

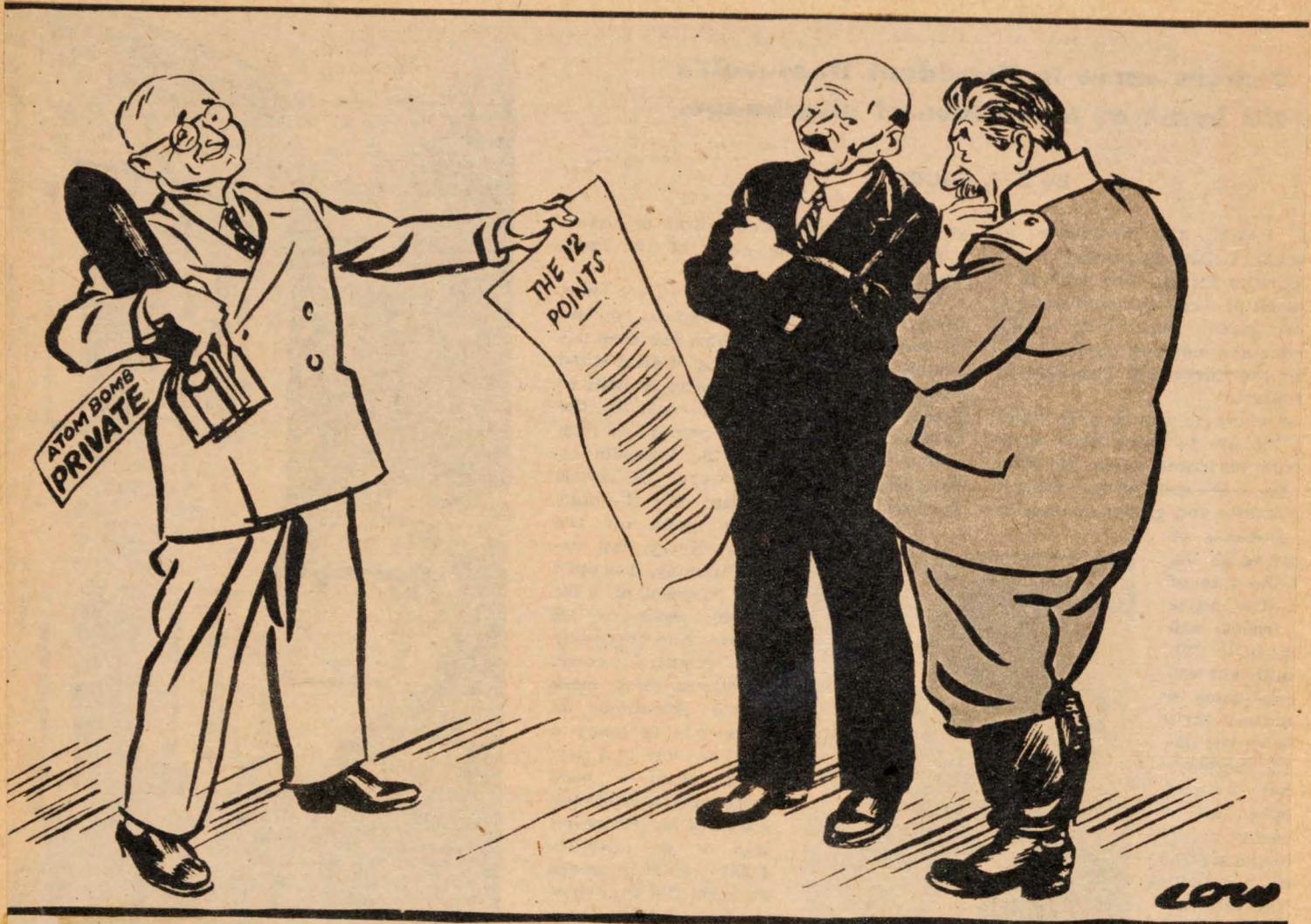
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"Why can't we work together in mutual trust and confidence?"—A British point of view.

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EINSTEIN ON THE ATOMIC BOMB

ALBERT EINSTEIN *as told to* RAYMOND SWING

ALBERT EINSTEIN was born in Ulm, Germany, in 1879. He was awarded the Nobel Prize for Physics in 1921. Driven into exile by Hitler's advent to power, Professor Einstein came to this country in 1933, was appointed for life a member of the Institute for Advanced Study at Princeton, and became an American citizen in 1940.

On August 2, 1939, just a month before the outbreak of World War II, Dr. Einstein wrote a letter which made history. The letter was addressed to President Roosevelt, and it starts with the sentence: "Some recent work by E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future." Dr. Einstein went on: "This new phenomenon would also lead to the construction of bombs, . . . extremely powerful bombs. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port, together with some of the surrounding territory."

It was Einstein's daring formula, E equals mc^2 , which led to the concept that atomic energy would some day be unlocked. Here, in these words recorded by Raymond Swing, he explains how mankind must control atomic power. — THE EDITOR

THE release of atomic energy has not created a new problem. It has merely made more urgent the necessity of solving an existing one. One could say that it has affected us quantitatively, not qualitatively. As long as there are sovereign nations possessing great power, war is inevitable. That statement is not an attempt to say when war will come, but only that it is sure to come. That fact was true before the atomic bomb was made. What has been changed is the destructiveness of war.

I do not believe that civilization will be wiped out in a war fought with the atomic bomb. Perhaps two thirds of the people of the earth might be killed, but enough men capable of thinking, and enough books, would be left to start again, and civilization could be restored.

I do not believe that the secret of the bomb should be given to the United Nations organization. I do not believe that it should be given to the Soviet Union. Either course would be like the action of a man with capital, who, wishing another man to work with him on some enterprise, should start out by simply giving his prospective partner half of his

money. The second man might choose to start a rival enterprise, when what was wanted was his coöperation.

The secret of the bomb should be committed to a World Government, and the United States should immediately announce its readiness to give it to a World Government. This government should be founded by the United States, the Soviet Union, and Great Britain — the only three powers with great military strength. All three of them should commit to this World Government all of their military strength. The fact that there are only three nations with great military power should make it easier rather than harder to establish such a government.

Since the United States and Great Britain have the secret of the atomic bomb and the Soviet Union does not, they should invite the Soviet Union to prepare and present the first draft of a Constitution for the proposed World Government. That action should help to dispel the distrust which the Russians already feel because the bomb is being kept a secret, chiefly to prevent their having it. Obviously the first draft would not be the final one, but the Russians should

be made to feel that the World Government would assure them their security.

It would be wise if this Constitution were to be negotiated by a single American, a single Britisher, and a single Russian. They would have to have advisers, but these advisers should only advise when asked. I believe three men can succeed in writing a workable Constitution acceptable to all three nations. Six or seven men, or more, probably would fail.

After the three great powers have drafted a Constitution and adopted it, the smaller nations should be invited to join the World Government. They should be free to stay out; and though they would be perfectly secure in staying out, I am sure they would wish to join. Naturally they should be entitled to propose changes in the Constitution as drafted by the Big Three. But the Big Three should go ahead and organize the World Government whether the smaller nations join or not.

The World Government would have power over all military matters and need have only one further power: the power to intervene in countries where a minority is oppressing a majority and creating the kind of instability that leads to war. Conditions such as exist in Argentina and Spain should be dealt with. There must be an end to the concept of non-intervention, for to end it is part of keeping the peace.

The establishment of the World Government must not have to wait until the same conditions of freedom are to be found in all three of the great powers. While it is true that in the Soviet Union the minority rules, I do not consider that internal conditions there are of themselves a threat to world peace. One must bear in mind that the people in Russia did not have a long political education, and changes to improve Russian conditions had to be carried through by a minority for the reason that there was no majority capable of doing it. If I had been born a Russian, I believe I could have adjusted myself to this condition.

It is not necessary, in establishing a world organization with a monopoly of military authority, to change the structure of the three great powers. It would be for the three individuals who draft the Constitution to devise ways for the different structures to be fitted together for collaboration.

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Do I fear the tyranny of a World Government? Of course I do. But I fear still more the coming of another war or wars. Any government is certain to be evil to some extent. But a World Government is preferable to the far greater evil of wars, particularly with their intensified destructiveness. If a World Government is not established by agreement, I believe it will come in another way and in a much more dangerous form. For war or wars will end in one power's being supreme and dominating the rest of the world by its overwhelming military strength.

Now that we have the atomic secret, we must not

lose it, and that is what we should risk doing if we should give it to the United Nations organization or to the Soviet Union. But we must make it clear, as quickly as possible, that we are not keeping the bomb a secret for the sake of our power, but in the hope of establishing peace in a World Government, and that we will do our utmost to bring this World Government into being.

I appreciate that there are persons who favor a gradual approach to World Government even though they approve of it as the ultimate objective. The trouble about taking little steps, one at a time, in the hope of reaching that ultimate goal is that while they are being taken, we continue to keep the bomb secret without making our reason convincing to those who do not have the secret. That of itself creates fear and suspicion, with the consequence that the relations of rival sovereignties deteriorate dangerously. So, while persons who take only a step at a time may think they are approaching world peace, they actually are contributing, by their slow pace, to the coming of war. We have no time to spend in this way. If war is to be averted, it must be done quickly.

We shall not have the secret very long. I know it is argued that no other country has money enough to spend on the development of the atomic bomb, and this fact assures us the secret for a long time. It is a mistake often made in this country to measure things by the amount of money they cost. But other countries which have the materials and the men can apply them to the work of developing atomic power if they care to do so. For men and materials and the decision to use them, and not money, are all that is needed.

I do not consider myself the father of the release of atomic energy. My part in it was quite indirect. I did not, in fact, foresee that it would be released in my time. I believed only that release was theoretically possible. It became practical through the accidental discovery of chain reactions, and this was not something I could have predicted. It was discovered by Hahn in Berlin, and he himself misinterpreted what he discovered. It was Lise Meitner who provided the correct interpretation and escaped from Germany to place the information in the hands of Niels Bohr.

I do not believe that a great era of atomic science is to be assured by organizing sciences in the way large corporations are organized. One can organize to apply a discovery already made, but not to make one. Only a free individual can make a discovery. There can be a kind of organizing by which scientists are assured their freedom and proper conditions of work. Professors of science in American universities, for instance, should be relieved of some of their teaching so as to have time for more research. Can you imagine an organization of scientists making the discoveries of Charles Darwin?

Nor do I believe that the vast private corporations of the United States are suitable to the needs of these times. If a visitor should come to this country from another planet, would he not find it strange that in

this country so much power is given to private corporations without their having commensurate responsibility? I say this to stress that the American government must keep the control of atomic energy, not because socialism is necessarily desirable, but because atomic energy was developed by the government and it would be unthinkable to turn over this property of the people to any individual or group of individuals. As to socialism, unless it is international to the extent of producing a World Government which controls all military power, it might more easily lead to wars than does capitalism, because it represents a still greater concentration of power.

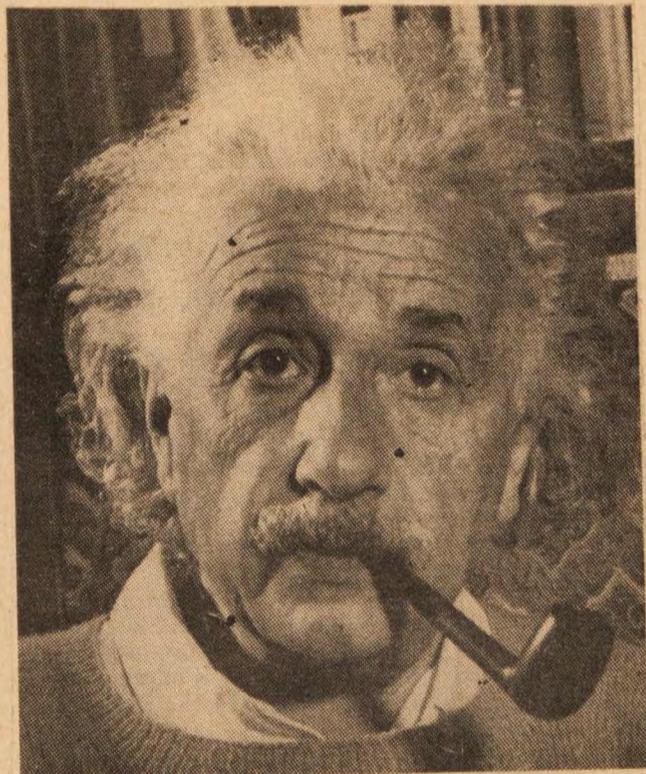
To give any estimate of when atomic energy can be applied to constructive purposes is impossible. What now is known is only how to use a fairly large quantity of uranium. The use of quantities sufficiently small to operate, say, a car or an airplane is as yet impossible. No doubt it will be achieved, but nobody can say when.

Nor can one predict when materials more common than uranium can be used to supply atomic energy.

Presumably all materials used for this purpose will be among the heavier elements of high atomic weight. Those elements are relatively scarce, because of their lesser stability. Most of these materials may already have disappeared by radioactive disintegration. So, though the release of atomic energy can be, and no doubt will be, a great boon to mankind, that may not be for some time.

I myself do not have the gift of explanation by which to persuade large numbers of people of the urgencies of the problems the human race now faces. Hence I should like to commend someone who has this gift of explanation — Emery Reves, whose book, *The Anatomy of Peace*, is intelligent, brief, clear, and, if I may use the abused term, dynamic on the topic of war and the need for World Government.

Since I do not foresee that atomic energy is to be a great boon for a long time, I have to say that for the present it is a menace. Perhaps it is well that it should be. It may intimidate the human race into bringing order into its international affairs, which, without the pressure of fear, it would not do.



Dr. Bush Asserts a Strong U. S. Is the Best Peace Guaranty in Atomic Age

He Sees Another War Reducing Humanity to Level of Savages

Favors Sharing of Basic Knowledge of Atomic Energy, Provided Other Nations Are Equally Candid in Areas of Scientific Progress

Following is the complete text of the address by Dr. Vannevar Bush, director of the Office of Scientific Research and Development and president of the Carnegie Institution, of Washington, at the Forum last night:

Throughout the world, thoughtful people are agreed that there must be peace, and that the nations must join together to maintain it. The bombs that burst over Hiroshima and Nagasaki require that we end war as an accepted and possible instrument for nations. In those bombs which unleashed the titanic power of atomic energy, mankind demonstrated to itself that it has reached the ultimate in destructive power. This means that a new world, evil or good, as we choose, lies before us. On the one hand are utter ruin and suicide; on the other are friendship and abundant life. It makes no difference whether a man is a physicist or a farmer, a Russian or an American, a youngster or a grandfather, a machinist or a financier—when he looks at these alternatives, he thinks first of all as a simple human being.

And as he sums up in his mind the toll of death and devastation which the war has exacted, and projects in his imagination the horribly greater toll which another war would surely demand, he knows in his heart that greater than all other considerations—of race, nationality, ambition, trade, profession, power or prestige—is the one all-encompassing fact that there must be peace and good will among men.

This has been mankind's problem after every war in history. It has never been solved but there has always been another chance. This time it must be solved, for there will be no chance to try again. Another war would not necessarily wipe the human race from the face of the earth. But it could reduce the human race to a savage level or below.

The atomic bomb—of which I shall have more to say later—means that war now could come with volcanic suddenness and volcanic destructiveness to the headquarters of industry and production, and could blast the nerve centers of civilization into impotence even before an alert could be spread. The entire pattern in which we are accustomed to think of war is scrapped by this truth. Moreover, non-atomic weapons which were under study, in preparation, or in existence when atomic bombs ended this war could by themselves when fully developed obliterate civilization. The atomic bomb emphasized and punctuated a stark reality. It is therefore imperative for us finally to prove that the old assumption that wars are inevitable is a fallacy.

Sees Progress Toward Goal

Already we have made marked progress toward that goal, in the establishment of a framework within which the peaceful people of the world can work together. The United Nations Organization is a fact, and a fact that can be made as powerful in its way as the fact of the availability of atomic energy.

I believe that a strong United States is the surest guaranty of peace in the world. Not a strong United States policing the world. Not a United States strong in merely immediate military power designed to wage war in the next few years. I mean a United States strong now, and stronger in the future, governmentally, economically, scientifically, industrially, morally, and also, and until we arrive at an international framework capable of preserving peace, strong in a military sense.

We must grasp the tough fact that the very emphasis on peace in the great democracies in the interval between the last two wars undoubtedly fostered the aggressors' conviction that the democracies were soft and decadent, and encouraged Hitler to strike. Talk of peace must this time be realistic; we shall need to maintain our full strength as a military power if we are to be respected and listened to.

Americans who sincerely want to share in securing and maintaining the peace of the world through a strong international organization have their work plainly before them. We must all judge our courses as good or bad according to how they will help or hinder the strength with which the nation goes forward not as a possible combatant in a world of isolated suspicious states but as one free people among other free peoples. This applies to the engineer in the field, the scientist in the laboratory, the industrialist at his desk, the mechanic at the lathe—to all of us as individuals and to all of us as groups. No individual, no group has any right to override the good of the nation as a whole. At this critical time any individual who places a selfish interest above the good of his country, above its strength in a difficult world, should pause to think that by so doing he may be making it necessary for his children or grandchildren to fight in a desperate war.

The realistic sense of moral responsibility which I stress here is basic. With it we have the foundation on which the bul-

warks of national strength can be built.

Need for Vigorous Research

I place high in the list of these the maintenance of vigorous research in fundamental science, with Federal financial aid for the support of research programs and for the education of future scientists, and with stress on the fact that fundamental research demands at the same time the highest degree of freedom and initiative for the individual. There must be no taint of regimentation as Federal support is thus provided. The Congress now has under consideration bills which will establish a national research foundation. Through this mechanism the people of the United States will be enabled to foster the fundamental studies of science from which come rich basic knowledge and immediate practical utility in all great scientific fields. Of particularly great importance is the fact that this



"SCIENCE FOR WORLD SERVICE"—Dr. Vannevar Bush

legislation will help give the brains of young Americans a full chance to work. Throughout all the field of knowledge, and especially in the vast unknown new field of atomic energy, the need and the opportunity for young, fresh minds are greater than ever before in history.

During the war years we drew heavily on our scientific capital, making great advances in applied science—in radar, rockets, anti-aircraft gunnery, in immediate therapeutics, in transportation. To do so, we had to give up fundamental research, and so we had to sacrifice the future to the present. We must now replenish the reservoirs of fundamental knowledge. Second, it is through the application of the results of vigorous fundamental research that we have in the past created extensive industries, secured productive employment for our people, raised our standard of living and of general education and increased the national income upon which government draws for the general good. We must be able to rely in the future on fundamental science to provide the basis for those things to a greater extent than we have in the past.

The advantages which an alert and aggressive military establishment gained from scientific research in the hard-fought struggle just past need no rehearsal here by me. It is a blunder, however, to pass over the third member of the powerful team that made them possible. This third member is American industry, flexible, resourceful, vigorous. Without it this country and the rest of the free world might well have gone down in defeat. Industrial might, when well exerted through teamwork between management and labor, has always been one of this country's greatest sources of national strength, in peace or war. Hence, I hold that we must foster and preserve the industrial zeal that has served us well ever since our pioneer days. Only thus can we be sure of the avenues by which the results of scientific and engineering progress find their place as useful products in national and international life.

Vigilant Government Needed

This does not mean that the central government should relax its vigilance to protect the public against wrongdoing—in business or elsewhere. It does mean, however, that we must encourage the advent of new industrial units, remove obstacles and petty annoyances, and thus create a climate of opinion in which sound business will thrive. It does not mean failure to regulate where regulation is necessary, as in the natural monopolies, but that there should be no hostility between government and business, even if business is big.

We must also have a strong government. Its several functions must be clearly defined and allocated, it must consist of able, alert men and, above all, it must be honest and upright because its members have moral integrity and a breadth of vision which lets them see against the background of history the significance of what they do. In the war years, all Americans in and out of uniform have been alert participants in their government. It will not do for that active sharing to slacken now.

In this war the representative republican system proved efficient, versatile, adaptable. We must keep it that way. There is no inconsistency between this assertion and the existence of a strong Federal government in the United States. As society becomes more complex there are more things for the central government to do—many things which only it can do. Nor is there inconsistency between this assertion and the creation of great government works. Some of these are as old as the nation—consider the postal system, the highways spanning the continent. Such works as these are of necessity a national and hence a governmental responsibility. A new one is before us in the control and administration of atomic energy. Already, in legislation now being considered, we are undertaking the problem of national control—an essential first step toward ultimate world regulation and utilization of this

vast new power. Establishment of an Atomic Energy Control Commission of competent and disinterested citizens armed by the Congress with the unprecedented powers demanded by their unprecedented responsibilities, with proper safeguards against their arbitrary or unreasonable use, should soon be expected.

Now just as the self-interest of groups within the nation must yield to the essential requirement that the nation be strong, so the self-interest of nations must in the years to come be subordinated in order that the world organization may be strong. We must be prepared to recognize that no short-range self-interest of the United States can be allowed to stand in the way of full and sincere collaboration with other nations in the furtherance of peace. At this moment we Americans face this issue, and the issue is stated in very great terms. It is the question whether and how we shall share with other nations our knowledge of the control and utilization of atomic energy. I do not use the atomic bomb as a term in stating the issue; the bomb is but one application of atomic energy, a titanic and awesome application, it is true, but still only one application.

Let me digress for a moment to say something about the bomb. First, we can never be thankful enough that the secret was learned by peace-loving peoples, not by the Fascist nations which sought with all their might to master it in order to unleash atomic war on the whole world. Second, the bomb did not win the war; the bomb did end the war swiftly and, I think, mercifully, and thereby saved many thousands of human lives. Third, and this is extremely important, by reason of its sudden, spectacular effectiveness, the atomic bomb underscored and emphasized as never before the fact that the nations of the earth must put an end to all wars forever. Fourth, and of equal import, the development of the bomb—the work of a congress of free minds and free hands in a free country—is undying testimony to the strength and vitality of the philosophy of government in which we believe. Only in a free country where people have faith in the good will of one another could so vast an undertaking have been carried through so successfully in so short a time. Whatever I have said earlier about the teamwork of science, management, labor, the military and government is forcefully re-emphasized by this achievement.

For the time being—that is, for the five to fifteen years which other nations must have if they are to make atomic bombs of their own—the control of atomic energy thus achieved by scientists and engineers working in the United States puts in the hands of the American people a power and an opportunity such as no other people ever before have had. It is a startling fact, but it is a fact, that the United States today, if it would continue to put all its resources into such an effort, and if matters of physical force only were involved, could turn aggressor, devastate the centers of the world with atomic bombs, and in

a short time impose its will on all nations. The power is thus the power to rule the world. The opportunity is the opportunity not to use that power for that purpose. These are not alternatives for a free people rich in the tradition of freedom. For us, there is no choice between them. The United States will use the opportunity, not the power.

It is perfectly plain that we will not use atomic energy to impose our will physically on the world. How shall we use it? Remember that though all we have now is a bomb, control of atomic energy will in time become an economic factor of the first importance. Note that in mankind's history the applications of chemical energy appeared first at the simplest level—uncontrolled fire, then explosions—and that later they were one by one controlled and applied to meeting human needs. The science of atomic energy today is comparable to the science of electricity in the time of Faraday. Things move faster today than they did a century ago; hence we may expect that though it is far more difficult, the development of atomic energy for peaceful industrial and economic use will be swifter than was the development of electricity. The atom should be at useful constructive work for us within ten years. Yet it will not perceptibly alter the pattern of our living until long after that. We shall still use steam and electricity for lighting and

power. The atom will generate these things—not drive the family car. And we must bear in mind, as we look thus to the future, that this development which the public interest requires will have to be carried on under controls which the public safety demands. Using atomic energy is a dangerous undertaking. But that energy must be brought to use, for it can ultimately bring all mankind more ease and peace than we have ever known. American industrial ability, working within sensible limits which the well being of the people imposes, can be relied on to overcome the dangers and produce the benefits.

As an engineer, I have good reason to know that the free exchange of ideas and knowledge is the first requirement of progress. We had such a system before the war, and under it American science led the world. It must be restored, for only by the cross-fertilization of brains do we breed great thinking, and the peaceful control of the energy of the atom will demand much great thinking. Therefore, I hope to see the United States make the first great move toward the renewal of international exchange of scientific knowledge. I believe we should undertake to share with our world partners all of our basic scientific knowledge of atomic energy.

Do not oversimplify this state-

ment and mistake me as saying that I think we should blandly give away this part of the information without consideration. The consideration we should ask is quite clear. We would expect all nations to do likewise, in fact, to be equally candid and open in all areas of scientific progress, and to make the interchange real by constant exchange of scientists, students, and publications, with a policy of open doors in scientific laboratories all over the world. We can bring about this result if we are united and wise, but it should be clear that there are two great objects: first, to open our own scientific doors, and second, to do so in such manner that all other doors will also open.

This would be only a first step, but it would be an important one. It would not involve "giving away the secret of the atomic bomb." That resides, as far as it exists, primarily in industrial experience, the solving of a multitude of practical problems and the intricate techniques of application. It cannot be too strongly emphasized that no man could convey this information by a formula or a diagram or two, if he would; it is much too complex for that. I would propose that we retain such information securely at present, for it is one

of the reasons that our lead over other nations that might wish to construct atomic bombs is as large as it is. But the first step of suggesting full interchange on the basic science of the atom is still important; for to take it would indicate strongly that we wish to proceed down the road of international collaboration.

Other steps can follow, if the first is successful. I would advocate as the next step the placing of full information in regard to all aspects of atomic energy in the hands of a body in the United Nations Organization, with instructions for the complete dissemination of it. But I would do so only if there were complete acceptance of the principle that this body would have inspection rights, to be implemented by a scientific board internationally constituted, and before the door was opened wide I would make very sure that such inspection would work so that no nation could in fact proceed in secret with military applications.

Beyond this lie other steps, and these hardly need to be specifically formulated as yet, for the road is long. Trusteeship for all military emboldenments, provisions for use only under the orders of the Security Council, dispersion of materials into industrial emboldenments from which they could not be reassembled without the knowledge of the world, are possibilities to explore.

The first step toward that ul-

timate goal is to establish the full free flow of facts—the complete and honest exchange of knowledge—among the nations. We Americans are the first to be in full possession of the most powerful and most precious knowledge of the physical world ever discovered. We can therefore open the way toward assuring the growth of the full free flow of facts, by providing for complete interchange of information on the basic scientific aspects of atomic energy. In the War Department release in early August, we made the right start, and I believe we should go farther on that course. The strongest help that we can give to bettering the common destiny of mankind is to demonstrate in this way our faith in the good will of men and our desire to be one nation among other nations in a peaceful world of free interchange.

As we enter a new world I urge two things. Let us maintain our country strong in every way. In this strength, let us lead through the path of international understanding to the organization of a sovereign world where the nations of men will find the better, happier life which man's final mastery of the energy of the atom offers, if he will but use it rightly. To this end every citizen, in every contact with his fellows, guided by his patriotism and his own judgment, has his duty clearly before him.

Truman Explains Plans

By FELIX BELAIR JR.

Special to THE NEW YORK TIMES.

WASHINGTON, Oct. 31—President Truman said today that the entire field of atomic energy and no other subject was on the agenda of his forthcoming discussions with Prime Ministers Attlee and Mackenzie King, although he welcomed a discussion of any other matters they cared to bring into the conference.

At the same news conference Mr. Truman denied suggestions heard in the House of Commons yesterday that President Roosevelt and Winston Churchill had entered into a secret agreement during their meeting at Quebec for the peacetime control of the atomic

bomb. The President did not develop this latter theme to any great length, saying merely that he did not think such a statement was true. He added that as nearly as he had been able to learn the entire field of atomic energy release was shared equally by the United States, Great Britain and Canada.

A question twice repeated in different form as to whether Britain and Canada knew as much about the production of the atomic bomb as we did brought an affirmative answer from the President. However, the President did not modify his recent statement at Reelfoot Lake, Tenn., that the United States would not give away to any nation the industrial know-how required to construct the huge plants in which the bomb is assembled.

The President's remarks on that former occasion appeared directed to Soviet Russia, but he included all other countries in his explanation that it would not do any nation any good to learn the secrets of the bomb construction since only this country possessed the resources and the industrial know-how to put it together and to build the huge plants necessary for its construction.

President Truman was asked if his meeting with Prime Ministers Attlee and Mackenzie King on Nov. 11 could be considered as a prelude to another meeting of the Big Three, including Generalissimo

Stalin. It would be possible for him to reply to the question intelligently, the President said, but he added that the next thing after the Nov. 11 discussions would be for this Government, with Britain and Canada, to take up with other world governments general policies on peacetime control of atomic energy release.

Murray Asks for New Bill

Meanwhile, hearings went forward before the Joint Senate Commerce and Military Affairs Committee, where Philip Murray, CIO president, called for new legislation to substitute for the May-Johnson atomic power control bill so that the United States can "keep abreast" of other countries in the development of nuclear research.

Mr. Murray in a statement to the committee said that "only by freeing the scientists" could the United States keep up with the pace of other nations. He charged that witnesses at hearings on the bill "paraded their fears and hopes for a future war" instead of testifying on what shape scientific research should take in the future.

Mr. Murray further testified that both the May-Johnson bill and a measure by Senator Warren G. Magnuson, Democrat, of Washington, to set up a research foundation were "designed to become the instruments of monopoly, and easy prey to those who want to launch this country into another war."

1945.

RADIOACTIVE CROP STIRS ATOM STUDY

Science Seeks to Learn if Blast Particles From New Mexico Fell on Illinois Straw Field

Special to THE NEW YORK TIMES.

CAMBRIDGE, MASS., Oct. 31—Scientists in several parts of the country are endeavoring to solve the mystery of the strong radioactivity of a quantity of strawboard, manufactured in southern Illinois, from straw cut in that area twenty-three days after the test explosion of the first atomic bomb in New Mexico.

Dr. Robley D. Evans, Professor of Physics at the Massachusetts Institute of Technology and director of the radioactive laboratories there, disclosed the efforts to run down the agent which caused the radioactivity. It was discovered during tests of the strawboard when it was delivered to the Eastman Kodak Company at Rochester, N. Y., for use in wrapping films.

A news report two days ago from Schenectady, N. Y., quoted Dr. Chauncey Guy Suits, director of the General Electric research laboratories, as saying that stocks of film at the Eastman plant, 1,500 miles from Los Alamos, N. M., were mysteriously fogged and destroyed by the effects of the atomic blast.

According to Dr. Evans no photographic film was destroyed at Rochester. The tests made on the strawboard when delivered to Rochester showed it was so intensely radioactive that it would have ruined any film wrapped in it, it was said.

Dr. Evans and other physicists, who have been at work on the problem, have not reached a final solution, but admit two possibilities.

One is that the atomic bomb explosion at Los Alamos may have been responsible. It was said to be possible that active ingredients of the bomb, which did not go through fission, were carried to a high altitude, possibly 60,000 feet, caught in the trade winds, borne eastward and precipitated by rain on the Illinois strawfields.

The other possibility is that the contamination may have come from some source, such as the Wabash River, the waters of which are used in the strawboard manufacture.

A cutting of straw from the Illinois field on July 14, the day of the Los Alamos explosion, proved to be perfectly clean, it was stated, but a cutting on Aug. 6 was a different story.

SENATORS DEMAND BAN ON ATOM BOMB

WASHINGTON, Nov. 1 (AP)—

The Senate heard demands today that the atomic bomb be outlawed by international agreement as a weapon too terrible ever to be used again.

Voiced first by Senator Kenneth McKellar, Democrat, of Tennessee, they stirred a flurry of debate ranging from questioning whether reliance could be placed on such an arguments against the use of the atomic bomb applied also to other air bombs. Mr. McKellar left the presiding officer's chair to plead that the United States seek to bind all nations in a pledge against using atomic bombs. Until such a pledge has been won, he said, this country should keep what secrets it has on the release of nuclear energy.

Senator Edwin C. Johnson, Democrat, of Colorado, acting chairman of the Military Affairs Committee, was skeptical. "If it is possible to outlaw the bomb, why not go the whole step and outlaw war?" he demanded.

Mr. McKellar recalled that this country had spent \$2,000,000,000 to develop the bomb. No other nation would spend such a sum, he contended, if there was an agreement against the use of atomic bombs.

WHAT PEOPLE ARE THINKING

By ELMO ROPER

Opinion on the Atomic Bomb

Mr. Roper, well known authority on public-opinion surveys, conducts the "Fortune" magazine polls.

There is much discussion about what the United States should do with the secret of the atomic bomb. Some want to give it to the United Nations, holding that such a gesture would establish the good faith of the United States and set an important precedent for future world-wide collaboration. Some would give it first to Russia as a means of establishing the unity of the Big Three—since England already has all or most of the secret. Some would hug the secret close to our chests, on the theory that if we alone know this important secret of destruction no one can be an aggressor against us.

President Truman has indicated that he will take, or at least share, the responsibility for the secret of the atomic bomb. But can he?

The American people are essentially a practical people. The story about the saloonkeeper who countered with the question, "Has Kelly had the drink?" when asked by his bartender, "Is Kelly's credit good for a drink?" is a story typical of American realism.

The Real Questions

The real questions in the disposition of the secret of the atomic bomb are: Can we keep it a secret? Will our actions regarding it create good will or ill will? Will we use it to promote our own and world security or as another maginot line?

It would seem that it is of no use to ask whether we should keep the atomic bomb secret if the facts are that we cannot keep it. We have the word of our best scientists that the secret is ours for a short time only. Surely no one expects any member of the United Nations to start a war with us within five years. Even those people who suspect Russia will agree that Russia needs peace for longer than that. If we are not to be attacked for more than five years and if we can't keep the secret of the atomic bomb for that long a period, then

the practical question is: How can the secret be used for America's long-term political good?

This argument, of course, entirely overlooks the moral issue; it simply recognizes that we cannot be King Canute and bid scientific progress stand still in every country of the world except our own.

Results of Poll

Nor do the American people as a whole think we can keep the secret of the atomic bomb. "Fortune" magazine has just released the results of this question:

It took the United States about five years to develop the first atomic bomb. About how long do you think it will be before some other country will develop one if we don't give them any help at all on it?

	Other countries will develop atomic bombs in				
	Less than five years	About five years	More than five years	Never	Don't know
Total	52.7	12.9	11.7	4.5	18.2
By Age Groups					
21 to 34	54.3	12.1	13.6	3.7	16.2
35 to 49	53.8	13.9	11.7	4.3	16.3
50 and over	50.2	12.6	10.0	5.4	21.8
By Economic Level					
Prosperous	66.4	14.9	3.8	3.8	11.1
Upper middle	66.6	10.2	9.2	3.7	9.7
Lower middle	57.0	13.7	11.5	3.7	14.1
Poor	32.8	12.9	15.8	6.3	32.2
By Education					
Grade school	37.5	12.4	13.3	6.4	30.4
High school	55.0	15.0	12.7	3.8	13.5
College	73.6	9.6	7.2	2.5	7.1

It is interesting to note that a clear majority of all but the most poorly educated believe we can keep the secret for less than five years. And only 20 per cent of the most poorly educated are willing to say we can keep it for more than five years. Only 10 per cent of those with some college education believe we can keep it longer than five years.

The question "Would it be best to keep the secret if we could?" becomes a question of moral issues and hypothetical advantages. The practical question is, "Shall we try to accomplish the impossible—keep the secret—and in so doing create distrust as to our own intentions?"

Senate Group On Atom Holds 1st Meeting

Washington, Nov. 1 (AP)—The Special Senate Committee on Atomic energy met for the first time today.

When Chairman McMahon (D-Conn.) called the committee to organize it hadn't even been assigned quarters and had to borrow space from the Agriculture Committee.

McMahon said he hopes the scientists who worked on the bomb which flattened Hiroshima will give the committee the technical aid it must have for intelligent legislation on developing and controlling the new power source.

"We must have the benefits of the full testimony of the outstanding scientists in the nuclear energy field, equipped with all the facts," he added. "If we are provided with the facts, we should be able to make logical decisions."

Russia Needs 50 Years of Peace

An Article from "The Sunday Times" of London

By Alexander Werth

HT
"RUSSIA—is it hopeless?" That is a phrase one often hears in London these days. The question is a fundamental one. For it is one directly affecting the life and future of every human being. Lasting peace is not conceivable without co-operation with Russia, or, at any rate, without some reasonable *modus vivendi*. Russian stock has slumped heavily. One finds people now going to the other extreme, forgetting all that Russia did during the war, and almost accepting the view that she is the inevitable aggressor of the near future.

Today, five months after V-E Day, the Allies are passing through a crisis of mutual distrust. Bringing it down to its bare essentials, one may say that we thoroughly distrust and dislike the way the Russians are acting in central and eastern Europe, and that the Russians are acutely shocked at the idea of their war-time Allies trying to "intimidate" them—as they put it—with their atom bomb. There are also differences of outlook and temperament, and above all, a failure to understand each other's way of thinking—and way of feeling. To take an example: if you talked to a Russian for hours about the Belzen trial, you would still fail to convince him that Britain was not being lenient to "Fascists," and was not condoning gas chambers for children.

The attitude of the Russian people toward the foreigner was always a mixture (not always in the same proportion) of two feelings: a desire to learn from him, and even to make friends with him, and the suspicion that he is anti-Russian. In the twenty-eight years of Soviet rule it became worse still; the hostility of the outer world toward the Soviets, and therefore toward Russia, was almost self-evident, and on those occasions when the opposite was patently true the Russian was happily surprised—as, for example, when Mr. Churchill declared Britain's support for Russia the day she was invaded.

That speech was a landmark in the Soviet Union's foreign relations. One thing led to another: to the Cripps-Molotov agreement of July 12, 1941; to the Anglo-Soviet Alliance of May, 1942; to Teheran, to Yalta and Potsdam. To the ordinary Russian there seemed no reason why the happy new relationship that was being built up by the Big Three should not continue indefinitely. It is true that he had been consistently and systematically discouraged against being too "pro-Ally." That was part of the long-term policy of the more "politically conscious" part of the Communist party.

Thus, in the heyday of the happy post-Teheran period there appeared in the Russian press the ridiculous "Cairo rumor" about secret Anglo-German peace talks. It was intended to remind the Soviet citizen that even the best of capitalist allies could not be trusted 100 per cent.

Similarly, the Allied war effort and the Allies' aid to Russia nearly always tended to be played down. Despite this, the Russian citizen and soldier were becoming increasingly conscious of the great part played by the Allies. But, even so, the glorification of the Red Army was done with such intensity that, with a certain naïveté natural to him, the Russian soldier and citizen became convinced that "there is no one like us." At the same time the casualties had been terrible, and the ordinary Russian, in crossing his frontier into central Europe, felt that the world, outside Germany, could not help loving and admiring him.

The first disappointment came when the Russians entered Poland.

In the other Slav countries they were received more cordially; but even there they did not feel quite at home. Nor did the Russian soldier really take to the British and the Americans; and, at heart, he felt that it was "unfair" that he should have to share Berlin or Vienna with people who "hadn't fought for it." Also, the Germans did their best—and not ineffectively—in doing anti-ally propaganda among the Russians and vice-versa. Altogether, except on a high level, relations between the Russian and Allied forces in Germany were not very happy.

The feeling that many things were "unfair" to the Red Army was exploited by home propaganda. The Red Army had liberated Poland and Rumania and the Balkans and Austria, and "why should the others interfere?" The acceptance of such "interference" was, from the start, reluctant and grudging. Sometimes convincingly, sometimes less so, Russian propaganda kept on demonstrating that the progressive elements in all these countries desired the "new" democracy, complete with land reform, and that only "reactionaries" and "Fascists" could wish for anything else; their hankering for "British democracy" (which they had never had, anyway) was dismissed as insincere.

However, while Roosevelt—whom the Russians always considered a friend—was alive, and Churchill—whom they regarded as a sound realist firmly believing in the Big Three principle, was in office—there was every prospect, in the Russian view, that suitable compromises would be reached, and that the three principal Allies would carry into the post-war world the traditions of Teheran and Yalta.

The agreement on Poland, in its final form, was not quite satisfactory to Churchill himself, but he let it go at that, Mikolajczyk's arrival in Warsaw was, if anything, a help to the Russians in that it introduced an element of conciliation into Poland; and since Mikolajczyk had pronounced himself in favor of good relations with Russia, it did not matter very much whether he liked Mr. Bierut or not. The principle of having a "friendly" government in Poland was safeguarded; for, as a prominent Russian diplomat recently remarked: "We cannot afford to have hostile governments next door; the nineteenth-century conception of absolute sovereignty and absolute neutrality was, surely, finally exploded by the sorry experience of Belgian and Dutch neutrality in 1940." At the same time, the recognition of the Warsaw government by Britain and America fully suited the Russians; it also contributed to stability and quiet; and that is one reason, in many, why, in fact, the Russians do not want to go into isolation.

Yet what, one may ask, is the Russian game now, after the failure of the Foreign Ministers' Conference?

Again, one must have a peep into the Russian mind. As already said, the disappearance of Roosevelt and Churchill had seriously upset the Russians. And then, under the new men, came the announcement of the atom bomb. All that was anti-Russian—for instance, most of the Swedish press hooted with joy. It was rubbed in that victorious Russia, with all her bemedaled marshals, could now be "kept in order," and some even said that she had become "a second-class power."

All this produced two reactions in Russia; a feeling of great distrust of the "capitalist world" and a sudden feeling of insecurity at a time when it was least expected; and secondly, a feeling of injured pride and prestige. These feelings were general.

That is one of the explanations

11/1
of the Russians' unhelpful attitude at the London conference. They were unquestionably hoping for some "gesture" to be made in connection with the atom bomb, and it was not forthcoming, conditionally or in any other way. Their alternative was to intensify their atomic research. Militarily, the atom bomb may not be of the slightest importance (for who is going to use it?), but psychologically the effect in Russia, conditioned as she is, has been much deeper than most people realize.

There is another point. From all the tangle of the London conference one fact emerges clearly: and that is that the Russians want, in the main, to return to the Big Three principle. To be one against two is always easier than to be one against four. Nor do they like what they consider the excessive democratic "purism" of Mr. Bevin, as compared with Mr. Churchill, and they will miss no opportunity to "debunk" it by asking for "Gibraltars" of their own, by speaking of the 350,000,000 voteless Indians, or by asking why General Franco should be more acceptable to Mr. Bevin than M. Groza.

To show that they are "not frightened," the Russians are liable, as the example of Hungary shows, to defy Allied wishes for a time. Somebody must take the next step. There is reason to believe that the Russians would like to take it, but are hesitating, for they are still hoping for some atom bomb "gesture." But the temper in this country and the United States is not exactly pro-Russian—at the moment. They would like the Foreign Ministers' Conference somehow to resume on the basis of Potsdam. They do not consider the time ripe for a Big Three meeting. But the present deadlock (which would have delighted Goebbels dearly) cannot continue. The Russians do not, and can not, want isolation—for isolation would mean unrest in those very border states which the Russians want to be friendly and peaceful. (It would also mean economic isolation—a less serious matter.)

The Russians deny, of course, that there is any "Eastern bloc," but, whether there is or not, they need a *modus vivendi* with Britain and America, as otherwise the "friendly neighbors" can only become a first-class liability teeming with unrest, and even civil war. As for the Western bloc, the Russian objection is, above all, ideological, for it conjures up visions of new Locarnos and Munichs. But they are also a little afraid of it for another reason: it is the French idea that the Western bloc could become the Third Monster, which could hold an even balance between the two other "monsters"—Russia and the U. S. A., and play them off one against the other. Such an idea is, they say, contrary to the Big Three formula, which Stalin likes best.

But on whether the Russians "want war," all one can say is that their country requires and hopes for fifty years of peace. The Russian is very "object-conscious," and his main object—at least until the atom bomb upset him—was to turn Russia in the next fifty years into the "most prosperous country in the world." Which, in itself, implies a Russian fear that the "others" might be envious and start interfering. This is just another example of those psychological complexities surrounding the difficult, but by no means "hopeless," Russian problem. But, clearly, there can be no reconstruction without demobilization.

There is good reason for believing that Stalin, though on holiday, is giving serious thought to the present deadlock and is preparing a decisively important statement for Nov. 7. No one knows better than he how important it is to stop the present dangerous rot—in both senses of the word.

On The Record

By Dorothy Thompson

Congress and the Atomic Bomb—II

Recently I set forth propositions about the atomic bomb: It is no secret; it can be used only as an instrument of aggression; as an instrument of war it rings the death knell of small nations and promises mutual annihilation to the largest; it is an instrument for unlimited political blackmail; as the property of a commission, such as that proposed in the original May Bill, it is an instrument threatening domestic liberties.

Already the atomic bomb is blowing up what little there was of international confidence. No nation can "trust" another which has the capacity to destroy its centers of population from long distances. Its unique possession by us, together with flaunts of power—"We are the most powerful nation militarily on earth, with the largest Navy, and Air Force," and the call for universal service to "enforce" peace, is scaring the world to death, and leading to an atomic science race.

Our moral position is weakened. At Nuremberg, we shall accuse Germans for having broken the rules of warfare by first resorting to weapons banned by international conventions. The onus for the introduction of atomic warfare rests, however, on the United States.

We have committed ourselves to stopping potential aggressors. Already there is apprehension abroad that the United States may be the next potential aggressor. The only way, in the atomic age, to strike down a potential aggressor is to strike without warning. Any nation, with the atomic bomb, can act before a Security Council agrees on who is potentially dangerous.

They'll All Have It

To hand the atomic bomb about indiscriminately in a world of sovereign states and great powers which have hitherto refused any restrictions upon their actions is suicidal. If everyone has the atomic bomb, one will use it first.

Soon all great nations will have it. Estimates that it will be years before it can be developed elsewhere are based on false assumptions. One is that no other country has a formula now. How do we know? The greatest contribution came from Germany. One of the leading atomic physicists, Prof. Lange, went to Russia as early as 1934. When the Russians took Berlin, they captured the physical laboratories in Dahlem, and here and in Vienna are bidding for scientists and getting them. The length of time needed depends upon advances already made, and the urgency put behind development. That will be immense.

Atomic power for war should be outlawed. How? By verbal or paper agreements?

And the Solution—

The solution is as simple as the Judgment of Solomon.

The secrets of atomic science should be given to every country which agrees to submit to a control of its mines and laboratories by an international authority, responsible exclusively to the World Security Organization—to humanity. It should be composed of scientists, technicians, and engineers, selected chiefly from small nations who would, of course, also be under observation. Small nations are more trustworthy, since for them atomic warfare means obliteration.

The composition of the authority and watchmen is of pre-eminent importance. If any power represented in the board knows about its dispositions, relative to that power's own territory, the purpose of control will be largely stymied. If the watched participate in watching, they are certain to try to control the directives. The body must be neutral vis-a-vis any single power.

It may be argued as a measure

of difficulty that atomic bombs can be manufactured in small factories. But there is unanimity that the deriving of atomic energy from elements more stable than uranium and plutonium is long distant. The commission, therefore, must have a geological branch to investigate and guard sources of raw materials.

Its purpose is not to control the bombs but prevent their manufacture.

The commission should also be empowered to undertake experiments in the constructive use of atomic power. Some scientists have proposed that experimental cities be taken, in which heating and transportation derives from atomic energy, to divert the attention of mankind from the fear of destruction to creative possibilities.

Our brief exclusive possession of the atomic bomb gives us the historic opportunity to liberate the world from the most terrible of fears, and establish the first fool-proof test of what constitutes a potential aggressor.

A potential aggressor is any government that refuses to accept international and impartial control over its experiments with a science that can be used to obliterate half of mankind. People who live in glass houses cannot throw atomic bombs. It is an American proposal to open all windows to God's sunlight.

They'd Rally to Us

It is practical, urgent, would put the first content into the San Francisco Charter, and win the peoples of the world. From being scared of the United States, they would rally to her from the corners of the earth.

The first country with absolute superiority of power plus the atomic bomb, which offers to have that power controlled, only in return for the same concession by all others, will break the worst weapon discovered by man without moving a single gun, and can publish on the air-waves of the earth the message for which millions wait in tears: Peace!

TODAY and TOMORROW

By WALTER LIPPMANN

First Things First

IN OUR effort to settle the war we are making the great strategical error which, happily, we avoided in waging the war. We are dispersing our strength on sideshows in the secondary theaters instead of concentrating first of all on the central and primary objective. In Europe, thanks largely to General Marshall, we never lost sight of the fact that the war would be won only when the German Army was defeated, and holding fast to that conception we refused to let our forces be diverted to smaller indecisive campaigns in the Balkans and the Near East, however plausible and pressing politically, which did not bring us to grips with the central power of Germany.

But since Potsdam, and indeed in considerable degree since Yalta, we have lost sight of the main issue in Europe, which is the German settlement, and have drifted into secondary disputes all around the edges of Europe. We may have been right as rain about such questions as Trieste, the Italian colonies, the Romanian government, and the Bulgarian elections; they were nevertheless not the questions which deserved to come first, and the real reason we got nowhere in settling them is that they cannot be settled until a basic German settlement has been agreed to. Many explanations have been offered for the failure of the London conference. The true explanation, I submit, is that the London conference dealt with the wrong subjects. It was like a conference of creditors trying to decide whether John Smith, who has just been through an earthquake, a fire and a flood, should pay \$10.72 to his grocer or \$9.36 to his butcher. Among the spectators the ideologists of vegetarianism were hot for paying the grocer.

Surely it is evident that these Balkan and eastern European questions are subordinate to the German question. How, for example, can there be elections free from foreign influence as long as the Red Army is all over the place? Yet how can the Red Army withdraw from eastern Europe until there is a German settlement which can be enforced without great unwieldy masses of troops?

How can there be any kind of orderly reconstruction on the continent of Europe until it is settled what Germany is to produce, is to export, and is to import? It is all very well for Mr. Bevin, seconded by Mr. Byrnes, to protest about bilateralism between Hungary and the Soviet Union; but what else can they expect when they have not made up their minds about Germany, which was the chief economic supplier of central Europe? How would any one go about reconverting the United States to peace if between the Ohio and the Mississippi no one knew what it was possible and what it was permissible to produce, to buy, and to sell?

General Eisenhower wrote to the President on Oct. 26 reminding him of an agreement made last summer under which the Army would be relieved of the duty of governing Germany, the responsibility given to civilians, and the Army confined to its "true function" which is to provide the "reserve force and power" to enforce regulations and policy. It is a striking commentary on how these great matters have been allowed to drift that a soldier should have to remind the civil authority about the true function of an army.

In carrying out the agreement, which the President has reaffirmed, the Administration will need to reconsider radically the whole occupation system. It might well begin by asking itself whether there is any prospect of our being able and willing to continue very

much longer to keep several hundred thousand ordinary troops on garrison duty in Germany. The answer is that there is no prospect. The kind of army we have in Germany was not recruited, was not trained, and is inherently unfitted, for garrison duty. It cannot be kept there very much longer: it cannot be effective while it is there if its only interest is to come home. Long before it democratizes the Germans, it will demoralize itself.

This was foreseen and foretold long ago by many among us. The War Department, which was so brilliantly ingenious and resourceful in developing co-ordinated specialized task forces in the war, has shown no imagination about developing specialized task forces to carry out its mission in Germany. It has just left a combat army composed of young civilians to sit around in Germany waiting for a ship to take them home.

Surely the men who planned the landing in Normandy ought to be able to draw up a plan for a police force which is recruited from men who are prepared to stay in Europe, and paid well for staying, which is trained specially for its mission, which is small and compact enough to be manageable, and to have its own esprit de corps, which is equipped with all the planes, armored vehicles, devices and weapons to move irresistibly and swiftly anywhere in Germany. As an anonymous member of the R. A. F., writing in this month's "Harper's" magazine, puts it, "to apply our force correctly in Germany . . . it is not in the least necessary to have a bored G. I. wandering around the streets of Frankfurt."

With such a different type of armed force, a different kind of control of Germany would naturally follow. The control would be based on the principle, not of governing Germany, but of compelling the Germans to bear that unattractive responsibility, of telling them what they may not do within Germany, what they must deliver out of Germany, what they may receive into Germany, and then of arresting, trying, and punishing individual Germans who violate the code.

If we are wise, we shall make it a simple and not an elaborate code. Having disarmed the Germans and demobilized them and destroyed or removed their chief arsenals of war, we should forbid them to train men or to make weapons. There is no use trying to define weapons; that will only invite ingenious evasion. We can easily send a commission to Germany which can tell quite quickly if some new gadget is or is not a weapon.

The rules for German industry should also be simple. It should not be difficult to say what may not be produced at all, and what in broad quotas must be done, what may be done, with the coal, the steel, the electric power, etc., etc., authorized for production. Probably it will be advisable to internationalize the coal production of the Ruhr not, let us hope, by stationing four armies in the Ruhr Valley, but by organizing a public corporation which owns the controlling shares in the coal mines and is itself owned by the Allied nations directly concerned with Germany.

What we must avoid is complexity in our demands and prohibitions and in our methods of control and enforcement. For the system will not last if it is not simple, and the Germans will never learn to govern themselves, or face up to the consequences of aggression, if—in the guise of occupying and reforming them—we relieve them of their responsibility for Germany.

De Seversky Sees Atomic Bomb Overrated as Threat to the U. S. U. S. 5-15 Years Ahead on Atom

Halifax, Tedder, Wilson to Join Attlee in Atom Talk With Truman

TOKYO, Nov. 2 (AP).—Major Alexander P. De Seversky, noted designer of airplanes, declared today that the atomic bomb which hastened Japan's surrender could kill no more people than could a regular ten-ton bomb, if dropped on American cities of steel and concrete.

Arguing against "getting hysterical" about the atomic bomb, De Seversky also told a news conference that he doubted whether the bomb could sink a battleship unless it scored a direct hit.

"Nothing happened at Nagasaki or Hiroshima," De Seversky said, "that indicates to me a radical revolution in the science of warfare to the point where we can dispense with the Army, Navy and Air Force." He hastened to add that he considered the atomic bomb "a great step in the science of demolition."

De Seversky, who is in Japan studying bomb damage, said he thought the atomic bomb had wrought devastation at Hiroshima

and Nagasaki because of their flimsy wood construction. He said: "If a bomb like that dropped over Hiroshima were dropped over one of our cities, we would lose a lot of glass if the windows were closed. Chicago would require a great many atomic bombs to do any great deal of damage."

De Seversky said the atomic bomb, so far as he could learn, started no fires in the two Japanese cities, but that fires broke out from stoves and gas leaks after the explosion leveled homes and buildings. For that reason, he continued, he remained unconvinced that the atomic bomb could displace "incendiaries and high explosives if we are going to tackle well prepared cities with concrete structures."

It will still be necessary to win air supremacy, both as a defense against the atomic bomb and as a means of employing it offensively, De Seversky argued. For that reason, he said, America must remain strong in the air and should have an independent air force.

Tells Senators That Great Britain and Russia Can't Catch Up in Less Time

WASHINGTON, Nov. 2 (UP).—Dr. James B. Conant, who helped perfect the atomic bomb, estimated today that it would take Great Britain and Russia five to fifteen years to catch up with this country's achievement in atomic development.

Testifying on scientific-research legislation before a joint Senate subcommittee, Dr. Conant, president of Harvard University, said he was not in a position to say how much of the bomb's manufacturing secret Britain possesses.

Representative J. Leroy Johnson, Republican, of California, said that Britain and Canada share with the United States only the scientific knowledge of the bomb, and not the industrial knowledge. He made the statement after talking with Major General Leslie R. Groves, who directed the atomic-bomb project.

A. R. Blackburn, Labor party member of Parliament, said this week, however, that Britain possesses the full manufacturing secret of the bomb, including the technical "know-how."

Senator Carl A. Hatch, Democrat, of New Mexico, told the Senate that there is no chance of getting an effective international agreement to outlaw the bomb. It would be easy to get an agreement, he said, but making it stick would be another thing.

He was asked by Senator J. William Fulbright, Democrat, of Arkansas, "What good will it do to build up a country constructively if it can be destroyed overnight by the atomic bomb?" He replied that there were three defenses—international agreements, military preparation and basic scientific research. He said there is absolutely no analogy between the use of poison gas and the atomic bomb. Poison gas, he said, has been found to be ineffective.

Taft Urges Policing World

WASHINGTON, Nov. 2 (AP).—Senator Robert A. Taft, Republican, of Ohio, suggested today that use of the atomic bomb might be successfully outlawed by giving the United Nations Peace organization police power to see that no nation makes any of the bombs.

He said this plan might include provisions for inspections in all countries, and an understanding that United Nations forces will "move in" if evidence of preparations to use atomic energy militarily is found.

While the Senate debated, Dr. Conant advised against pinning hopes on outlawing such destructive weapons as the atomic bomb.

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LONDON, Nov. 2.—The Earl of Halifax, the British Ambassador to Washington, Air Chief Marshal Sir Arthur W. Tedder and Field Marshal Sir Henry Maitland Wilson, British representative on the combined chiefs of staff at Washington, will join Prime Minister Attlee in his forthcoming talks in Washington with President Truman on the future of atomic energy, it was disclosed today.

Tedder, who is in the United States as a guest of General of the Army Henry H. Arnold, was deputy supreme commander of Allied forces in western Europe under General of the Army Dwight D. Eisenhower until his recent appointment as chief of the air staff of the Royal Air Force. Wilson has been in Washington for the last year. He recently received considerable notoriety and an official rebuke from Attlee for an anti-Russian interview he gave to a newspaper reporter.

In addition to Sir John Anderson, chairman of the British government's Advisory Committee on Atomic Energy, Attlee will be accompanied by Major General E. I. C. Jacob, who acted as an expert military adviser to the British delegation at the United

Nations Conference at San Francisco, and D. H. F. Rickett, scientific adviser to the Cabinet.

Neville Butler, Assistant Under Secretary at the Foreign Office who was secretary general to the British delegation at San Francisco, will be in the group, as will T. L. Rowan, Attlee's principal private secretary; J. H. Peck, assistant principal private secretary, and Francis Williams, Attlee's adviser on public relations.

Put the Scientists in Charge

The point at issue in the controversy over the organization of a foundation for scientific research in Washington is fundamentally whether the direction of its activities shall be dominated by the government or whether, while integrated with the government, it shall have the freedom to go ahead on its own which its purpose demands. More specifically, the battle before the Senate committee having the subject in charge lies between the proponents of the Kilgore bill and those to whom the Magnuson bill seems far preferable. The one measure would repose control of the agency in the hands of an administrator, appointed by the President, with the duty merely of consulting an advisory board. The other would center control in the board by giving it authority to name the director.

In the Magnuson camp are most of our distinguished scientists, including Drs. Conant, of Harvard; Compton, of the Massachusetts Institute of Technology, and Vannevar Bush, director of the Office of Scientific Research and Development, the war agency which made such enormous contributions to victory. These gentlemen now have a champion and spokesman in the person of Mr. Bernard M. Baruch who has just insisted to the committee that the "science cabinet," as he calls it, should consist of a body of men selected solely for the contributions they can make to the advancement of science, that "full power and responsibility should rest with this board" under an executive director to be appointed by the President on the board's nomination.

This, it seems to us, is not only a sensible but an imperative program to follow if the foundation is to attract the services of our first-string scientists. It differs perceptibly from the Kilgore proposal and also from one put forth recently by Professor L. C. Dunn, of Columbia. Dr. Dunn, properly impressed with the vital importance of the prospective foundation, urged that it be made a regular department of the government with a director of Cabinet rank. But, obviously, this again would divorce its control from its scientific staff and open the door to its political manipulation. What the country needs is not a Department of Science to overlap the functions of all the other departments into whose operations science so largely enters but an independent agency of research, a clearing house of scientific discovery.

Minority Report on Atom Control

2 on Committee Want Full-Time, Well-Paid Board

Washington, Nov. 3 (AP).—Five objections to an atomic energy control bill approved by the House Military Committee were cited in a minority report made public today.

Signed by two committee members, Reps. Holifield (D-Cal.) and Price (D-Ill.), it was only the first of several expected before the House tackles the legislation later this month. A group of Republicans among the 10 committeemen reported to have voted against the bill are understood to be drafting a separate report.

Holifield and Price declared:

1. The commission proposed for control of atomic energy development should be composed of "full-time, well-paid members." The committee majority recommended a nine-member commission paid \$50 for each day of work.

2. Commission members should be removable by the President "whenever he deems it in the national interest." The majority recommended that the commissioners, once appointed by the President and confirmed by the Senate, be almost "discharge-proof" except for gross neglect of duty.

3. The administrator to supervise the atomic control program

"should be appointed by the President and serve at his pleasure." The majority favored appointment of a \$15,000-a-year administrator by the commission itself.

4. To emphasize possible peacetime benefits of atomic energy the bill should specify that the administrator be a civilian, not a military man. The majority would leave this to the commission.

5. The government "should be the exclusive producer and owner" of materials used in atomic energy development. The bill backed by the majority would permit the commission to license private concerns to produce, refine or process these materials.

CIO Urges Parleys on Atom, Backs United Nations Control

Washington Bureau

WASHINGTON, Nov. 3.—The CIO Executive Board, meeting here yesterday, adopted a program calling for United Nations control of atomic energy.

The program urges:

¶ Immediate negotiations with Britain and Russia to agree on world-wide atomic energy controls, and extension of the agreement thereafter to the United Nations.

¶ The United Nations to outlaw the use of atomic energy for military purposes, and all production of atomic bombs.

¶ United Nations control of atomic energy raw materials and production everywhere in the world, with full authority to inspect, investigate and police.

¶ Improving present United Nations machinery to make such controls effective and reduce international military rivalry.

¶ After those steps have been taken, "full and continuous disclosure" to the United Nations by all governments "of all information, discoveries and activities" related to atomic energy.

¶ Stimulation, through world-wide public information and education, of peacetime development and use of atomic energy.

¶ Formation in this country of a national agency to deal domestically with atomic energy. The Government, labor, industry, farmers, churches, universities, scientists and military would be represented on such an agency.

¶ Public ownership and control of atomic energy resources in this country.

The Executive Board also adopted a comprehensive program for veterans, calling on Congress to liberalize the GI Bill of Rights by increasing unemployment compensation, expanding educational provisions, increasing subsistence and dependents' allotments for student veterans, and providing for direct Government loans for veterans

going into business.

The resolution also called on the Army to speed up the return and discharge of servicemen available for demobilization. It condemned "the policy of releasing ships to shipping companies" for trade instead of using them to bring back more veterans from overseas.

Gen. Omar Bradley, new head of the Veterans Administration, was commended for modernizing, improving, and liberalizing VA.

Other resolutions:

¶ Opposed compulsory military training.

¶ Opposed return of U. S. Employment Offices to the States.

¶ Urged increasing unemployment compensation benefits.

¶ Urged Congress to vote UNRRA the full appropriation asked by President Truman, with no strings tied to it.

¶ Authorized formal affiliation by the CIO with the new World Federation of Trade Unions.

Bill to Control Atom in U. S. Goes to House

Has No Provision for an International Plan; Senate to Hold Nuclear Seminar

By Raymond J. Blair

WASHINGTON, Nov. 5.—Legislation creating a nine-member commission to handle domestic control and utilization of atomic energy, leaving to later settlement international aspects of the atomic problem, was sent to the House today by its Military Affairs Committee.

The bill was reported favorably coincidentally with these developments:

1. Eighteen House members announced plans to hear several atomic energy scientists Thursday afternoon. All House members were invited.

2. The special Senate committee on atomic energy chose Dr. Edward U. Condon, new director of the Bureau of Standards, as its scientific adviser. James R. Newman, former New York lawyer and assistant deputy director of the Office of War Mobilization and Reconversion, was named special assistant to the committee. The Senate committee also will hear scientists explain some of the atomic problems at a seminar Thursday night.

3. Senator Joseph H. Ball, Republican, of Minnesota, will introduce, probably tomorrow, an atomic energy control bill, designed to meet objections to the bill the House committee reported today.

4. The National League of Women Voters said in a letter to President Truman that the United Nations Security Council should "be responsible for the supervision of production and use of atomic power and the control of weapons derived therefrom." Anna Lord (Continued on page 30, column 4)

Strauss, president, declared the United States must formulate at once a domestic policy "in the interest of world peace."

Representative Leslie C. Arends, of Illinois, House Republican whip and a Military Affairs Committee member, said he would file a minority report on the atomic energy bill. The minority objects to failure of the committee bill to retain Congressional control over licensing foreigners to work on atomic energy.

The committee report said legislation for internal control of atomic energy could be enacted "without touching upon the significant international problems raised by the development of the atomic bomb." As for the atomic secrets now in sole possession of this country, "the bill also does not change the status quo," the report noted. The measure would prevent disclosure of secret atomic information without Presidential approval.

The bill has these purposes, the report said: (1) To centralize in one government agency control over all government property used in nuclear fission; (2) to give this agency full supervision over all fissionable substances and all uses of atomic energy involving a national hazard or military or industrial value; (3) to promote development of methods used for release of atomic energy; (4) to encourage nuclear research and

avoid interference with private research in this field; (5) to "avoid interfering with the status quo in relation to the secrets of the atomic bomb" and give authority to prevent disclosure of atomic bomb project secrets.

The Senate atomic committee announced it would hold public hearings after an inspection of atomic energy plants. House members will hear these scientists Thursday: Drs. H. C. Urey, Leo Szilard, E. W. Condon and L. B. Borst.

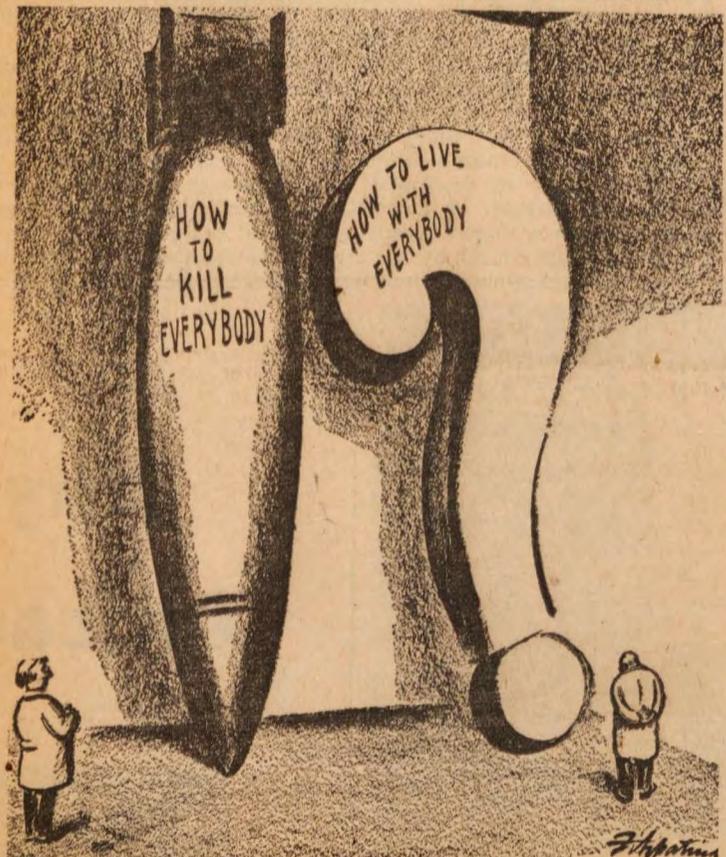
Kaiser Suggests a Defense

WASHINGTON, Nov. 5 (UP).—Henry J. Kaiser, west coast shipbuilder, told Congress today that one of the most important safeguards against atomic bomb attacks would be to decentralize the national industrial plant.

"If there are any protective measures against this device," he told a Senate subcommittee, "decentralization is one of the most important."

"When I look at the map showing the concentration of ordnance industries and then see the great inter-mountain area where there are none, I am convinced that our ordnance factories are altogether too concentrated to provide for our national safety."

"LABORATORY OF HUMAN AFFAIRS"



Fitzpatrick in The St. Louis Post-Dispatch

BRITISH SEE ATOM BOMB AS KEY TO COOPERATION

By MALLORY BROWNE

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 3—To Londoners, Prime Minister Attlee's sudden trip to Washington next week recalls the bomb disposal guards of the blitz. They still remember only too well here the tense drama of those days and nights during the air attack on London when a team of ultra-tough technicians would be summoned to deal with a 1,000-pound delayed-action bomb liable to go off any moment and blow a whole neighborhood to bits.

Now it is the atomic bomb that has fallen on international relations generally and Anglo-American relations in particular.

In desperate effort to keep the explosive repercussions of the atom from wrecking the whole world diplomatic structure, Mr. Attlee is hurrying off to the United States with his British bomb experts to join President Truman and Prime Minister Mackenzie King of Canada in discussing the best methods of atomic bomb disposal.

Serious Business

For the British this is deadly serious business. Britain will speed Mr. Attlee and his principal aide, Sir John Anderson, on their way to Washington with the deep conviction that the coming talks with Mr. Truman are fully as important for peace as any of former Prime Minister Churchill's meetings with the late President Roosevelt were for winning the war.

There are three reasons why so much significance is attached to Prime Minister Attlee's trip by the British. The first is that the atomic bomb and its terrifying potentialities, with characteristic English delayed-action timing, have now developed into a burning issue in Britain.

The second is that in the British view the relations between the western powers and the Soviet Union hinge primarily on what is done about the atomic bomb.

And the third is that financial negotiations of scarcely less vital importance to Britain than even atomic bomb are now under way in Washington, and it is hoped that Mr. Attlee may be able to help bring them to a successful conclusion.

These three points add up, in British eyes, to the questions: Can Britain and the United States get along together, and can they together get along with the Soviet Union?

For it is just as well for the American public to realize that the British do not like the way Washington has handled the atom bomb question any more than they like the abrupt way that lend-lease was terminated.

Attitude of British Public

Rightly or wrong, the general public in Britain has the impression that the United States Government is trying to keep the secret of the atomic bomb to itself.

Attlee Will Urge a Course Intended to Win Good-Will of Russians

Despite President Truman's later assurances that Britain and Canada knew all there was to know about the production of atomic energy, the average Briton is still skeptical.

He finds it hard to reconcile these declarations with Mr. Truman's statement in his speech, in which he described the atom bomb as a sacred American trust and proclaimed that the coming dis-

cussions would not be concerned with the manufacturing processes of the atomic bomb.

In other words, the man in the street in Britain is worried because it seems to him that after all that the British scientists contributed to atomic research the United States is now holding back on Britain.

Want Russians to Get Bomb

One does not find this suspicion in official quarters, at least not to the same extent. But what one does find in British Government circles, as in the British press generally, is sharp criticism of American policy of not sharing the atom bomb secret with the Soviet Union.

Just what precise policy Prime Minister Attlee will advocate in Washington remains to be seen. It is probable that the big debate next Wednesday on President Truman's twelve points, when both Mr. Attlee and Mr. Churchill will speak, will throw some light on the subject.

But already it is certain that under heavy popular pressure Britain's Labor Government has adopted the view that atomic energy must be regarded as all humanity's heritage and that any temporary strategic advantage that might be gained by withholding the secret for the next few years would be more than offset by the antagonism that this would arouse in Moscow.

Nearly all leading British newspapers and weekly magazines have voiced this view bluntly. An editorial in The Times of London, for example, said that the bomb should be, as Mr. Truman said, a "sacred trust." But the editorial continued that "it seems difficult to resist the conclusion that the United Nations Organization and its Security Council is in the end the right and natural repository and administrator of this trust."

The editorial added that the future prospects of peace depended upon confidence, and concluded: "But what hope can there be of establishing such confidence where it is most needed so long as the most powerful weapon yet devised by modern science is withdrawn from the cognizance of the Se-

curity Council and maintained as the prerogative and monopoly of one power?"

When allowance is made for the traditional understatement of The Times, it is evident from these remarks how strongly the feeling on the issue runs.

Furthermore, it is significant that the sentiment does not follow party lines. Among the influential weeklies, for example, both the

Conservative Spectator and the left-wing New Statesman and Nation take the same strong line editorially. An editorial in the latter said of Mr. Truman's speech: "What stood out from this speech was its insistence on the overwhelming might of the United States and her determination to retain the advantage she possesses as the only power at present in a position to manufacture atomic bombs."

"In the immediate future to which this speech was a preface two urgent questions face us, which are not separable—our joint relations with Russia and the control of atomic energy," the editorial continued. "The Russians are difficult to deal with, not because their victories have made them overconfident but for the opposite reason. The devastation of their territory and the slaughter of their best troops between Stalin-grad and Berlin have given them an anxious sense of insecurity, which the American monopoly of the atomic bomb has greatly aggravated."

View of Moderates

Similarly an editorial in the moderate Spectator spoke out as bitterly against "Mister Truman's almost defiant reaffirmation that the United States is not going to share the secret of the atomic bomb with anyone—not at present, at any rate." Like the editorials in The Statesman and Nation, The Spectator's editorial said that Russia was in a deplorable state of mind and "any suggestion that she is being put on a different level from her western Allies, a lower level, makes her impossible to deal with."

"And that is precisely what is happening in the matter of the atomic bomb," the editorial continued. "So long as America possesses the secret and Russia does not, America is a superior and Russia an inferior military power. And that relation is created solely from the conviction—that Russia cannot be trusted with the secret."

"So long as that situation continues, confidence between the Allies is shattered. And so long as

confidence is shattered the dangers to peace are immense."

These quotations, which are entirely typical of British opinion at present, are important because they reveal clearly how Britain is thinking about America, about Russia and about the atomic bomb. They show how it is that the British today are definitely annoyed with the United States and disagree with the American policy of secrecy on the atom bomb because they believe this policy will intensify Russian distrust of the western powers and thus make confidence between the three great Allies still more difficult to achieve.

Differ in Emphasis

This underlines an important difference of emphasis—at least between the British and American approach to the Washington talks. The British start from the premise that if peace is to be preserved and the world saved from the destructive effects of atomic warfare, the confidence of Russia must be won by trusting her with the atomic bomb secrets. The Americans, on the other hand, appear more inclined to take the view that the English-speaking countries, to begin with at any rate, should assume the trusteeship of the atomic bombs.

Probably Mr. Attlee will seek a compromise solution by proposing to entrust atomic control to the Security Council of the United Nations Organization or rather to the Big Five, including Russia, who are permanent members of the Security Council.

Although officially Prime Minister Attlee's talks in Washington with President Truman and with Prime Minister Mackenzie King are to be confined to the atomic bomb, it is believed in London that certain other matters are bound to be discussed.

Economic Negotiations

In particular, the financial and economic negotiations that have been going on in Washington are considered in London to be the keystone in the arch of Anglo-American cooperation. There have been reports lately that these talks have been going badly—in fact, that they are on the brink of complete collapse—and that Mr. Attlee really is going to the United States to try to save them from disastrous failure, just as much as to discuss the atomic bomb.

Although these reports may be exaggerated, it is felt in London that the importance to Britain of the financial questions now under discussion in Washington cannot be overstressed. In British eyes a mutually satisfactory agreement in trade and monetary matters would constitute the best evidence that Anglo-American cooperation rested on a solid foundation, and that from the basis of this solidarity Britain and the United States could then approach with confidence the closely connected problems of the atomic bomb and relations with the Soviet Union.

On The Record

By Dorothy Thompson

The Party Line on the Atomic Bomb ^{11/5}

If the British Prime Minister is coming to the United States to ask Mr. Truman to give the atomic bomb to the "Security Council" of UNO, he is coming in vain. Mr. Truman can't give it, because it is not his to give.

The atomic bombs on hand, the formulas and equipment for their manufacture, belong to the American people. They were given us by international science, which chose to repose this most dangerous of discoveries in the western world.

Niels Bohr, Lise Meitner, Albert Einstein, Dr. Victor Weisskopf, Enrico Fermi, Prof. James Frank, Dr. Leo Szilard and many others could have chosen to take their brains from Axis countries to the Soviet Union. They didn't. They brought them to England and America.

What they have given us, developed with our own wealth, is a sacred trust for humanity. What they are asking us to do is to devise means whereby atomic science will never again be employed for destruction.

What they are warning us is that if its use is not abolished, the world faces the possibility that two thirds of the human race may perish. They ask that atomic science be barred from warfare and released for creative energy. And that is what we should employ all our might to do.

What Kind of Peace?

Giving the atomic bomb to the Security Council means giving it to five great powers, none of which has been willing to accept any restrictions, or external judgments, even if all others are unanimous. Each insists on being a law unto itself. Thus, the idea that if the war departments of Britain, France, China, the Soviet Union and the United States all have a nice supply of atomic bombs, peace and good will between us will be that much nearer is worthy of a meeting of the best minds of Bellevue's wards.

Atomic bombs distributed to the five corners of the globe would, of course, bring the end of this planet nearer. That would, indeed, be perfect peace.

Given universal possession of the weapon, each general staff would make the only kind of war plan which any war college could make under such circumstances—how to jump a potential enemy first.

Certainly the world has least to fear from powers with representative governments which cannot make undeclared wars.

Ask Abolition? No

There is something sinister in this international scramble after the atomic bomb. The fact that the Soviet Union did not have it passed her a wonderful opportunity for moral leadership—that was to issue a call for immediate international abolition, under international control, of atomic weapons, and, progressively, of V-weapons, bombing planes, and inspection and control of other instruments of warfare which make possible blitz exterminations of great population centers inhabited, for the most part, by the proletariat.

But no. I do not know whether Mr. Byrnes reads regularly the Communist Daily Worker, but if he doesn't, he should. Maybe the Comintern has been dissolved, but then there is a remarkable osmosis of thought between the Communist press from Moscow to New York, and from London to Paris and Rome.

The Communist press bitterly criticizes our handling of the atomic bomb. But is it asking for the abolition of atomic warfare? Is it promoting a strengthening of UNO through restrictions on the war-making powers of all na-

tions, great and small? Is it backing up the scientists' frantic plea for genuine worldwide prohibition and inspection of uranium mines and laboratories and the diversion of atomic science to experiments in its constructive use? Is it applauding Einstein's plea? Not at all.

Those who want to strengthen UNO by a new international law to which all nations must be subject and by a genuine international police to enforce that law are accused of trying to destroy peace.

Not Interested in Our Security

As in 1942 and '43 the Communist world press was crying in repetitive claque for a second front in Europe, regardless of the warnings of the western military that an ill-prepared invasion would be disastrous; so now, not a single consideration of American security interests it; it wants atomic bombs for Russia with no strings attached while it uses the word "Fascist" to describe American policy, and speaks of "American imperialism" in verbiage almost identical with that of Dr. Goebbels.

Universal peacetime service for American citizens is attacked as a warlike act, and as the foundation for American imperialism, not American defense. But nowhere do the Communists press for the universal abolition of conscription.

The peacetime conscription of the Soviet Union, which has been a feature of Soviet life for a quarter century, is entirely for defense; entirely for defense is the creation of a new Polish army of half a million, armed, commanded, and politically commissared by Russians or Russian-trained Poles; entirely for defense the new Yugoslav army, of half a million, commanded by a years-long Russian agent; entirely for defense the new Czech legions armed and equipped by the Russians, meshed in with their military system, and supervised by political commissars; entirely for defense the transfer of every bit of armament machinery and equipment from Germany to Russian soil; entirely for defense the exclusive Russian control of the great heavy industry of Silesia; entirely for defense the proposal that the only other great heavy industry of Europe, the Ruhr, should be internationalized, with Russian participation—though the western Allies may not participate in control of the Silesian industry.

Entirely for aggression are all other armies and armaments, wherever they may be—all leading to the logical conclusion that the United States is a potential aggressor, who should—according to international agreements—be struck in its nefarious Fascistic purposes before it strikes first. Meanwhile, Russia must get the atomic bomb.

Strict Reciprocity

This column has never accepted the doctrine of the "enforcement of peace" as set forth in the arguments for the San Francisco charter. It holds for universal restrictions on war-making powers, on all nations including the United States.

But it holds for strict reciprocity. The propaganda that monstrous armaments for one power are "peace loving" and "defensive" for another are Fascistic, war mongering, and aggressive, is obviously insincere, and fraudulent, if not conspiratorial, criminal, and treasonable.

ATOM STUDY LINKED TO WORLD CULTURE

London Parley Gets Proposal for Commission on Scientific Value of Power for Peace

By BENJAMIN FINE

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 6—Stressing the role that science could play in helping to maintain world peace, Auguste Buisseret, Belgian Minister of Public Instruction, recommended today that the United Nations Educational Conference, which is meeting here to establish an international organization, set up a commission to study the question of nuclear energy from the scientific rather than the political viewpoint.

A United Nations body of this kind, he said, could prove useful in acting as a clearing house for the work being done on the atomic bomb. It would combine the liberty of research for individual scientists with some over-all control by an international organization.

Avoiding political issues entirely, M. Buisseret pointed out that the educational body could become the repository for all scientific advances. The aim, he explained, would be to avoid secret research, as all research would be put at the disposal of the other nations.

Agreeing with his colleague, Prof. Gustave Magnel of the University of Ghent, a member of the Belgian delegation, said that if the educational organization formed a scientific commission it would mean better international relations. Every scientist should be permitted to do his own research, he observed. This would be reported to his government and then the government, in turn, would report to the international body.

Cooperation Stressed

The role that science could take to help maintain peace was stressed by other delegates at today's sessions. It was essential, the educators held, to receive the fullest cooperation from scientists of the world.

Both Britain and the United States introduced resolutions proposing that the word "scientific" be included in whatever final name was chosen for the international organization.

At present the tentative name used is the United Nations Educational and the Cultural Organization.

The United States delegation recommended that the role of the scientists and the place of science and scientific knowledge be emphasized and more explicitly expressed in the constitution now being formulated.

Going further, the Cuban delegation proposed that a United Nations assembly of representatives of scientific and learned societies be established by the organization. This assembly would promote the interchange of ideas and knowledge in the fields of science, technology and other branches of learning.

National Jurisdiction Urged

With all five commissions set up, the conference considered detailed proposals at morning and afternoon sessions. Delegates are now drafting various blanks to appear in the final charter.

An amendment submitted by the United States delegation held that "nothing contained in this present constitution shall authorize the organization to intervene in matters which are essentially within the domestic jurisdiction of any State."

One of the most urgent matters demanding attention is the setting up of an interim commission to act pending the first meeting of the new organization which, it was suggested, would be held next May.

Although Russia has not attended the conference, M. Buisseret was the first delegate to refer publicly to her absence. When the question arose of whether the interim commission should be limited to fifteen members, the Belgian delegation urged that it be open to all countries, as Russia might decide to join the organization.

Other delegates likewise proposed that nothing be done by the conference that would preclude the ultimate entrance of Russia.



I'd Rather Be Right

By Samuel Grafton

It is wonderful to follow the many patterns of flight taken by the human mind after a glance or two at the atomic bomb. We have now reached a stage at which it has perhaps become possible to classify typical reactions to the bomb under generic headings, as for instance:

LET'S OUTLAW IT: The Senate tangled itself in a bomb debate the other day, led off by Mr. McKellar of Tennessee, who demanded that we make all use of the atomic bomb illegal by international agreement. But since the other nations do not as yet have the bomb, they would have to pledge themselves not to use something they don't possess, a situation which, for the time being, makes the argument moot, and would perhaps lead to rather tart diplomatic exchanges. There is something vaguely off-center about a plea to the world by the United States to make illegal a device which we ourselves have spawned, as if we had become frightened of our own offspring.

Mr. McKellar's plea is really an argument that we ought to uninvent the bomb. But the bomb cannot be uninvented; it exists; and, in any case, it is not atomic energy which makes the world horrible; it is the condition of the world which makes atomic energy horrible. Mr. McKellar lacks proposals for making the world less horrible; he would simply keep the blockbuster and throw the A-bomb away, a solution lacking in reality, and one which flees the problem.

LET'S HIDE IT: This proposal, entertained by Mr. Truman, holds that if we can't make the bomb an outlaw, let's keep it a secret; if we can't chuck it, let's cherish it. Scientific testimony has disposed of this particular flight from reality.

AW, SHUCKS, IT AIN'T SO BIG: Major Alexander P. de Seversky, reporting from Japan, declares that the power of the atomic bomb has been exaggerated. He does not believe atomic bombs, of themselves, started the great fires of Hiroshima and Nagasaki, but that the fires were started by hot stoves. (Maybe we ought to outlaw hot stoves.) The major believes we ought not to let ourselves become "hysterical" about the power of the atomic bomb; he does not feel that an atomic bomb could do much more damage in a city like New York than one ten-ton blockbuster; and he thinks there is still a place for old-fashioned incendiaries and high explosives. The major does not want to be considered a reactionary, and he concedes that the atomic bomb is "a great step in the science of demolition," and that "great strides may be made," and that is far as he goes.

One would desperately like to believe that the major is right, but one remembers how a test bomb turned a large area of New Mexican desert sand into glass, without benefit of hot stoves, and how the head of our atomic bomb project has testified that one atomic raid could kill 40,000,000 Americans, which wouldn't seem to leave room for many more great strides.

Maybe the major is right, but to minimize the bomb, to consider it only a more powerful form of an old weapon, rather than a baby form of a new horror, is one way of fleeing from it.

SQUARING THE CIRCLE: And perhaps the most honest answer to the atomic bomb is to admit frankly that there is no answer to the problems it raises, in the world as it is now constituted; that the conditions for a solution do not yet exist. Those who favor a world government are certainly on the right track, and are operating in the best tradition of American idealism; but they are guilty of an evasion, too; it might be called the leftward evasion, which consists of jumping out of the window to show that one likes fresh air. To explore patiently our relations with our allies, to avoid the glamorous and the spectacular, to try, devotedly, to melt down the nasty intricate barriers which lie between us, is perhaps the only way to create the conditions necessary before we can hope to handle the bomb. Those who take this road can, of course, travel with the profound assurance in their hearts and minds that it is perfectly possible to fail.

NYP 11/7

'Don't Use Atom Bomb Ever'

Would End All Peace, U. S. Officer Warns

The world will never be offered another chance to bring about international accord among nations if the atomic bomb is ever again unleashed in warfare, Maj. Gen. Leslie R. Groves, officer in charge of the Manhattan Project for the bomb's development, said today.

Groves made his statement at the opening of Town Hall's annual lecture series.

The fearsome, devastating properties of the bomb alone have given the world "a compelling reason to strive for world accord," he said.

Asserting that force must not be a substitute for moral principle, he said, however: "We must have adequate strength to insure a safe period for the gradual evolution of sound national and international policies throughout the world."

Groves also envisaged the ultimate industrial, medical and scientific exploitation of atomic energy, but said he was unable to

set a date in the foreseeable future when atomic energy would be available for those purposes.

Ball Introduces New Atom Bill

Limiting Secrecy to Military Use

Senator, Denouncing May-Johnson Measure, Backs 9-Man Board of 5 Department Heads and 4 Prominent Scientists

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 6—Denouncing the May-Johnson Atomic Energy Bill as undemocratic and monopolistic, Senator Joseph H. Ball, Republican of Minnesota, today introduced in the Senate a substitute act intended to eliminate objections voiced against the House measure, which was drafted by the War Department.

Like the House bill, Senator Ball's law would create a commission of nine members to control and develop atomic energy, but he would include the Secretaries of State, War, Navy, Interior and Commerce in its membership. The four other members would be prominent scientists and engineers, appointed by the President and confirmed by the Senate for six-year terms. One of these appointed members would serve as chairman.

The commission would be authorized to form three advisory boards for research, industrial application of atomic energy, and military use of such energy. An administrator and deputy administrator would perform administrative duties, and they would receive \$15,000 and \$12,000 annually, respectively. Each of the nine members of the commission would also have a full-time assistant whose salary would be \$8,000 a year.

Under the Ball measure there would be no security provisions on atomic energy activities except those necessary to safeguard military application of nuclear force. Violations of the military security provisions, however, would be punishable by a fine up to \$10,000 or ten years imprisonment, or both.

Research Unhampered

Thus fundamental research, including industrial study, would be unhampered, according to Senator Ball. He added that general supervision would be exercised by the commission only through its control of raw materials, safety regulations, and its authority to grant funds for research.

In submitting his measure, which now goes to the McMahon special atomic energy committee in the

Senate for consideration Senator Ball stated:

"I agree with most of the scientists who have expressed themselves on the May-Johnson bill that as it stands it is not only undemocratic, in that it creates a gigantic monopoly which would function in complete secrecy, but it also is impractical, because its stringent secrecy and control requirements would slow down rather than speed up both fundamental research and research on peaceful applications of atomic energy.

"I have placed five Cabinet members whose departments inevitably have a vital interest in this whole development on this commission. Top-level Government policy in all of these departments will be tremendously affected by the developments in atomic energy and the heads of those departments should be on the control commission, along with top-flight scientists and engineers."

Seversky Is Contradicted

CHICAGO, Nov. 6 (AP)—Three scientists who worked on the atomic bomb at the University of Chicago today called Major Alexander P. de Seversky's view of the weapon a "gross underestimate."

A statement issued by Drs. William Rubinsen, Melvin Friedman and Leonard I. Katsin said Major de Seversky, aviation authority, calculated that 200 B-29's with ordinary explosives would do the damage of one B-29 with the atomic bomb.

"If a raid of only 200 'Superforts' with ordinary explosives can wipe out Hiroshima, as the atomic bomb did, these same 200 'Superforts' using atomic bombs could, in a single raid, wipe out 200 cities with a population of about 300,000 each," the statement said.

"The United States has only about eighty cities with a population between 100,000 and 500,000. Remember, the bombs dropped on Japan were the first atomic bombs ever made. They are firecrackers compared to what will be developed in ten or twenty years."

Molotov Address Asserting That Atomic Bomb Cannot Be Kept Secret From Russia

LONDON, Nov. 6 (AP).—A partial text of Foreign Commissar V. M. Molotov's address tonight, as broadcast by Moscow and recorded here:

After several years of heavy war, we are celebrating today the twenty-eighth anniversary of the great October Socialist Revolution in conditions of peace and glorious victory over Fascism.

Behind us are four years of war against Hitlerite Germany that tormented our country and the whole of Europe, and also the war in the East, started by Japan, into which we had to join in the autumn of this year.

In this heroic struggle, in which the Soviet people have taken a decisive part, peace for the peoples of the whole world has been won, and the main hotbeds of world Fascism and world aggression in the West and in the East have been liquidated.

Now we have the possibility of returning to peaceful labor to consolidate our victory. As Comrade Stalin said, our Soviet people did not spare energy and labor in the cause of victory. We have lived through difficult years and now each one of us can say: "We have won, and from now on we can consider our motherland rid from the menace of German invasion from the west and from the menace of Japanese invasion from the east."

The long-awaited peace has come for the peoples of the whole world.

The Germans invaded our country, calculating that the unexpectedness of their bandit attacks would assure them success. Not only in Germany, but in other countries also, there were many who considered that the Soviet Union would not last long, and that in a few weeks, or at most, according to some calculation, in a few months, Germany would smash the Soviet Union and Hitler would celebrate victory.

Predicted Soviet Defeat

After the comparatively easy successes of the Hitlerites in western Europe, this seemed to many to be inevitable. This conclusion was reached in the first place by those who in general did not recognize the logic of the October revolution in Russia, and also by those who proved unable to understand the truly national character of the Soviet state created by our revolution.

The German invasion of the Soviet Union was a great trial also for our foreign friends, who followed with bated breath the exceptional difficulties which our country experienced in the first period of the war. The Soviet Union remained on its feet despite the unexpectedness of the attack.

The material damage and deep wounds inflicted upon it in the first years of the war did not undermine its physical and spiritual powers. The Red Army was able to cope with and recover from the first blows. The Soviet people gathered together and exerted their force to insure a crushing repulse of the enemy.

Then the time came when our Army passed from the defensive to the offensive, first on separate sectors of the front and then along the whole front.

The interests of self-defense dictated the need to form a united anti-Hitlerite front of large and small democratic states.

It is well known to all that the Anglo-Soviet-American coalition successfully fulfilled its historic task in organizing the common struggle of the democratic countries against Hitlerism.

It is also well known that the opening of the second front in western Europe, when Germany found herself caught in pincers between two fronts, made the position of German Fascism hopeless.

At the same time, it must not be forgotten that the decisive turning point in the position on the Soviet-German front took place a year before the opening of the second front, when the Hitlerite troops ignominiously rolled back under the mighty and ever-growing offensive of the Red Army.

Now the state, created by the October revolution, was able not

only to defend itself from the Fascist attack but to pass over to the offensive, so as to make an end of the chief hotbed of Fascism and aggression. Then it became clear to all that the Soviet power does not resemble the defunct power of czarism in the time of the first world war.

Now it has become obvious that the Soviet state can with honor stand up for itself, and is able to pass the most difficult tests that have ever been in the history of war.

Hitlerite Germany threatened not only the Soviet state. Before its attacks on the Soviet Union, the German Fascists captured Norway, Belgium, Holland, France, Greece and Yugoslavia.

The Germans had among their allies not only Fascist Italy but also several other states which had concluded alliances with Germany. Spain and several other countries gave Hitler full and open support. The threat of a Hitlerite attack hung over Britain.

If, later, the Soviet Union had not won success, the whole of Europe might have come under Hitler's heel. The Hitlerites were already putting the "new order" into practice on their various fronts.

The voices that echoed the Fascists, like all the Quislings and Lávalls, had already started work under their German masters. Everywhere the domination of Hitlerism was established by the destruction of all democratic institutions and working class organizations.

At the same time, the Hitlerites plundered the enslaved countries and squeezed out of them all the material resources for still further supplying and arming their bandit Fascist hordes.

Hitlerites Had Heads Turned

The first successes of the Nazi attack on the Soviet Union still more turned the heads of the Hitlerites. They began to speak more openly than ever not only about their adventurist plans for the domination of the German race over all the peoples of Europe but outside Europe as well.

The German Fascist theory of the domination of their "higher" race over other peoples who had been put by them into the category of "lower" races became a direct threat to the existence of European civilization.

In all the states which were invaded by the Hitlerite band the peoples proved to be badly prepared for repulsing the German invaders. Only gradually, thanks to the efforts of the patriot-democrats, the democratic forces of resistance to the invader began to form and grow.

But even in those countries like Yugoslavia, where the whole people gave support to the revolt against the invaders, there was not enough support to break the military might of Hitlerism.

Only when our Army passed over to the offensive and began to defeat German troops, tearing from them the halo of invincibility, were wide possibilities opened for the liberation of the people enslaved by German imperialism.

Moving westward, the Red Army brought liberation to its neighboring countries and the other peoples of Europe.

The Soviet armies, together with the armies of its allies, have emerged in the role of liberators of the countries of Europe, including those states which severed their alliances with Germany and entered the ranks of the peoples fighting for the liquidation of Hitlerism.

Thus the cause of liberation of the countries of Europe from the yoke of Hitlerism will be entered as a brilliant page into the history of our victorious Red Army.

Fascist Italy was the first to come out from the side of Germany, which had unleashed the war in Europe.

At the moment of the German attack on the Soviet Union, the governments of Romania, Hungary and Finland, having concluded military alliances with Hitlerite Germany, led their countries into the war against the Soviet Union. Bulgaria, the government of which at that time was made up of Hitlerite agents, also proved to be an ally of Germany.

Thus European countries with

Fascist regimes bound up their destinies with the fate of Hitlerite Germany in the second world war.

Hence the defeat of Germany not only the defeat of German Fascism. It led to the defeat of Fascism in other European countries. Consequently, the significance of our victory must be seen not only in the light of the defeat of German Fascism but in the light of military, political and moral defeat of Fascism throughout Europe.

After the ending of the war in Europe the Allied powers were faced with the task of liquidating Japanese aggression in the East so as to hasten the restoration of peace throughout the world.

The Soviet Union could not stand aside in the solution of this question, both by reason of mutual obligations existing between the Soviet Union and its allies and because this was insistently necessary in the interests of our security in the East.

Japan Was Constant Threat

In addition, Japan in the past had attacked our country more than once, and there existed in the East for our state a constant threat of Japanese invasion.

All this rendered inevitable the entry of the Soviet Union into the war against Japan.

It is not difficult to be convinced that, from the time when German Fascism began to suffer defeat after defeat on the Soviet-German front, the result of Japanese aggression in the East was predetermined.

The Soviet Union, which finally took the field against Japan, hastened the latter's defeat and thus hastened the conclusion of the war in the East.

Japan capitulated to the Allies, suffering the same fate as Hitlerite Germany. Thereby, not only the plans of German imperialism for mastery in Europe were shattered, but also the pretensions of Japanese imperialism for mastery in Asia.

In addition, these countries had regarded until recently their positions both in the West and in the East as stages in the conquest of world power, showing by their example the aggressive intentions of such an adventurist war in our time.

The defeat of Japanese imperialism, as the chief hotbed of Fascism and aggression in the East, and the liberation of China from the Japanese invaders, are of tremendous positive importance for the democratic development not only of the countries of Asia but of countries outside Asia as well.

To consolidate this victory is in the interests of all democratic states.

Asks Joint Control of Japan

It is therefore understandable that the Soviet Union attaches such great significance to the negotiations between the Allies on the establishment of due control by the main Allied powers who participated in securing the surrender of Japan.

The differences which exist in this question have not yet been eliminated. But the Soviet Union expresses its confidence that all the peace-loving powers are deeply conscious of the need for consolidating the victory over the aggressor Japan, and for creating in this connection the appropriate conditions for collaboration among the Allied powers.

Both Germany and Japan were forced to surrender unconditionally to the Allies. Thus the Anglo-Soviet-American coalition achieved the aim it set for itself.

The people of our country can now recognize with satisfaction that a decisive place has been taken by the Soviet Union in the victorious conclusion of the second World War in the interests of the democratic states, and particularly in the liquidation of the most dangerous seat of Fascism and aggression, Hitlerite Germany.

The Soviet people called its war against Hitlerite Germany the great patriotic war. By the example of the Soviet people, patriots of other states learned how one must fight for one's motherland, for its liberty and independence.

Fought for Peace in Europe

It should be noted that the Soviet people not only liberated their own country, but also waged the heroic struggle for the restoration of peace and liberty throughout Europe.

A year ago Comrade Stalin said: "Today every one recognizes that the Soviet people by its selfless struggle saves European civilization from the Fascist program makers." This great service of the Soviet people is recognized by all.

The second World War differed in many respects from the first. Above everything else, it differed in the scale of which the nations were involved, and also in the loss of life and the material damage which it caused.

Four-fifths of the population of the world took part in this last world war in one way or another. The number of troops mobilized in both camps exceeded 110,000,000. It is practically impossible to name a country which was really neutral during these years. An untold price in human life and in the devastation of many states has been paid by humanity for having allowed the second World War, that is to say for failing to take timely measures against the aggressive forces of Fascism which unleashed this war on such an unparalleled scale.

This war was forced upon our people, who proclaimed a great

patriotic war in answer to the assault.

In attacking the Soviet Union, Hitlerite Germany aimed not only at seizing our territory. Hitlerism had declared its aim of extermination of the Russian people and the Slavs in general, and from the moment when the Russian people and the other peoples of the Soviet Union subordinated all their efforts to Stalin's call—"Everything for the war"—and finally broke the backbone of the German army, the Hitlerite savages stopped at nothing in carrying out their big-scale plans in the territories they had seized.

To forget that would be a crime against the memory of the millions of innocent victims, against their orphaned families, against the entire nation. Nor can we forget the enormous material damage which the German invaders and their allies inflicted on us in the many long months during which they ran wild on Soviet territories.

For all this the major war criminals, before all else, must be made to answer. The German Fascist invaders wholly or in part destroyed or burned 1,710 towns and more than 70,000 villages and hamlets in our country. They burned or destroyed more than 6,000,000 buildings, and left about 25,000,000 people homeless.

Among the towns that were destroyed or very severely damaged are some of the biggest industrial and cultural centers of the country: Stalingrad, Sevastopol, Leningrad, Kiev, Minsk, Odessa, Smolensk, Kharkov, Voronezh, Rostov-on-Don and many others.

Factories and Farms Looted

The Hitlerites destroyed or damaged 31,000 industrial enterprises, which employed some 4,000,000 factory and office workers. The Hitlerites sacked and looted 98,000 collective farms, including the majority of the collective farms of the Ukraine and White Russia. They slaughtered, confiscated or shipped to Germany 7,000,000 horses, 17,000,000 head of cattle and tens of millions of pigs and sheep.

The Extraordinary State Commission has estimated the direct loss alone to the national economy and our citizens to be the sum of 679,000,000,000 rubles.

We cannot forget all this. We must demand from the countries which unleashed the war at least partial restitution for the damage they caused. One cannot contest the justice of this desire of the Soviet people. We must not pass by the fact that the decisions of the Berlin conference of the three powers on reparations from Germany have not yet been satisfactorily implemented.

However, among us there are no supporters of the policy of vengeance in regard to the defeated peoples. Comrade Stalin has pointed out more than once that feelings of revenge or retribution for wrongs are bad counsellors in policy and in relations among nations.

We must be guided in regard to the vanquished nations not by feelings of revenge, but by the effort to prevent a renewal of aggression and to put possible new aggressors in a position of literal isolation among the people. It is not past wrongs that should actuate us, but the interests of safeguarding peace and security for the nations in the post-war period.

It is beyond question that the interests of lasting peace require the peace-loving nations to have the necessary force of arms at their command. At any rate, this applies to the countries charged with the major responsibility of seeing that peace is maintained.

Deplores Arms Race

However, interests of safeguarding peace have nothing in common with the policy of an armaments race among the great powers, such as is preached abroad by some particularly zealous advocates of the policy of imperialism.

In this connection a word must be said about the discovery of atomic energy and about the atom bomb, the colossal destructive force of which was displayed in the war against Japan. Atomic energy has not yet been tried, however, for averting

aggression or safeguarding peace. But it is not possible at the present time for a technical secret of any great size to remain the exclusive possession of some one country or some narrow circle of countries.

This being so, the discovery of atomic energy should not encourage either a propensity to exploit the discovery in the play of forces in international policy or an attitude of complacency as regards the future of the peace-loving nations.

A good deal of noise is also being made about the formation of blocs or groups of states, as an end of particular foreign-policy interests. The Soviet Union has never joined groups of powers directed against other peaceable states. In the west, however, attempts of this kind have been made, as is generally known, more than once. The anti-Soviet nature of certain such groups in the past is equally well known.

In any case, the history of blocs and groups of the western powers indicate that they do not tend to bridle aggressors, but, on the contrary, to encourage aggression, particularly on the part of Germany.

Vigilance Must Be Kept

Hence there must be no relaxation in the vigilance of the Soviet Union and other peaceful states on this score.

The restoration of world peace has by no means led, and could not have led, to a restoration of the pre-war position in international relations.

For a certain time Germany Italy and Japan have dropped out of the list of great powers which determined the tone of international affairs as a whole. This holds for the period when they are under joint Allied control, directed against a resurgence of the aggressive tendencies of these countries, not impeding the development and progress of these countries as democratic peaceable states.

Another fact of no mean importance for the future of Europe is that a number of Fascist and semi-Fascist states have now entered on the road of democracy and are endeavoring to establish relations of friendship with the Allied nations. It is clear that the reinforcement of democratic principles in these countries, instead of being obstructed, should be promoted.

In the camp of the Allied countries, too, the war has brought a good many changes. In the great majority of cases the reactionary forces here have been pushed back considerably from their former positions to make way for democratic principles old and new. A number of European countries have carried out such fundamental social reforms as the abolition of the obsolete system of landed estates, turning the land over to the needy peasants.

Reactionaries Undermined

This undermines the former strength of the reactionary Fascist forces and stimulates the development of the democratic and Socialist movements in these countries.

In certain states such important economic reforms as the nationalization of key industries, the eight-hour working day and others have now been put on the order of the day, giving fresh vigor and confidence to the growing ranks of the democratic movements inside and outside Europe.

Certain reactionary publications are trying to make out that these bold democratic reforms are largely due to the increased influence of the Soviet Union; such arguments, however, are patently unfounded. In a sense it is common knowledge that problems of this kind have been successfully solved in the progressive countries of Europe before now.

This does not mean that the forces of Fascism have been crushed for all time and need no longer be taken into account. You have all heard the Crimea declaration of the three powers on liberated Europe, which says: "The establishment of order in Europe and the rebuilding of the national economic life must be achieved by processes which will enable the liberated peoples to destroy the last vestiges of Nazism and Fascism and to create

democratic institutions of their own choice."

There is still much to be done to insure correct fulfillment of this declaration.

However, there can be no doubt that, in spite of all its unwelcome consequences, the war with Fascism, by ending in victory, has helped in many ways to clear the political atmosphere in Europe and to open up fresh opportunity for the anti-Fascist forces to revive and develop more than ever before.

Such a position undoubtedly is in accord with the interests of the peace-loving states. And it is hoped that the need to destroy the last vestiges of Nazism and Fascism will come home still more strongly to the nations of Europe.

Soviet Extends Friendship

The Soviet Union has also been true to its policy of consolidating normal relations among all peaceable states. In the war years it established relations of friendship with Great Britain and the United States, with France and China, with Poland, Czechoslovakia and Yugoslavia. Today, with nearly all of these countries, it has long-term treaties of alliance and mutual assistance against possible renewed aggression by the states that were the major aggressors in the last world war.

Everything is also being done on our part to normalize matters and establish good relations with other countries which have broken with the policy of hostility and distrust toward the Soviet Union.

The failure of the London conference sounded a certain warning in this matter, but there were also difficulties in the Anglo-Soviet-American coalition during the war. Nevertheless, though not always immediately, the coalition of the three powers was able to find a correct solution in accord with the interests of the entire anti-Hitlerite coalition, and one that took into account also the need for further consolidating the collaboration of the great democratic states.

Now a new international organization, the United Nations, has been created. It was set up on the initiative of the Anglo-Soviet-American coalition, which thus took upon itself the main responsibility for the results of the U. N. O.'s future work.

It is clear to us that the United Nations Organization should not be like the League of Nations, which proved utterly incapable of preventing aggression and organizing forces for crushing possible aggression.

Nor must the new organization become the tool of any one great power, for the claim of any one state to dominate the common affairs of the world is as unfounded as the claim to world supremacy.

Success Needs Collaboration

Only by the joint efforts of the three powers who carried the burden of the war can we secure the victories of the democratic countries over Fascism.

Only such collaboration can promote success in the work of the new international organization for lasting peace.

Expressions of good intentions are not sufficient for this. Such intentions must be proved in ability to carry out this type of collaboration in the interests of all the peace-loving states.

The Soviet Union has been and will continue to be a reliable bulwark in the defense of peace and the security of the peoples, and is ready to prove this, not in words but in deeds.

The four years of war with Germany was a test for all the forces of the Soviet state, a test from which the Soviet Union emerged with credit.

Time and time again events bore out the words of the great immortal Lenin: "A nation can never be defeated when the majority of the workers and peasants have seen, felt and come to know that they are defending their own Soviet power, the power of the working people, and that they are defending a cause whose victory will make available to them and their children all the blessings of culture, all the fruits of human endeavor."

The Red Army has come out of the war crowned with the victor's glory. It has become a more formidable armed force and stronger than ever in its Soviet fighting spirit.

The friendship among the peoples of the Soviet Union has grown stronger than ever in the years of war. Our multi-national state, with its differences of language, customs, culture and history, has grown still more united, and the different Soviet peoples have come still closer together.

No other multi-national state could have held out under the ordeal through which we passed in the years of war. Only our state, in which there is no room for the exploitation of man by man, in which there are no exploiting classes and the workers, peasants and the intelligentsia administer both local affairs and state as equal citizens—only such a state could have withstood the German invasion in the hard years of 1941-1942, routed the overwhelming enemy by its own efforts, driven him from its territory, and in addition rendered other nations strong assistance in shaking off the alien subjugators.

The right of all peoples to independence and free national development is now acknowledged in the Soviet state, in which all peoples are educated in the spirit of friendship and respect for one another, and also of recognition of the services of each people in accord-

ance with its efforts in developing its national culture and contributing to the further progress of the Soviet state as a whole.

True Democracy Flourishes

The high degree of activity of our innumerable trade unions, production, cultural, sports and other working-class organizations, the formation of the collective farms, the constant spread of Socialist emulation in the factories and mills, on the collective and state farms, in the mines and railways—all this reveals a flourishing of true democracy of the people which they did not know in the old days and which cannot exist in any other states, divided as they are into classes of oppressors and oppressed, a thing that Soviet power has long put an end to in our country.

In the rapid strides made by our country's cultural life and in the fact that now our intelligentsia, as the most advanced and cultured section of the population, has merged with our people and raised the moral and political unity of Soviet society to a still higher plane—in all this we cannot but discern fresh signs of Soviet democracy, inspiring us with new hope and confidence in our country's future.

It is the good fortune of Soviet men and women that the October Socialist Revolution, which saved our country from being degraded to the status of a second-rate power, released the forces of the people's shackles by the regime of the nobles and feudal lords, and afforded them, on the basis of Soviet power, opportunities for development such as they had never had before.

That is why in our victory over Fascism we discern at the same time the great victory of Soviet democracy.

The war took the Soviet people far beyond the borders of their country. The stubborn resistance of Fascism made our troops enter a number of foreign countries to make closer acquaintance with the life of their towns and villages and to reach such western capitals as Vienna, Budapest and Berlin. In all these countries, including those which had recently sided with Fascism, the Soviet people had no trouble in finding a common tongue with the laboring classes and democratic servants. Naturally, it was not to be expected of Soviet people that they should treat as friends yesterday's enemies.

People's Outlook Widened

Of course, the acquaintance with the life and customs of other nations will be of benefit to our people and will widen their outlook.

The Soviet Presidium is strong in its kinship with the people. Unlike parliamentary democracy, the democracy of the Soviets is a true democracy of the people.

Thus the duties of the Soviet state include the task of educating the people politically in the spirit of defending the interests of peace, in the spirit of friendship and collaboration among the nations. This, however, does not preclude, but, on the contrary, presupposes the necessity of, unmasking all attempts to prepare for a renewal of aggression and a resurgence of Fascism, a thing which must not be forgotten in the post-war years.

In some countries freedom of speech and of the press are still understood to mean that the venal servants of Fascism need not even assume masks in order to engage in unbridled propaganda of aggression and Fascism, although the peoples of every continent have paid a colossal price in blood and hardship for the orgy of world aggression and Fascism.

We are nearing the new elections to the Supreme Soviet of the U. S. S. R. The Bolshevik party, together with the wide circles of the non-party Soviet bodies, is preparing for these elections, which it regards as a major manifestation of Soviet democracy and one more powerful means of denoting the unity of our people and further consolidating the Soviet state.

Our country has embarked on peace-time construction. Great new tasks confront the whole of our people. We shall, of course, devote necessary attention to new territories incorporated in the U. S. S. R.

Enemy invasion of our country prevented us from devoting due attention to arranging the life of the western Ukraine and western White Russia, which before the war had been in the U. S. S. R. but a short time.

White Russians Reunited

Now under the treaty with Poland a new Soviet-Polish frontier has been established. As a result all territories inhabited by the White Russians have been reunited in a single Soviet White Russia which will advance confidently along the road of free national development.

Through the treaty with Czechoslovakia, the trans-Carpathian Ukraine at last has become part of our state, and now the Soviet Ukraine embraces all Ukrainian territories, a thing our Ukrainian brothers dreamt of for centuries.

Under the treaty with Romania, Soviet Moldavia now embraces all territories with Moldavian population. This affords them extensive opportunities for further national development.

The western frontier of our country likewise has been shifted to include Koenigsberg Province. This gives us a good Baltic port open all the year around.

The independence of Soviet Lithuania, Soviet Latvia and

Soviet Estonia has been restored. Such are the contours of our present western frontiers, which are of the greatest importance in safeguarding the Soviet Union's security.

In the northwest we have restored our frontier with Finland.

Lastly, as regards the Far East. Here the Soviet Union retains southern Sakhalin and the Kurile Islands, which are of important value to its security in the East.

It remains to recall restoration of our country's rights to Manchurian railways and to the Port Arthur and Falyr (Dairen) areas in the southern part of Manchuria. All these, and also the area of our Porkkala naval base on Finnish territory, must receive proper attention from us, and in so far as applies to new Soviet territories they will require extra attention from our state.

We must cope as soon as we can with the urgent tasks in the Soviet territories which were temporarily occupied by enemy armies. Rehabilitation work was started everywhere immediately after the invader was driven out, but it is only a small part of the work to be done.

Rehabilitation Urgent Need

Efforts of the entire Soviet people must be directed to helping in the early and complete rehabilitation of the economic and cultural life of these areas.

Restoration of factories and mills, collective farms, machine and tractor stations and state farms, of schools and hospitals and restoration of living quarters so that every urban and rural inhabitant of these parts may again have a home of his own—all these are our urgent tasks.

It is vital that concern for the men now returning home from the Army and for disabled soldiers and bereaved families should be considered one of the first duties of Soviet organizations. We must do everything to cope successfully with this responsible task and heal the wounds of war as soon as possible.

Now at once we must think about solving the fundamental problems of an advancing national economy, so that within a few years we may considerably surpass the pre-war standard of the country's economical development and secure considerable improvement in the living standards of the entire population.

We need a fresh upsurge of heavy industry in order to provide the country with metal, coal, oil, locomotives, rolling stock, tractors, agricultural machinery, motorcars, vessels of various kinds, power stations and many other things. The populations of town and country expect a considerably increased supply of consumers' goods and improved supplies of foodstuffs.

Not for a moment must we forget our big obligations, providing as we should for the needs of the country's defense, the Red Army and Navy.

We also need to think more about the proper organization of labor, so that the productivity of Soviet men and women and the quality of their work may yield the highest results.

In our days of advanced technology and extended employment of science in production where it has become possible to harness atomic energy and other great technical discoveries, attention in economic planning must be focused on problems of technology, on the problem of raising the technological power of our industry and training highly skilled technological trainers.

We must keep level with the achievements of present-day technology in all branches of industry and economic life, and provide conditions for the utmost advance of Soviet science and technology.

The enemy interrupted our peaceful creative endeavor, but we shall make up properly for all lost time and see to it that our country shall flourish.

We will have atomic energy and many other things, too.

Let us tackle these tasks with all our inexhaustible Bolshevich energy, with all the boundless energy of Soviet people. Let us work as Comrade Stalin teaches us to do.

Lastly, about our tasks in foreign policy. The Soviet Union has always given first place to promoting peace and collaboration with other countries for universal peace and development of international business relations.

As long as we live in a system of states and when the roots of fascism and imperialistic aggression have not been finally pulled up, our vigilance as regards possible new breakers of peace must not be slackened, and efforts to consolidate collaboration among peaceful powers will remain as before our most important duty.

We have no task more important than the one of consolidating our victory which we achieved in a staunch struggle and which opened the road toward a new great rise of our country and further improvement of the living standards of our people.

Never before did we face the prospect of Socialist construction on such vast scale or such possibilities for the growth of the Soviet Union's strength. Our people are full of faith in their great cause, the cause of the great October Socialist Revolution.

WHAT PEOPLE ARE THINKING

By ELMO ROPER

Mr. Roper, well known authority on public-opinion surveys, conducts the "Fortune" magazine polls.

46.9% Say Atom Bomb Lessens Chances of War

The recent "Fortune" survey which found a majority of Americans believing that we cannot keep the secret of the atomic bomb for as long as five years, as discussed in this column last week, also devoted some interesting information regarding other American attitudes toward the atomic bomb.

Despite the fact that most people felt the Japanese war was drawing to a close before the atomic bomb was used, a majority still felt that the atomic bomb hastened the end of the war.

How much longer do you think the Japanese would have held out if it had not been for the atomic bomb?

	Total P. C.
No longer	8.4
A month or less.....	9.9
Two to five months.....	17.0
Six months	17.2
Seven to eleven months.....	3.3
One year	15.1
Over a year	17.6
Don't know	11.5

Believing as they did that the use of the atomic bomb shortened the war and thus saved the lives of an unknown number of American boys, it isn't surprising to find a majority approving of our use of the bomb. Fifty-three and five-tenth per cent of the civilian population believe that we should have used this secret weapon in exactly the way we did use it—by dropping two bombs and allowing an interval of time to elapse for the significance of this destructive force to penetrate the consciousness of the Japanese war lords. A majority of both sexes, all age groups, and people in every part of the country subscribed to this feeling of satisfaction over our use of the atomic bomb.

Minority Deplored Use

There was, nevertheless, an unhappy but small minority of 4.5 per cent which felt we should not have used any atomic bombs at all. The dispersion of this tiny minority is interesting in that it reached highs of 7.2 per cent among the prosperous and 6.5 per cent among the people living in New England and the Middle Atlantic States, whereas it was low in the lower middle economic level, where only 3.5 per cent deplored our use of it, and in the South, where only 3.3 per cent disapproved of it.

A somewhat bigger minority, 13.8 per cent, believe that we should have dropped a bomb first on some unpopulated region to show the Japanese its power and should have dropped the second one on a city only if the Japs hadn't surrendered after our first experimental use of it. An even larger minority, however, went to an entirely different extreme; 22.7 per cent believed that we should have quickly used many more of the bombs before Japan had a chance to surrender! Men subscribed to

this doctrine of total destruction more than women, the poor subscribed to it more than the well-to-do, the poorly educated more than the well educated, and the people in the South more than the people in the North or on the west coast.

Obviously the use of such an instrument of destruction as the atomic bomb ought not to be determined by the results of public opinion polls; it should be determined by the appraisal of military necessity by our top military men and by our top elected officials as a matter of national policy. That the decision to use the bomb, however, and to use it in about the way it was used pretty accurately reflected the spirit of America at that time is indicated by the majority approval of the way it was used and by the roughly equal size of the minorities who would have gone either farther or less far than we did.

See Chances of War Lessened

Perhaps one of the most important findings to come out of this survey was the result of this question:

Do you feel that the atomic bomb has increased or decreased the chances of a future world war, or made no difference one way or the other?

	In-creased P. C.	De-creased P. C.	Made no difference P. C.	Don't know P. C.
Total	15.7	46.9	24.1	13.3
By Age Groups:				
21 to 34	21.1	44.0	23.9	11.0
35 to 49	14.0	47.7	26.3	12.0
50 and over	12.5	48.6	22.1	16.8
By Education:				
Grade school	12.0	46.9	17.3	23.8
High school	18.4	48.7	25.1	7.8
College	16.8	43.4	33.3	6.5

A plurality of the people believe that discovery of the atomic bomb has decreased the chances of a future world war. We have already seen that a bare majority believe the United States will be unable to keep the secret of the atomic bomb for very long. This means, of course, that they base their optimism about the prospects of another war on something other than the satisfaction of feeling that we alone possess the power of really wholesale destruction. Other surveys have shown us that a majority of Americans do have at least a measure of faith in the ability of the United Nations to find a way of avoiding the almost total destruction of a third world war.

Upon the shoulders of Truman, Stalin and Attlee rests the tremendous responsibility of quickly ironing out the petty differences that exist between their respective nations now—petty, that is, when compared to the prospect of unlimited use of the atomic bomb at some future date.

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Associated Press Photo

STUDYING THE AIMS of their newly-formed Federation of Atomic Scientists, Drs. H. H. Goldsmith of the U. of Chicago, Irving Kaplan of the Assn. of Manhattan Scientists, Lyle B. Borst of the Assn. of Oak Ridge (Tenn.) Scientists, and W. M. Woodward of the Assn. of Los Alamos (N. M.) Scientists (l. to r.) are pictured at yesterday's meeting in the Senate Office Bldg. in Washington.

Bombs Invincible?

HT 11/8
Scientists Dispute View of
Major De Seversky

To the New York Herald Tribune:

We wish to challenge the statements recently made in Tokyo by Major De Seversky concerning the atomic bomb. We assert that his arguments are unsound, and that his conclusions about the importance of air supremacy constitute an altogether inadequate view of the security problems raised by the bomb.

He asserted that the bomb could kill no more people than could a regular ten-ton bomb if dropped on American cities of steel and concrete. In the first place, most buildings in American cities are made of brick and wood. Moreover, there is abundant evidence that steel and concrete are vulnerable.

Apparently Major De Seversky has overlooked the destruction already caused by atomic bombs at Alamogordo, New Mexico, Hiroshima and Nagasaki. We must face the fact that the atomic bomb produces explosions which level areas of several square miles, twist massive steel structures, cause crumbling of stone to dust, and bring almost instant death to all living things near the place of detonation. The scientists of the Manhattan Project knew that if they could release nuclear energy at all, the resulting destruction would be on a scale vastly greater than that of the usual explosives. The success of the project was demonstrated to the world on Aug. 6 at Hiroshima.

The air supremacy issue, which is the core of Major De Seversky's position, seems to us to have negligible relevance to this question. We recognize that aircraft have their place in our national security program. We also recognize that air power did not protect England from the V-2 attack, nor do we believe that air power can offer protection against atomic explosives carried in this manner or in other recently developed types of directed missile, or against nuclear mines.

The enormous destructive power of the atomic bomb requires any adequate defense to be 100 per cent effective. Such total defense cannot be achieved by air power. In fact, it is our opinion that no established military procedures can furnish adequate defense, because they can at most try to prevent a substantial fraction of the missiles from reaching their targets and the successful arrival of even one would be a major calamity.

HOWARD LEVI,
JEROME ROSENBERG,
Members Association of Manhattan
Project Scientists.
New York, Nov. 6, 1945.

PROFESSOR LASKI DUE IN CITY NEXT MONTH

11/8 NYT
Prof. Harold Laski, chairman of the national executive council of the British Labor party and center of a recent controversy over his reference to the Catholic Church in a speech broadcast to a rally here, will arrive in this country, probably on Dec. 1, for a five-day visit, Miss Lillie Schultz, director of The Nation Associates, announced yesterday.

His trip, under the auspices of the publishers of The Nation, has been planned to permit him to address in person the closing session of a conference, "What is the Answer to the Atomic Bomb?" to be sponsored by the magazine, Dec. 1 through Dec. 3, at the Hotel Astor, Miss Schultz said.

Other speakers scheduled to appear before the final conference session Dec. 3 are Dr. Herbert V. Evatt, Australian Minister for External Affairs; Mrs. Franklin D. Roosevelt, Prof. Leo Szilard of the University of Chicago; Leon Henderson, former chief of the Office of Price Administration; and Freda Kirchwey, editor of The Nation.

Miss Schultz pointed out that Professor Laski's talk probably will come after President Truman and British Prime Minister Clement R. Attlee have finished their discussions on atomic energy.

Swiss to Work on Atom

WT 11/9
BERN, Switzerland, Nov. 7 (UP).—Swiss authorities have decided to create an atomic commission of experts and federal officials to cooperate with industry.

Scientists Plan Bomb Control

Oppose U. S. Monopoly
of Atomic Secrets

By PETER EDSON,

NEA Service Staff Correspondent.

WASHINGTON, Nov. 9.—Representatives of the four principal groups of young scientists who worked on the atomic bomb project have been meeting quietly in Washington to form a national organization of atomic bomb scientists.

Purpose of the new united front is to work for international control and inspection of atomic bomb production, and free exchange of information on atomic energy research. The scientists are in full revolt against attempts to tie up the atomic secret in a U. S. monopoly, as proposed in the May-Johnson bill, which would call for heavy penalties against anyone disclosing information now held by military authorities under Presidential directive, as a national defense measure.

Articles of Federation stating these purposes of the new organization have now been drawn up after undergoing consideration and revision by the four local organizations of atomic scientists at Oak Ridge, Tenn., Los Alamos, New Mexico, Columbia University in New York and the University of Chicago.

Nearly 2000 scientists are members of these four local organizations, all of which have independently issued statements demanding international co-operation in atomic bomb control as the best way to maintain world peace.

The four organizations claim to represent 95 per cent of the scientists who worked on the project. Their average age is said to be under 30, but knowing the secret of the bomb and its real power, they say they are in the best position to judge its potentialities.

90 German Scientists Coming To U. S. on a Secret Mission

11/8
By William J. Humphreys

By Wireless to the Herald Tribune
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LE HAVRE, France, Nov. 7.—

Ninety German scientists were in an Army staging area here tonight, ready to board a United States-bound transport for a mission which their conducting officers refused to discuss. It was said that the enemy civilian group was being shielded under direct orders from Washington.

In the absence of official information, the arrival of the party quickly spread rumors that the scientists formed an "atomic team" from the laboratories of the late Third Reich. Germany is known to have been hard on the trail of an effective atomic bomb at the time of the surrender.

The hush-hush collection of scientists was said to be traveling under the leadership of Army intelligence officers. An all-day effort by a handful of reporters to penetrate the veil of secrecy revealed merely that the group was not identified in any way with 1,200 other German scientists who recently volunteered to go to the United States and develop some of the fantastic war weapons which the Nazi surrender disclosed.

These weird armaments were untried and untested, but American ordnance experts at the time were reported impressed at Nazi experimentation with such devices as super-rockets.

The German party was described as comprising men of varying ages, although quite a number were called "the young professional type." Officers who had seen them in their camp added that they did not appreciate the fact that these scientists were

displacing high-point United States Army veterans, even though "they may know an awful lot."

The German party will sail on Friday for New York on the Argentina. In the mean time it is quartered in the old French fort at Sainte Adresse overlooking the Port of Le Havre.

This old moated redoubt appeared to be an ideal staging area in which to keep the Germans incommunicado. It was stated that the party is traveling as a civilian group and not as prisoners of war.

Primarily the new organization represents a protest against the May-Johnson bill calling for government control of all atomic energy resources, secrets, processes and materials. This bill has just been favorably reported to the House by the Military Affairs Committee.

As the bill was drafted by War Department lawyers, it has been ticketed as the Army-Navy bill, though military service spokesmen disown it, saying it was drafted at the direction of a civilian committee of cabinet secretaries and assistant secretaries, plus the three scientists most prominent in government war-time research. They are Dr. Vannevar Bush, Dr. James B. Conant and Dr. Karl T. Compton.

The official position of these three scientists is that they were reluctant to say that they represented U. S. scientific opinion. But since they did serve on the President's Interim committee which approved the May-Johnson bill draft, the position taken by the new organization of young atomic scientists represents a revolt and repudiation of the Bush-Conant-Compton action.

Actually, the statement signed recently by 500 leading scientists of Harvard University and Massachusetts Institute of Technology, calling for international control of the atomic bomb, constitutes a far worse slap at Bush, Conant and Compton. All three are New Englanders. Dr. Conant is president of Harvard, Dr. Compton is head of M. I. T. and Dr. Bush, president of Carnegie Institution of Washington, is an M. I. T. director. They are practically the only three important scientists in the Boston-Cambridge area whose names do not appear on the statement of the new Cambridge Assn. of Scientists.

This Cambridge group worked more on radar and electronic development than they did on the atomic bomb project, so for the present they have not been asked to join the new organization of atomic scientists.

First of the atomic bomb groups to organize and voice its plea for sharing the atomic secret was the Atomic Scientists of Chicago, Dr. Harold C. Urey and Dr. John Simpson have both spent considerable time in Washington lately. Dr. Urey has appeared on several forum programs and has testified before Congressional committee. Dr. Simpson has been most active in the new organization.

The Association of Oak Ridge Scientists has been represented in Washington by Dr. L. A. Borst, its chairman, and Dr. F. S. Henshaw, who was denied the opportunity to make a statement before the House Military Affairs committee, but did submit a written statement against the May-Johnson bill, which was printed in the committee's hearings.

The Los Alamos group has been represented principally by Dr. Robert Wilson, testifying before Senate Committees on science mobilization.

The Association of Manhattan District Scientists, representing the Columbia University group is the most recent to come into the field in taking an active part against the May-Johnson bill.

Scientists Promise Own Atom Bomb Control Bill

Dr. Urey and Others Complain Army's Idea Ignores Their Ideas

By ELIZABETH DONAHUE
Washington Bureau

WASHINGTON, Nov. 9.—Dr. Harold C. Urey, one of the foremost scientists associated with development of the atomic bomb, has promised Congress that the scientists "will have something" in the form of new legislation ready in a few weeks as a substitute for the Army's dictatorial May-Johnson Bill for control of the bomb.

Urey, at an open forum on atomic problems held yesterday for House members, argued that the scientists had so far been forced to take a "negative" stand in order to stop the Army blitz to force the May-Johnson Bill through Congress.

At the same time Dr. Lyle B. Borst, a young Chicago physicist, disclosed that the Interim Committee on Atomic Energy, consisting of high Government officials including Secretary of State Byrnes, had last May requested scientists working on each phase of the bomb project to present their ideas on legislation.

"We submitted our views," he said, "and were assured that they would be the basis of legislation. But the May-Johnson Bill in no way resembles the program we offered."

Not Seen by Scientists

Urey told about 30 House members at the forum that "no scientist" excepting Dr. James B. Conant, president of Harvard University, and Vannevar Bush, Director of the Office of Research Development, "saw the May-Johnson Bill before it was introduced."

The forum addressed by Urey, Borst, Dr. Leo Szilard and Dr. J. C. Stearns, who was in charge of all personnel on the atom bomb project, was arranged by 18 enterprising House members so that their colleagues could acquire first-hand information on the problems.

But somehow the vital importance of the atomic question with all its domestic and international repercussions is not a matter of primary interest in the House. Excepting the sponsors of the forum, not more than a dozen Congressmen turned up, although the House is expected to act next week on the May-Johnson Bill.

Only Two Republicans

Only two Republicans, Rep. Charles M. LaFollette (R., Ind.) and Rep. Robert Hale (D., Maine), were present. The absence of members of both parties was not attributable to the fact that any vital discussions were taking place on the House floor. Only a dozen Congressmen were there.

Szilard told the gathering, "The development and use of the bomb adversely affects the military position of the U. S. If we get into an armament race the U. S. has an early advantage, but if two countries develop the bomb it will not



Dr. Harold C. Urey

help us much to have ten times as many," because a few can be totally destructive.

Stearns warned that the U. S. A. was in grave danger of losing its two sole "capital assets on scientific development." He listed these:

1. The "personnel capital" we got from other nations, in Szilard, Fermi and the majority of top scientists who, seeking haven in a free country, came to America. He said the "ever-present threat" under the May-Johnson Bill would drive them out.

2. Our scientific progress from within. He said it would be impaired because not even our own scientists would work under the restrictions and threats of the bill.

Urey, predicting a scientific revolt against the restrictions in the bill, declared, "If we continue to put barbed wire around the labor worries, the better scientists will be forced to go to Standard Oil and duPont, or wherever the job is the most interesting, to develop peacetime uses for atomic energy."

Stearns, dramatizing the wartime restrictions imposed on scientists, disclosed he was compelled "to hire and fire Szilard three times in one day" because of the Army's wartime regulations which the May-Johnson Bill would carry over.

If U. S. Tries to Hog Atom Secret We Face Disaster—Scientists

By OLIVER PILAT
Post Staff Correspondent

Washington, Nov. 9.—The problem of atomic control must be solved on an international scale.

The U. S. can remain strong only by continuing to be the scientific melting pot of the world. Any attempt to hog the atomic bomb secret will in the end leave us economically and militarily vulnerable.

This was the message left with Congress today by atomic bomb scientists who came out of their laboratories to lecture and to answer the questions of more than 70 Representatives in the House caucus room and to take part in an earlier senatorial seminar.

Side-Alleys to Be Proved

Dr. J. C. Stearns, formerly head of the Atomic Laboratory at Chicago University, mentioned that many scientific "side-alleys" went unexplored in the headlong, three-year plunge to an atomic bomb.

"The splitting of one atom of uranium releases 200,000,000 electron volts of energy," said Stearns. "If we could use hydrogen to make helium, we could develop more energy than by uranium."

"And then there are cosmic rays, my specialty—the phenomenon of mesotron which releases,

not millions, but billions of volts of energy."

Stearns began to reel off the names of the men who made possible the atomic bomb: Szilard, Fermi, Wigner, Teller, Weisskopf, foreigners all until they became naturalized U. S. citizens.

Men like these were our chief "scientific capital" during the war, he said. If a military strait-jacket is kept around the atomic secret, as proposed by the Army-sponsored May-Johnson bill, such men will emigrate or turn their attention to other fields, he predicted.

Dr. Leo Szilard, Hungarian-born scientist who persuaded Albert Einstein to approach President Roosevelt with the idea of an atomic bomb project, told the Congressmen existence of the bomb "profoundly and unfavorably affects the military position of the U. S." and makes international control necessary.

"The chief weapons of aggression previously have been tanks and airplanes, in which the U. S. could easily out-produce any other country," Szilard said.

"In an atomic armament race we would soon have enough energy to destroy all cities. To have 10 times as many bombs as a potential enemy would not make us stronger."

We Are More Vulnerable

"In fact, we would be more vulnerable because 70,000,000 people live in our metropolitan areas. To relocate them would cost \$15,000,000,000 over a 10-year period and we would still not be stronger than other nations."

Dr. Harold C. Urey revealed that Dr. Eugene Wigner went to the military officials in charge of the Manhattan District project months ago and said formally on behalf of the atomic bomb scientists:

"You are doing a disservice to the American people in not telling them what this means. It leaves them faced with an historic decision with too little time to make up their minds."

Atom Experts Tired Of Living Like Hermits

By Scripps-Howard Newspapers.

WASHINGTON, Nov. 9.—Like a lot of other warweary GIs, this country's atomic scientists are tired of living on military reservations and having their mail censored. What's more, they want to be able to talk shop on streetcars.

A bunch of them went up to Capitol Hill and told Congressmen what they didn't like about the May-Johnson bill. And that is considerable. They sounded like exservicemen enthusiastically taking the Army over the coals.

They even looked like GIs. Dr. William Woodward, who is all of 28 (he says) and a professor at Massachusetts Institute of Technology, said their average age is 29 to '0. Only 5 per cent of the men who made the bomb capable of killing a million people are over 35. Bill Woodward says in their business, they believe, "you're all washed up at 35."

The May-Johnson bill would continue military security on atom bombs. It could, conceivably, cause a too-talkative scientist to be sent to prison. What's worse, the boys said, they can be expelled from the project and kept from working with their atoms any more.

Has Had Enough.

Dr. Harold Urey of Chicago University said the bill would continue the conditions under which they lived and worked for three and a half years on Project Manhattan. Three and a half years, Dr. Urey said, were enough for him. He said he doubted he'd want to go on if they kept treating him like a GI now that the war is over.

Dr. Urey insisted he wasn't going to be stifled by Army regulations. After all, he added, working on an atom bomb isn't any more romantic than washing your own socks, and there are plenty of good jobs for scientists nowadays. The boys stuck it out during the war because they were patriotic, but

they want a little freedom now. Dr. Urey's colleagues agreed.

Tired of Secrecy.

But things didn't really begin to pop until Dr. Lyle B. Borst of Oak Ridge, Tenn., had his say. Dr. Borst said his name was Mr. Anonymous because he was just one of 2000 fellows who knew how to make atom bombs, and no one ever heard of him, anyhow. He said he was speaking for the atomic little people as a representative of the Federation of Atomic Scientists.

"We came to this project from school, most of us," he said. "That's all we know. We want to start living our own lives. We want to be able to talk on street cars. We don't like code names. How would you Congressmen like it if you had to refer to your bills in double-talk?"

Dr. Borst said he objected to military security. He objected to living on a military reservation where a collection of 10 people is a public gathering and view with suspicion.

"We want a civilian administrator," he said. He repeated it three times. No doubting that he had all he wanted of the Army.

MONOPOLY OF ATOM SEEN AS VISIONARY

Four Leading Nuclear Physics
Experts Tell Congress That No
Defense Is Yet Feasible

By W. H. LAWRENCE

SPECIAL TO THE NEW YORK TIMES.

WASHINGTON, Nov. 8.—Top-flight atomic scientists warned the Congress and the people today that a continuing monopoly of the atomic bomb by the United States was impossible, that there could be no specific defense against this type of weapon, and that no nation could feel secure in the atomic age "until the problem of the control of atomic power is solved on a world level."

Faced with the Truman Administration's support of the May-Johnson bill, which they feel would stifle research in nuclear energy, the scientists have united to form a Federation of Atomic Scientists, representing 90 per cent, or more than 1,300 of the scientific workers whose research and labors for the Army's Manhattan Engineering Project produced the bombs that exploded over Hiroshima and Nagasaki.

Their spokesmen, at an informal and unofficial hearing with a small group of Congressmen and at a press conference with Washington correspondents, were Dr. H. C. Urey, University of Chicago Nobel Prize winner, Dr. Leo Szilard of the Universities of Berlin, Columbia and Chicago; Dr. J. C. Stearns, cosmic ray expert at Washington University and the Chicago University Laboratory, where the principal atomic research for the Government was conducted; Dr. Lyle B. Borst of the Clinton Laboratories at Oak Ridge, Tenn.; Dr. H. H. Goldsmith of the Chicago Metallurgical Laboratories; Dr. William M. Woodward of the Los Alamos (N. M.) Project, and Dr. Irving Kaplan of the Samuel Laboratories in New York.

Experts Give Unsought Views

It was an impressive array of scientific knowledge—men whose "know-how" on the atomic bomb and the problems of national and international import that the existence of this weapon created, had not been sought by the House Military Affairs Committee before it approved the Administration measure on atomic control.

Their testimony today was more political than scientific, and the few scientific queries propounded had to be left unanswered because, they said, military security regulations made it impossible for them to inform even members of the Congress of the nature of a weapon that, used destructively, could endanger not only the United States but the world.

They were unanimous in the conviction that not even the "know-how" of the bomb's manufacture was a secret that could be kept for long, and they were as one in asserting that no fundamental scientific secrets were not already known to every industrial nation of the earth. They dismissed as "exaggerated" the contention that because it cost the United States \$2,000,000,000 to develop the bomb and its manufacturing facilities under war-time conditions, other nations would hesitate to embark upon such an expensive development project.

They indicated a belief that the announced policy of the Administration to try to keep the bomb secret already has pushed the world into a race for the development of atomic energy. They regarded this as a contest that could only weaken the defensive position of the United States, whose industrial potential would be important only up to the point of developing sufficient bombs to wipe out the cities of an enemy, or combination of enemy powers.

Research Held Stifled

They were outspoken in their opposition to the May-Johnson bill, soon to go before the House. They said its secrecy and security provisions would stifle research and cause nuclear scientists to seek other fields of research, where they would be free to discuss the results of their work with other colleagues.

Dr. Borst, who announced formation of a Federation of Atomic Scientists, embracing the existing associations of scientists at Los Alamos, Oak Ridge, Chicago and of Manhattan project workers in the New York area as well as production engineers at Oak Ridge, said that the organization had been founded for these major purposes:

"To study the implications to our nation and to the world of the liberation of nuclear energy.

"To create a realization of the dangers that this nation and all civilization will face if the tremendous destructive potential of nuclear energy is misused.

"To help establish an atmosphere of world security in which the beneficial possibilities of nuclear energy may be developed.

"To study the relation between national legislation and the establishment of an adequate international policy."

Dr. Szilard, whose contributions to the development of the atomic bomb were described as vital by Representative Jerry Voorhis, California Democrat, put the problem of atomic energy in destructive purposes before the committee in the bluntest possible terms. He said that it seemed to him essential that the United States should seek control of this weapon on an international level, rather than along nationalistic lines. He maintained that if world control was not attainable some persons would say that the United States would have to consider destructive warfare against the countries seeking to make the bomb for possible use against us before they perfected it.

The existence of the atomic bomb, he said, has affected adversely the military position of the United States, which until now has been able to rely on its industrial superiority to build sufficient tanks, guns and planes to swamp any potential combination of enemies.

"If we have enough bombs to destroy every city of the enemy, and the enemy has enough bombs to destroy our cities, we will be in a very vulnerable position," Dr. Szilard declared.

He said that if such an armament race developed, it might be wise to relocate the 30,000,000 to 70,000,000 Americans who live in metropolitan areas. This, he said, might take ten years and cost \$15,000,000,000. If this were done, he said, our position would not be weaker, but it would not be stronger than that of any other country. It might, he said, keep us from losing such an armament race, but it would not help us to win it.

Army Policies Criticized

He criticized the Army's security ideas again and again, and said it was essential for the Congress and the public to be kept informed on atomic progress so that they would know the kind of world in which they lived.

At the time the San Francisco conference was drafting the United Nations Charter, Dr. Szilard said, the scientists perfecting the atomic weapon prevailed upon President Truman to let Edward R. Stettinius Jr., then Secretary of State, in on the secret so that he and the rest of the American delegation would know the kind of world for which an international charter was required.

Dr. Urey assailed the "barbed-wire fence" attitude of the Army toward atomic scientists and said that the top-flight scientists would not continue to work on such Government projects in time of peace if their freedom of research and free interchange of comment and experience were denied to them.

"There is no idea of a strike," he said. "It is the simple fact that one type of scientific employment will look more interesting and attractive than another."

Private enterprise could not be persuaded to carry on the type of atomic research necessary under the restrictions imposed by the May-Johnson bill, he added.

Dr. Stearns said that a free interchange of scientific opinion was essential to future progress and pointed out that the atomic bomb had been developed in the United States because of results already achieved in Great Britain, France, Germany and Italy. Some of the best scientists on the Manhattan Project, he said, came here because the United States "offered a haven for scientists who wanted freedom, free speech, free enterprise and unhampered research opportunities."

He said that it was not probable that the restrictive features of the Administration measure might cause some scientists to go to other countries, where they could work freely.

Dr. Stearns also pointed out that there were more explosive sources of power than the present plutonium-base atomic bomb. He mentioned the production of helium from hydrogen and the mesatron cosmic ray as examples, but he said that he hoped that the world would not engage in any race to harness their power for destructive purposes.

Several of the scientists objected to the independent character of the Atomic Energy Commission that the May-Johnson Bill would create. They pointed out that it conceivably could disregard the wishes of the President and the State Department for effective international collaboration.

The scientists would not give a definite answer to questions about the commercial use of atomic energy, nor would they specify a date by which commercial use might be expected. They were not, however, worried about the dangers of having a private monopoly develop in this field.

When asked if they thought that the atomic weapon could be outlawed by agreement, all the scientists indicated that they thought that was as unlikely as the outlawing of war unless all the nations of the earth were willing to work together.

4 Scientists Say House Atom Bill Leads to War

Doubt That Any Congress
Action Can Prevent It;
Demand World Approach

By Stephen White

WASHINGTON, Nov. 8.—Seventy members of the House of Representatives, before whom the May-Johnson bill for domestic control of atomic energy will soon be placed for decision, today heard four of the country's most eminent atomic scientists express unequivocal opposition to the bill.

Dr. Leo Szilard, Dr. Harold C. Urey, Dr. J. C. Stearns and Dr. L. B. Borst, who in combination probably know as much about atomic fission as any group of four men, pulled no punches in expressing hostility to the legislation, which has already been reported favorably by the House Military Affairs Committee.

Its effect, they agreed, would be to weaken this country militarily; drive scientists from the field of nuclear physics; choke off indirectly all other sciences; make international control impossible, and lead to an international armament race that could end only in atomic war.

The May-Johnson bill places control of atomic energy in the hands of a nine-man commission and an administrator appointed by the commission, giving the group plenary control. It embodies stringent security provisions, with a high degree of secrecy in its work.

Disliked Manhattan Project

In each of the four addresses by the scientists was profound distaste for the Manhattan District, under the guidance of which, through Major General Leslie R. Groves, the bomb was made. All agreed that both in spirit and in performance the Manhattan District offended them. ("Manhattan District" was the code name for the Army's secret project developing the bomb.)

The scientists advocated a new bill in which freedom of research would be completely unhampered; control would be carefully checked by the people of the United States through their elected officers, and the administrator would be answerable primarily to the people.

"We want," Dr. Borst said, "a civilian administrator. I repeat, we want a civilian administrator."

No one of the four appeared particularly hopeful that even the best efforts of Congress would prevent an atomic Armageddon.

"The problem," said Dr. Szilard, "must be solved on an international scale. I am not saying it can be solved on an international scale, but it must be tried." Dr. Szilard, too, expressed the group's general attitude toward the bill: "At present, I do not know of anyone who likes it except those who wrote it." Another speaker identified the authors as Dr. Vannevar Bush, Dr. James Bryant Conant and perhaps Dr. K. H. Compton.

Dr. Szilard said it was the scientists themselves who wrote twenty-five strong, to President Roosevelt urging, two weeks before the San Francisco conference, that Edward Stettinius Jr., then Secretary of State, be informed of the bomb's existence. Dr. Szilard pointed out what he believed to be the absurdity of attempting to write a charter for the United Nations when the authors were in ignorance of the existence of the tremendous new weapon.

Dr. Urey urged a bill in which only military uses and weapons remained under security, and pointed out that in the first days of the project the scientists voluntarily established that type of security. He cited the steady flow of first-rate men from the project as an example of the scientists' unwillingness to work under restrictive regulation.

Dr. Borst was even more specific. Speaking for the younger scientists—and he pointed out that only 5 per cent of the entire group was thirty-five years old or more—he said simply: "There are plenty of jobs."

Dr. Stearns, who was personnel director for the project at Chicago, stressed that of the five men first to recognize the importance of the atomic discoveries, Dr. Szilard, Dr. Eugene Wigner, Dr. Edward Teller and Dr. Victor Weisskopf were Hungarian, and Dr. Enrico Fermi was Italian.

"That is our scientific capital," he said. "We must not shut it off."

He discussed also two sources of energy that might even be more

important than atomic fission: The possibility of creating energy as the sun does, by transmuting hydrogen to helium, and the possibility of utilizing the billions of electron volts released by the mesotron, a newly discovered part of nature which exists in cosmic rays. Science, he said, must remain free to work in these directions.

Freedom of science, he said, would implement any international control that may be set up. This country will best know what other countries are planning if it is able to maintain contact with those countries' first-rank scientists.

Representative Jerry Voorhis Democrat, of California, one of eighteen Congressmen who arranged the meeting with the scientists, presided. The Congressmen applauded each speaker. The question period that followed led the four men simply to repeat their contention: That the May-Johnson bill was not workable, and injured the cause it was meant to aid.

Stassen's Speech on Atom-Bomb Air Force

Following is the complete text of the address by Captain Harold E. Stassen before the Academy of Political Science last night:

Mr. Chairman, Distinguished Guests and Fellow Citizens:

There can be little doubt that we meet at the opening of one of the crucial decades of history. A world-wide war, ten-fold more destructive than any previous war, has ended. It ended and left in its wake a billion of men and women and little children of the world hungry and short of food. It ended and left a quarter-billion of the people of the world without shelter. It ended and left a half-billion of the earth's inhabitants, including many on every hemisphere, seething in the ferment of political and social unrest. It ended and left fifty millions of mankind wounded or ill or long, dreary distances from home, at strange locations to which they had been swept by the flood tides of the conflict. It ended and left little white crosses, row on row, around the globe as signposts of the youth, virility and manhood that was no more and as symbols of the sorrows in the hearts of their loved ones. It ended as the United Nations were preparing to put into effect their charter for peace. It ended and left the production and distribution systems in great areas of the world disrupted and destroyed. It ended in a rapid succession of guns that shot farther, of airplanes that flew greater distances with heavier bomb loads, of rockets that outsped sound itself. It ended with the awesome flash at Hiroshima and Nagasaki signaling to the world that science had unlocked the devastating and disintegrating force of the atomic bomb. It ended, and we face the future. And, what of the future? What shall our course be?

Frank Discussion

I believe the best way to discuss that future course is to take up specifically one of the world's problems. I believe we can best come to grips with the issues of the days ahead by discussing frankly and in detail our policy on the world's major challenge of the future—atomic energy. Needless to say, I speak as an individual and not in any sense for the Navy or the government.

Seeking to find the wise policy as to atomic energy, it is important that we first endeavor to clarify basic factual information.

First of all, the successful development of the sustained neutron chain reaction resulting from nuclear fission, and the manufacture of the atomic bomb, was a result of many years of effort by scientists of many countries, including Denmark, France and Germany, culminating in the specific intense work by large groups from England, Canada and the United States in the Manhattan Project in Washington and Tennessee, and in groups at Berkeley, Chicago, Columbia, Los Alamos, Clinton, Hanford and elsewhere.

Second, scientists do not anticipate that there can be any successful scientific countermeasure to an atomic bomb. There appears no scientific theory that would provide for its neutralization or its advance detonation.

Third, the production of atomic bombs requires an installation of such size that a rigid inspection by competent scientists could ascertain the presence or absence of such production.

Fourth, it appears likely that the tremendous energy developed can at some future time be harnessed and controlled for peaceful and constructive pur-

poses for the benefit of mankind.

Fifth, there is nothing about the scientific features of fabrication methods of the production of the bomb that cannot be ascertained in a relatively short space of years by any group of able scientists and engineers anywhere in the world.

Sixth, the destructive power in one small bomb is greater than a thousand of the greatest bombs made previously, and it is physically possible to manufacture these by the hundreds and to further increase their destructive power.

The Alternatives

If these are the correct basic facts, then what should the policy of America be? Obviously, there are a number of alternatives. The first is the policy of secrecy and suppression. Under this policy we would provide for heavy penalties against any one who would reveal any part of the information that was not already public. We would keep our own scientists under surveillance. We would investigate all reports of any of our scientists meeting with scientists or representatives from other countries. We would follow a policy that is inherent in the preface of the Smythe report. I quote, "All pertinent scientific information which can be released to the public at this time without violating the needs of national security is contained in this volume. No requests for additional information should be made to private persons or organizations associated directly or indirectly with the project. Persons disclosing or securing additional information by any means whatsoever, without authorization, are subject to severe penalties under the espionage act."

Under this secrecy and suppression policy we would give to our government extreme powers which it has never approached before in time of peace. And what would be the result? Throughout the world other scientists and other engineers would pursue the same discoveries, would experiment and develop, until they, too, had atomic bombs. Throughout the world the pressure of all governments would be on their scientists to develop the explosive and the destructive powers of atomic energy. Throughout the world the research and experimentation and the utilization of atomic energy for peaceful and constructive purposes would be retarded. Here in America, for the first time in peace, we would be restricting the freedom of science. For the first time in peace we would be departing from that basic liberty and openness of science which has led in the past to our superb scientific achievements. America would become less attractive as the home of scientists, and we would begin to establish conditions of a nature similar to those which caused many scientists to flee from Germany and seek refuge elsewhere.

Offers Control to World

Or, as a second alternative, we can say we have no secrets from our allies, and open up our entire records and details of production to every one of the United Nations, and rely on their good faith in their use of this information.

What then would be the result? Many other nations would manufacture some of the bombs. There would be an uneasy apprehension between nations as to what their future course might be. Changing policies of government and changing leadership would be viewed with uncertainty around the world. Relations between nations would be carried on with the dread of possible

surprise attacks. All of history says that good faith alone is not sufficient for the peaceful relationship between men. Good faith must be coupled with a framework of order, of law, and of justice. Under the give-away alternative, there would be no guarantee of reciprocal openness of information. We would, in effect, be increasing the armament of every other individual United Nation. There is no logical reason why each nation of the world should have the power to destroy other nations. Balancing of power has not proved in the past to be a road to peace, but rather a road to war.

It is the third alternative that I advocate tonight. This is the alternative of placing the control of the atomic bomb definitely on the world level. To my mind, it is the only basis that has real hope for future peace, stability and progress. To my mind, the splitting of the tiny atom, and the destructive release of its tremendous energy, urgently requires the uniting on this great earth of the constructive energy of all mankind.

This new development is one additional powerful reason for developing a new and higher level of government to serve mankind. The progress of science, of communication, of travel, and of mass production, has already brought the people of the world close together. All of history tells us that whenever men are living close together, they require a government of some form to prevent anarchy and chaos, to establish order and justice, and to facilitate progress and well-being. The world needed government on a world level before the atomic bomb. Now it has become an imperative.

I present tonight specific detailed recommendations, not because I am insistent that these are the precise answers, but rather because it is my observation that to discuss a subject in broad terms that mean all things to all men, does not contribute to clarification or decision. I present exact detail in order that men might differ with me and from the discussion of these differences we might find the way to the best answers.

I suggest that the United States propose an amendment to Article 43 of the United Nations Charter, an amendment granting to the Security Council the right and the duty to establish and maintain a small United Nations Air Force of five bomber squadrons and ten fighter squadrons, manned by volunteers from the United Nations, not more than one-fifth of the personnel of any squadron to be of any one nationality background, to be based at five different suitable bases around the world, to be financed by a small tax on all international travel, and that the United States furnish five atomic bombs to each of these five bomber

squadrons at the five bases around the world to serve as the stabilization force for world order.

I suggest the United States propose an amendment to Article 26 of the United Nations Charter providing that no nation shall manufacture an atomic bomb, and that the manufacture or possession of such a bomb would be a crime against mankind. The present plants would manufacture the number required for the World Stabilization Force, and then stop.

I suggest that the United States propose to the United Nations that the Security Council be given the right and the duty to establish an Atomic Commission of distinguished scientists, with the power and the duty to thoroughly inspect all nations, including our own, to ascertain the fulfillment of the foregoing charter provisions.

Scientific Freedom

I propose that no one shall engage in any nuclear or atomic research without first registering with this United Nations Atomic Commission, but that once having registered, any scientist would be entirely free to carry on scientific research and to publish his results to the world. I wish to emphasize that scientific freedom is just as important as academic freedom or freedom of the press to our way of life. The registration should be merely for the protection of mankind as to the location of the research and to facilitate the inspection of the activities.

I know full well that proposals of this kind will be attacked. There will be those who call them visionary, but I might ask whether failure to seek some such method would not be blindness. Are not each of these proposals in fact practical, sound and attainable?

Some of the clamor of opposition will come from those who will say that such a proposal will violate the absolute national sovereignty of the member nations. Yes, it will! But the narrow concept of absolute nationalistic sovereignty belongs in the same historical discard as the theory of the divine right of kings. The proposal that I make would not cause the people to lose sovereignty. They would be simply delegating a portion of their inherent sovereignty to a new and higher level of governmental machinery where it can be more effectively administered for the people's welfare. Principles of government must stand the test of service to the people if they are to be respected. The concept of absolute nationalistic sovereignty no longer serves the people of this world. It is a barrier that prevents that successful co-operation which every other fact of modern life demands. It is a fertile source of

equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;

3. To achieve international co-operation in solving international problems of an economic, social, cultural or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language or religion; and

4. To be a center for harmonizing the actions of nations in the attainment of these common ends."

Its machinery and powers are limited. Its veto is restrictive. But it is flexible. It can grow. It can be amended. It can be changed. Do not sell the United Nations organization short. Do not undermine what you have in an academic discussion of what you wish you had. The United Nations organization can be developed in any manner the United States, the Soviet Union, Great Britain, China and France, and a majority of the other nations wish it to be developed, and realistically, there cannot be effective world government without the agreement of those powers. The United States must continue to give leadership in this growth and development. I am tremendously encouraged by the ratification of the necessary five and twenty-four, by the successful completion of the work of the preparatory commission in London, and by the fact that in less than two months the first Assembly of the United Nations as a definite, functioning organization will take place. This has been a bright spot amidst the dark clouds of the deterioration of our world relationships which occurred at the London Conference of Foreign Ministers, a conference, it should be remembered, that had no connection with this United Nations organization and was not planned and prepared for in the same thorough manner.

The broad policy we are dis-

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cussing means that we must promptly reconvert, develop full production, and proceed with plans for the exchange of some of the results of our great productive capacity, with those who need it now, for future raw materials and investments and trade and tourist opportunities.

We should not overlook that the basic long-range facts of the world economy are encouraging, even in this tragic winter. The threat of Nazi and Japanese domination has been removed. This good earth has the capacity to produce enough food for all the people in it. The materials are here to construct shelter for all who wish it. There is room on the globe for all the people on it. But the science of government has not advanced as rapidly as have the other sciences, nor as rapidly as has the growth of population itself. We need intense study of this art of living together. This study should involve not only the development of mechanisms of government on a new and higher level for the conduct of those affairs that cannot be carried on successfully on the old basis of the nationalistic state, but it also means the development of more effective government at local and national levels.

The value of a periodic choice by the people between alternatives in administration needs earnest discussion and analysis. The avoidance of a complete political fragmentation of the population in a democracy to a point where no effective government of continuity is possible needs emphasis. The federal principle, its strength and its flexibility; the relations of the economic, social and political structures; the specific question of federated economies, co-existent with political alliances; and the comparison of men's existing governments with what they had previously rather than with an abstract ideal, all need searching consideration. These must challenge the best of intelligence the world can apply to them. Surely we have learned

through two tragic wars and a world-wide depression in a single generation, that the failure of men to learn how to live together can destroy and devastate much of what, all their other intelligence, invention, study and toil can create.

This same broad foreign policy also means that throughout the world, we must constantly emphasize basic human rights more than American rights. I am convinced that if we follow such a broad policy as we have discussed tonight, it will not result in our own impoverishment—it will not result in our own weakness. In fact, we will thrive and grow and be happier under the challenge of this course. We will find that after the decade goes by we have a healthier economy. We will find that we have access to more raw materials and greater markets than we otherwise would. We will find that we have a greater measure of good will throughout the world; that we have more jobs at home; that we are at peace.

In any discussion of the seriousness and scope of our discussion this evening, there always arises the question of how it shall be concluded. Permit me to merely say—Let us face the future with confidence.

those clashes and frictions that lead to war. And might I add that the diplomats' squeamishness about abstract sovereignty, as they refuse to take steps to prevent war, does not impress the millions of men who have seen the intimate innards of their pals spread over the landscape by war. Measures of world co-operation, steps of effective working together, machinery that serves mankind, should be judged on their own merits not by seeking to apply to it the outworn shibboleth of absolute nationalistic sovereignty.

Bars Selfish Interests

Another argument in opposition that will probably be made is that this proposal does not serve the "self-interest" of America. It will be argued that we now occupy a position of great power with our armed might and the possession of the atomic bomb; that we should use this power for our own enlightened "self-interest" rather than diffuse it on a world-wide basis.

Permit me to meet that argument head-on. In my judgment, if the selfish interest of America becomes the official guiding light of our world policy it will be one of the most tragic phases of American history. The doctrine of "America First" is purely and simply the extension of the doctrine of "Me First." There is, and there will be, a considerable measure of this doctrine in life. But if it ever becomes the officially accepted standard to be followed by every one, the tragedy, chaos and suffering, the demoralization and disintegration will be indescribable. Selfishness is not a virtue for individual life. Neither should it be considered a virtue for national life.

It is my view that the first pennant nailed to the mast of our foreign policy should state the objective to promote the slow, steady march of social, economic and cultural progress of all mankind and the general welfare of one world at peace.

Nothing less than that is worthy of America. This does not mean a policy of waste and extravagance. It does not mean the encouragement of idleness in other lands. It does not mean a careless charity that undermines the recipient and dissipates the resources of the giver. It does not mean placing the welfare of any other individual nation above that of America. It does not mean that we should be weak in armed force. It does not mean we love America less. But it does require a broadness of concept of our policies. It does require that in our domestic activities we constantly be concerned as to their effect on peoples of other parts of the world. We are today the most powerful nation in the world. We do have the greatest productive capacity. We do have a

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homeland—thank God—that has not been ravished by war. We do have an economy that is healthy and strong. If we seek to be selfish and narrow in this position, that same selfishness and narrowness will pass on down to groups within our country. America will be divided. It will be bigoted and intolerant. And our economy will wither. We will lose that precise powerful position which we seek selfishly to maintain.

Step in Right Direction

The broad policy I advocate means specifically that we must do more than give lip service to the United Nations Organization. We must do more than co-operate in a manner of detached aloof interest. We must seek constantly to give it vigor and vitality and contribute to its growth. I know there are those who speak of its inadequacy. It is true, as I said long since, that it is only a "beachhead in the battle for peace," that it is only "a very small step in the right direction."

But it is nevertheless a tremendously important step. It is a vital beachhead. It has brought together all of the essential elements for effective world administration. It directly and indirectly represents three-fourths of all the peoples of the world. Its purposes are right. I read them to you:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention

and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace.

2. To develop friendly relations among nations based on respect for the principle of

(Continued on next page)

While world events are still moving with dangerous speed, a strange paralysis seems to have stricken statesmanship. Confronting the atomic bomb—so powerful in itself, so grim as a symbol of the still unleashed forces which science is accumulating—the political leaders of the nations are content to make vague, placatory gestures that confess their inability to meet the challenge which atomic energy has posed. The do-nothing, fear-all atmosphere is not confined to the United States. Great Britain has turned up a sort of carbon copy of American policy and Russia has offered little that is constructive. But the American responsibility, as "trustee" of the atomic bomb, is uniquely great, and its leadership should be correspondingly forthright and effective.

Such leadership has not yet appeared in Washington. But Captain Harold E. Stassen, in his address before the Academy of Political Science, has provided a courageous and thoughtful blueprint of the manner in which such leadership should function. He proposes a definite use for the atomic bomb—"on the world level." He would assign a limited number of bombs to an international air force, "to serve as the stabilization force for world order." Once that force had been equipped, construction or possession of such bombs would be "a crime against mankind." The world organization would enforce the ban, through an atomic commission with right of full and free inspection. Scientists would be registered with the commission, but no limits would be placed upon research.

Captain Stassen showed himself fully aware of the criticisms which would be directed at his plan. He was not especially concerned with securing world approval of all its details but rather in supplying that concrete basis for discussion which has been so lamentably lacking heretofore. As for the more fundamental attacks which might be made on his position, Captain Stassen refused to make obeisance before the mystic phrase "national sovereignty" or to be satisfied with the excuse that it is impossible to trust the atomic bomb to a "paper organization," such as the United Nations Organization. Instead, he would give life and strength to the U. N. O.—which, after all, is a creation of men and can be just as strong and vital as men are willing to make it.

That is the heart of the matter. The world can drift into atomic dissolution or any other special hell that science may create, or it can be diverted into sane and productive efforts for mutual advantage by the exercise of human will and human intelligence. Captain Stassen cries out against the feeble-forcible half-measures, which are bred of fear and will assuredly breed catastrophe, and proposes instead that men "face the future with confidence." He gives a clear call to action, and one which must be heeded.

SCIENCE IN REVIEW

Will the Atomic Bomb Force Us to Break Up Our Cities Into Towns and Villages?

NYT

By WALDEMAR KAEMPFERT

Shall the construction of the atomic bomb be kept secret, or should the world be told everything? Physicists are all in favor of publicity. Though officially ignored as yet, the social scientists have been giving their views. The most authoritative of the lot, in our opinion, is Prof. William F. Ogburn of the University of Chicago. No arm-chair sociologist is he, but a practical authority on communal behavior. In an address, which he recently delivered to the Chicago Council of Foreign Relations, and in testimony which he gave in Washington he discussed some of the probable social effects of atomic energy.

Ogburn predicts that we shall have to adjust ourselves first of all to the breaking up of cities into town and villages in order to escape bomb attacks. The second problem is the prohibition of the bomb's use in war. Research will have to be conducted to deal with both these problems.

Ogburn points out that we might break up Washington, D. C., into fragments and distribute them around the country with happy results. Some seventy-five million Americans now live outside of cities. The pleasures of the cities (theatres, opera, symphonic music, shopping centers) could be distributed in accordance with a plan that would flow out of research. More serious is the question whether our industries and our labor supply could be decentralized without a loss in efficiency. We shall have to decide whether efficiency is worth more than safety.

Economic Consequences

Ogburn is fully aware of the economic consequences of breaking up large industrial centers. "There are 200 cities larger than 50,000, with a total population of 50 millions," he points out. "The task would then be to make 200 cities into 1,000." The buildings are valued at about \$150 billion. To this land values must be added. Land values would undoubtedly fall, and the buildings might have to be written off entirely.

Suppose the cost runs up to \$250 billion. That is still less than the cost of the most recent World War, and perhaps a smaller fraction of what World War III will cost. The city planners would have a supreme opportunity. And there would be an inestimable gain in safety, health, sunlight and space for aircraft if cities were broken up.

Such a wholesale redistribution of industries and people would mean the redesigning of our transportation system and the extension of telephone communication. It might be that some cities would become special centers, just as Atlantic City concentrates on hotels and recreation and Tia Juana on gambling. Hence, we might have towns that specialize in automobile making, furs, jewelry, furniture, and supermarkets which would be dependent on fast transportation by air and rail.

New Towns and New Ideas

These new towns would have to be planned in accordance with new ideas to be discovered by research. Early cities were wheel-like, a design good enough for walking animals and men but not for common carriers because terminals are usually congested. So Ogburn revives the old idea of a town strung along a road. "A long rope laid along the ground is harder to hit than a large wheel, which is the shape of the traditional target," is his way of putting the case. "After all, the reason for breaking up cities is to escape being hit." Here is still another facet of the problem in obvious need of research.

If aircraft can be propelled by atomic power at altitudes where the resistance of the air is virtually nil, speeds of 2,000 miles an hour will be attainable, so that "no place on the globe would be farther than six hours away." Ogburn notes that at such a speed "a person might leave London after the theatre at 1 A. M. on Sunday morning

and arrive in New York on Saturday, the day before."

The cost of atomic energy is at present high, so high that even if it could be controlled it could not compete with energy derived from coal and oil. But past history teaches us that the cost will come down. Should ordinary fuel be displaced, Ogburn predicts that the cost of manufactured products would fall and the standard of living would rise.

All this is more likely to come about if the secret of the bomb is freely disclosed, in Ogburn's opinion. Before the war information on atomic discoveries was freely published. It was in this way that Americans learned from Germany of the splitting of the uranium atom by Hahn and Strassmann, to mention only one achievement in nuclear physics. "If the Army or Congress stifles discussion and the free passage of information among scientists they may kill in the United States the goose that lays the golden eggs," thinks Ogburn. Not only this but the Army will defeat its own purpose if it wants bigger and more terrible atomic weapons.

A Good Sign

Pessimists who do not believe in the perfectibility of man have told us that we are likely to destroy ourselves with atomic bombs. Ogburn admits that "as human beings we have our share of pugnacity and greed and pride; but the outstanding lesson in sociology is that culture can recondition such animal drives as greed and pugnacity. He regards it as a good sign that in World War II gas was not used largely because of the fear of retaliation. Admitting that this is no argument for the prohibition of atomic bomb in another war, he considers it more sensible to arrive at some international understanding.

Even if this were done, the use of atomic explosives would not necessarily restrain ruthless nations. Ogburn cites the violation of the Pact of Paris—a pact which was to outlaw war—as an evidence of possible bad faith. He is therefore more inclined to rely on the results of nuclear research and the productive activities of various countries, on periodic investigation of uranium plants by an international agency, and on some infringement of sovereign rights.

NOTE: The International Latex Corporation, Playtex Park, Dover, Delaware ran this article, as its contribution to the Peace, in the leading newspapers of the nation on March 3rd, 1944... long before the news of the atomic bomb rocked the world. At that time the late President Roosevelt asked for and received twenty copies of this article, which is reproduced again... this time in the interest of human survival.

Science and Lasting Peace PROPOSAL

By WALDEMAR KAEMPFERT

Despite the reluctance of the great powers to yield their ancient sovereignties in the interest of world unity the signs are plain enough that as science and technology sweep on, unification proceeds rapidly.

It means something that an Englishman, a Frenchman, an American, an Australian are scarcely distinguishable so far as their clothes are concerned. It means something that automobiles are very much alike, that electric lights in millions of homes here and abroad glow in accordance with the same principle. It means something that Hottentots, Chinese, Americans and Englishmen rock with laughter at the same film or thrill to a symphony shortwaved from New York to London. It means something that in all advanced countries people travel in similar trains, steamers or planes, cook by gas supplied by a gasometer, suck dirt out of carpets by electricity shot from a central station. It means something that mass production and standardization, which are the hallmarks of a developed industrial technology, have been adopted by every industrial nation. At the bottom of all this lies the conviction that science and technology are good in themselves and are worth cultivating for social and economic reasons.

1944 A World-Unifying Force; or [1945 Atomic Bombs]

Clearly, we have in science a world-unifying force that should be systematically and rationally applied. Already there are in the world perhaps 250,000 first-class research chemists, biologists, physicists and engineers. These men and women in normal times meet in international conventions and give freely of their knowledge to the world. No questions are asked about the race, nationality or creed of these internationalists. We have here the nucleus of an organization that could weld the world psychologically and socially into a unit.

Science ought to be discussed at the peace table and not just politics, spheres of influence and economic rights—the kind of science that will really usher in a new order. Science has never had more than half a chance. It has had to develop in the face of frustration, even of downright suppression. Let us then at the peace table organize research on a world-wide scale with the intention of raising all countries to a single high intellectual and economic level, of giving all peoples a common outlook, and of thus preparing them for the acceptance of a single political order. We need experience in thinking and acting together if we are to convince ourselves that more is to be gained by regarding the land, the sea and the air as a whole than by regions and countries.

Suppose, therefore we organize a World Scientific Commission and suppose that we finance it by contributions from participating nations. One quarter of 1 per cent of pre-war budgets would be enough.

The Commission would first map out what has been accomplished. Gaps in our knowledge would appear. The program of research would be framed to fill them as well as to advance existing knowledge. As the results poured in some of the major disgraces of our scientific record would be expunged.

It is a disgrace that millions must still groan with arthritis. It is a disgrace that the conquest of cancer is not yet in sight. It is a disgrace that we have only the vaguest notion of what happens when a piece of beefsteak is chewed and digested. Because we know so little of the mechanics of heredity—why we inherit blue eyes or stub noses and some afflictions from our parents—it is a disgrace that we cannot pick out of the American population the 18,000,000 who are themselves mentally sound but who are believed to be the carriers of mental disease that can be passed on. It is a disgrace that millions of chemical compounds remain to be discovered—compounds of immense potentialities in medicine, agriculture and industry. It is a disgrace that we cannot predict what the weather will be a fortnight hence in Chicago and New York.

1944 Fruits of Organized Research; or [1945 Atomic Threat]

If we organize research to remove these and many other disgraces, we shall not only improve the lot of mankind, but change world outlook. Enlist the aid of the sociologist to predict the consequences of discovery and invention, so far as that is possible, and it lies within our power to direct social change, to imbue the world with new social purpose, to prepare the world for unity.

No vast palace of research is necessary. Universities that accept grants under the plan would still conduct research on their own account. So would the great foundations and industries. The Commission would be fully aware of its social function, meaning that the unknown would be penetrated with no thought of profit, yet with the conviction that direct material and intellectual benefits would accrue. The Commission would concern itself not with inventions as such but with the discovery of principles that inventors, engineers, physicians and farmers could apply.

Year after year the work would go on. The lagging biological sciences would receive an enormous impetus, and the social scientists and psychologists would be able to make field studies and conduct experiments on a scale unprecedented. We want to accelerate the process of unification that has begun with steamships, radio, airplanes, motion pictures and engineering.

1944 Science and Human Progress; or [1945 Atomic Death]

The World Scientific Commission must concern itself with the broad pattern of education as well as with the organization and support of research. That pattern must be shot through and through with social purpose. What does relativity mean to me? *Why are physicists bombarding atoms?* What good will it do when they find out how matter and how the universe is put together? Such questions probe deep into meanings that are rarely revealed in the classroom. Both the social point of view and the scientific approach to any problem must be acquired by the masses of Asia, Europe and the Americas. It may take decades but the project is worth undertaking.

Give us international cooperation in science and soon there will be cooperation in other fields. For invariably change in science means social change, so that new discoveries in turn call for cooperation in government to make the most of them. With peace maintained by an international police force and experience in cooperation gained by the international organization of science (the one subject on which we can agree), the world will begin to think of unity not as something utopian, but as something necessary. (From the magazine *Tomorrow*.)

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RAID ADVERTISEMENT...BUY VICTORY BONDS

Bush Bids Government Pay Its Scientists Well

Calls \$12,000-\$15,000 a Year Necessary for Preparedness

WASHINGTON, Nov. 9 (UP).—Dr. Vannevar Bush said today the government must offer salaries of at least \$12,000 to \$15,000 a year to attract the scientists it will need to maintain "adequate preparedness on a scientific basis."

The Director of the Office of Scientific Research and Development, testifying before the Senate Civil Service Committee, strongly indorsed proposals to set up two scientific classifications in civil service. One would offer salaries from \$12,000 to \$14,000 a year and the other \$15,000.

Even then, Dr. Bush added, the government would be paying less than industry for scientists performing comparable tasks.

Dr. Bush suggested that a special technical board be set up in the Civil Service Commission to pass on scientific personnel.

He said such a board should not be permitted to delegate its authority because "the men who determine the allocation of positions must be the peers of the men who will occupy them."

Senator Bourke B. Hickenlooper, Republican, of Iowa, agreed with him, adding that civil service "builds up a lot of deadheads" in supervisory positions.

Dr. Bush said: "Only the best qualified technical men will be able to supply the guidance and direction which the government will need."

LOS ALAMOS GROUP COMMENDS ATTLEE

LOS ALAMOS, N. M., Nov. 10 (AP)—Scientists at the Los Alamos Atomic Bomb Project commended British Prime Minister Attlee for his "understanding of the revolutionary problems raised by the atomic bomb" in a statement mailed to the White House today.

"We have worked in the closest collaboration with British scientists on the development of the atomic bomb," the statement said. "How successful that collaboration was, the world knows."

"Today the Prime Minister and the President, the elected heads of our two great nations, are meeting to discuss the future of this new force. We are confident they will continue the common striving of our countries toward a world free from war."

"The needs for steps toward control of nuclear energy is now as pressing as was the need for victory three years ago."

The message was signed by the executive committee of the Association of Los Alamos Scientists and by these individuals who have held top positions at the project: Enrico Fermi, Professor of Physics at the University of Chicago and associate director of the project; Hans A. Bethe, Professor of Physics at Cornell and director of the project's theoretical physics division; Robert Wilson, associate professor of physics at Harvard and director of the research division; Samuel K. Allison, Professor of Physics at the University of Chicago and associate director of the project; Robert F. Bacher, Professor of Physics at Cornell and director of the bomb physics divisions of the Los Alamos Project.

CHURCHILL GIVES WARNING

He Says Partisanship Must Not Impair National Interests

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 10—Partisanship must not be permitted to distract attention from the main interests of the nation, Winston Churchill, wartime Prime Minister and now leader of the Opposition in Parliament, said in a loan drive rally at Westerham, Kent, today.

"In this country," he declared, "we have differences of opinion among ourselves and I cannot for a moment pretend that the present government is all that I could wish it to be. It might be improved in a great many instances and I think its conduct may also be improved."

"These matters are dealt with in Parliament in the party warfare which goes on in every free country and has to go on if any country is to remain free. They must not distract our minds at all from the interests of the nation. We can never afford to let party warfare entrench upon the main interests of the nation."

CANADA IS ANXIOUS OVER ATOM POLICY

Watches Washington Talks to Chart Post-War Course—Flag Debate Still On

By P. J. PHILIP

Special to THE NEW YORK TIMES.

OTTAWA, Nov. 10—With the nervous tension they felt so often during the war, when battles hung in the balance, Canadians are awaiting the decisions of the Washington conference on the control of atomic energy. There has not been much forthright expression of opinion of what should be done, but in what has been said and written there is clear evidence that humanity has reached a turning point.

At tomorrow's ceremonies, when the memory of the dead of the last two wars is honored, the thoughts and prayers of Canadians will be as much with the men in Washington who must take responsibility for the future as with those who paid the price for past errors on the battlefield.

There is a feeling that whatever may be decided by President Truman and Prime Minister Attlee, a change has come into the relations of men as they have been organized in nations. It is argued that whether the secret of the atom bomb is kept by a few or handed over to the United Nations Organization, there can no longer be a feeling of national security.

Brake on Recovery Seen

To some degree fear of this terrible weapon is seen as subconsciously slowing the effort toward recovery which was expected to mark the return of men everywhere to a peacetime way of living. There has not been, it is said, the same joyous eagerness or bright hope in the return of peace as there was after World War I. Among businessmen and workmen one finds discouragement and frustration not dissimilar to what was endured by Canadians during the depression years.

In their practical way Canadians replied this week to their own fears by shattering all records in subscription to their Victory Loan. Of the total of \$1,662,000,000 subscribed up to Friday evening, the cumulative sales to individuals exceeded \$911,000,000.

Oddly, in the middle of the uncertainty whether the world is to be governed by force or law and nations can exercise full sovereignty, Parliament took a day off this week to discuss whether Canada should have a national flag. It is not a new issue. The discussion has been going on since 1867, but this time there seemed to be agreement, with few exceptions, to the Government's proposal that there should be a national flag as an emblem of national unity and of Canada's independent position within the British Commonwealth and within the United Nations.

Distinct Symbol in Issue

The only issue was whether this flag should be entirely Canadian in its symbolism or a kind of derivative of a British flag. Jean F. Pouliot, Quebec member, while protesting his loyalty to the British Crown, wanted a flag "which would designate only Canada and could be hoisted by all Canadians irrespective of race and creed, which would tell the world that Canada exists as a great country."

From the Progressive Conservative benches the proposal was made that the red ensign with the Canadian arms in the flag should be forthwith proclaimed the national flag, but this amendment was ruled out of order as the Government's proposal was only that a joint committee of the House and the Senate be appointed to consider a suitable design.

A feature of the debate, marked by good humor and occasional wit, was that the first three speakers, all of whom favored a distinctive flag, were born in the British Isles: Ian MacKenzie, who spoke for the Government; Maj. Gen. George R. Pearkes, who spoke for the Conservatives, and M. J. Coldwell, who spoke for the Cooperative Credit Federation.

Truman, Attlee Remarks

NYT Special to THE NEW YORK TIMES. WASHINGTON, Nov. 10—The texts of the remarks by President Truman and Prime Minister Attlee at the state dinner tonight follow:

BY PRESIDENT TRUMAN

It is a very great privilege for me tonight as the President of the United States to be host to the Prime Ministers of Great Britain and Canada and the representatives of the other commonwealths of the British Empire; and I want to say a few things that are, I think, in the hearts of all of us.

We, I know, are striving for a world order, and a world peace, in which nations will feel as the British Commonwealth of nations does, and as the forty-eight States in the United States feel. The objective of the United States, I think, has been stated both by the President and by the Secretary of State in words which all of us can understand. We are trying heroically to implement the program which was started by Woodrow Wilson, was carried forward by Franklin Roosevelt, and was finally consummated at San Francisco by a delegation made up of members of the Senate and citizens at large, without political complexion.

One of the great things of the British Empire is that when they have a foreign policy—and they always have one—the British people are behind that foreign policy, no matter which Government is in power. That was amply illustrated at the Potsdam Conference, which started with Winston Churchill as Prime Minister of Great Britain and ended with our guest of honor tonight as the Prime Minister of Great Britain.

And there was no break in the negotiations. Mr. Attlee was there with Mr. Churchill from the beginning. He knew the aims of the conference, and when he came back as Prime Minister things went on just as they had started.

I am hoping that the United States of America can implement a foreign policy which will be the policy of the people of the United States, and not the policy of any political party.

The Prime Minister of Great Britain and the Prime Minister of Canada are here to discuss with the Secretary of State and the President of the United States a program for the use of atomic energy, and for the implementing of a peace program that will be world-wide and continuous, and that will include every nation in the world, without exception.

We are going at our conferences prayerfully. We are hoping that agreements and policies will come out of those conferences which will make the United Nations Organization a living, moving, active program.

BY MR. ATTLEE

Mr. President and Gentlemen: I am extraordinarily glad to be here this evening at this historic occasion, and in this great White

House, and to be your guest tonight.

I heard what you said with great interest, Mr. President, of the need for having a foreign policy—a foreign policy for Britain, a foreign policy for the United States of America. But it seems to me today that what we need most of all is a universal foreign policy, a foreign policy that is directed not to any immediate aim of any particular country, but a foreign policy that is conceived in the interest of all the people of the world. That does not mean that we do not take into account our particular differences, but it seems to me today that our overriding interests of world civilization come first.

We all stand here for freedom, but we know that freedom may be attacked from many sides. Freedom needs to be retranslated every generation. Things that menace it in one epoch pass away; something else may menace it in another.

We all here believe in democracy. We have come out of the war in a great fight for freedom and democracy. And I think that standing here today with the United States of America and the representatives of the British Commonwealth of Nations we can all take pride in our democracy.

We can all take pride in our freedom; but I think we must beware of attributing that entirely to our own virtues. It has also something to do with our own geographical position, and we have a little charity toward others who are less happily placed.

Science Overcomes Barriers

We, for years, have had the Channel to protect us; you, for years, have had the Atlantic—but as we know today, the discoveries of science are transcending seas and transcending oceans.

We must not let anything rob us of our freedom, and of our democracy. Rather, we must try to see whether we cannot give to all nations that kind of security, in which through long years on both sides of the Atlantic we worked up in practice, that most difficult of all forms of government—democracy, about the only form of government that is worthy of free men.

And I hope, Mr. President, that our meeting today—this week—in which we shall take counsel together, will lead us on to help in bringing about what I believe is the supreme need of today—the lifting of the bonds of fear from the human spirit, and the setting free of the human spirit, so that science, instead of a menace, as it is being looked on today, shall be looked on as something that is throwing open wide the gate to a fuller life for all of us.

It is my earnest desire, Mr. President, in meeting you here today, that you and I and Mr. King, and all others with whom we shall be talking, will keep ever in mind that what we are out for today is to try and devise a world policy of the common man.

HOUSE ATOM BILL HELD DANGEROUS

Military Committee Minority Asks Further Study, Interim Measure, Curb on Board

WASHINGTON, Nov. 10 (AP)—Nine members of the House Military Affairs Committee declared today that establishment of a permanent Federal atomic energy commission as proposed "would undermine the very foundations upon which our national life is built."

Legislation setting up the commission to control the use and development of nuclear energy has been approved by a majority of the committee. It is expected to reach the floor of the House soon.

The nine dissenters, one Democrat and eight Republicans, issued a sharply critical report urging that:

- (1) The House send the bill back for further study and revision;
- (2) The measure should be of "interim character" and provide only for a temporary agency;
- (3) Powers of the agency should be greatly reduced, particularly to allow Congressional control and supervision.

In an earlier report the committee majority had recommended speedy action to set up a nine-member part-time commission with broad authority over atomic energy.

The majority said that the proposed commission needed power to protect atomic secrets. It urged that the legislation deal only with domestic control and leave international problems for later settlement.

The dissenting report was signed by Representative John E. Sheridan, Democrat, of Pennsylvania, and the following Republicans: Representatives Dewey Short of Missouri, Leslie C. Arends, Illinois; Charles R. Clason, Massachusetts; Paul W. Shafer, Michigan; Charles H. Elston, Ohio; Forest A. Harness, Indiana; Ivor D. Fenton, Pennsylvania, and Clare Boothe Luce, Connecticut.

The report declared in part: "Even if this were to be interim legislation its extreme terms are unwarranted by any circumstance or condition."

"While the vast powers outlined * * * are requested under the hue and cry of an emergency, it should be borne in mind that the atomic bomb was conceived and developed over a considerable period of time without specific Congressional action."

"We fully recognize that there must be a measure of secrecy and regulation, with rigid controls, but we are far from convinced that any emergency would warrant the surrender by Congress of the arbitrary and limitless powers set by this bill."

"We believe that passage of this bill would undermine the very foundations upon which our national life is built."

"It would defeat the purpose for which it purports to have been introduced. Scientific research, in-

The two who most strongly urged that the Union Jack be retained were Thomas Church, veteran Toronto member and J. H. Blackmore, Social Credit member from Alberta, who said that with its three crosses of St. George, St. Andrew and St. Patrick, the Union Jack was the most distinctly Christian flag on earth. For that reason, he said, his party desired that it should be an honored part of any Canadian flag.

SECRECY ASSAILED ON ATOMIC POWER

Section of Physical Society
Asks Armament Control Be
Handled Through UNO

NYT 11/11
The secrecy surrounding atomic energy and other scientific developments born of the war should be removed immediately and, in the interests of world peace and our own national security, international control of all armaments—particularly atomic power—should be established through the United Nations Organization, it was resolved in a special meeting of the Metropolitan Section of the American Physical Society, which last night ended its fall session at Pupin Hall, Columbia University.

Supplementing their regular fall discussions on matters of pure science with the unscheduled "business conference"—held late Friday night—200 members of the society, one of the ranking groups of scientists in the world and including on its rolls the names of many of the physicists who helped to perfect the atomic bomb, thus added a distinguished group to the long list of science organizations that have already condemned the Government's insistence that secrecy be maintained for many of the discoveries of this war.

Joined in principle now with the 515 chemists, engineers and physicists who two weeks ago in Cambridge, Mass., called for "international cooperation" to control atomic energy, and with such experts as Dr. J. R. Oppenheimer, who directed the atomic research at Los Alamos, N. M., Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, Dr. Henry De W Smyth of Princeton and Dr. Harold C. Urey of Columbia, the physicists specifically resolved that "immediate removal of all restrictions on the publication of scientific information" be urged upon the Government "in the belief that the national security will be promoted thereby."

Delay to Research Seen

"Any restriction of research will not only be contrary to the traditions of science but will delay the development of scientific research in this country," the physicists formally declared. "Advantages which may accrue from regimenting science for military secrecy will be more than offset in the long run by the disadvantages caused by hampered communications among scientists, the difficulties of training young scientists and the general discouragement of scientific initiative."

The determination of which of the scientific information that is now termed "classified" by the Government is really scientific and not simply technological, with which pure science is not especially concerned, should be placed in the hands of a board, the majority of whose members are representative civilian scientists and engineers, the society's members found. It should be the responsibility of this board, according to the physicists, to "declassify" scientific information—information that in the opinion of its members should not remain "classified" by the Government.

Problem of Meeting Challenge

Proceeding easily and casually during the two-day meeting with discussions of subjects like the electrodynamic theory of Piezoelectric oscillations and the ionic conduction in ammonium dihydrogen phosphate single crystals, the physicists were considerably more puzzled by the basic problem of what, exactly, scientists should do to help society meet the atom challenge.

Dismissing quickly one proposal urging that the atomic secrets be given to the Soviet, the members of the society resolved: "In the interest of world peace and of our national security we urge that our Government take immediate steps through the existing framework of the United Nations Organization to call a conference for the purpose of working out machinery for international control of armaments, especially those involving atomic power. We recommend that the UNO be encouraged to set up an international commission of scientists to advise on techniques through which such control might be exercised."

Copies of the resolutions were sent yesterday to President Truman, members of Congress and the Secretaries of State, War and Navy.

NYT 11/11
When of the University of Chicago, writing in a recent number of The Saturday Review of Literature,

thinks that heat and power from the atom, especially in areas where power is now relatively expensive, is not so far off. He says: "The indications are that for such purposes atomic power will before many years be competing with coal on favorable terms. These and other applications of atomic processes may have considerable effect in extending our industrial frontiers."

This is not the opinion of Foreign Secretary Ernest Bevin, as expressed in the course of debate in the House of Commons earlier this week. Mr. Bevin said: "There has been great excitement that atomic energy is likely to produce great industrial energy very quickly. I do not believe it. We ought to get down to a balance about this. It is going to take long, weary, hard and patient work before this new form of energy is available to rejuvenate and revolutionize industrial energy. I do not think the excitement is so justified as people make out."

The obvious first comment on this clash of opinion is, of course, that Dr. Compton, as a distinguished physicist and leading participant in the atomic-bomb project, knows ever so much more about atomic energy than Mr. Bevin. But further thought will suggest that before Foreign Secretary Bevin ventured to speak so definitely about atomic energy in a formal debate he must have taken competent scientific advice.

For that matter, as a member of Mr. Churchill's war Cabinet in intimate touch with everything that affected the conduct of the war, Mr. Bevin probably knows as much about the atomic bomb as Mr. Churchill himself.

All in all, estimates and predictions about atomic energy are bound to be as vague as they are vast, because the whole thing is so new as well as so stupendous in its possibilities. Just how many years are Dr. Compton's "before many years"? Just how long and hard and weary does Mr. Bevin think the long, hard and weary conquest of industrial atomic energy will be? If anything like an approximate time estimate could be formulated by a special commission of a dozen leading scientists, that would seem to be one of the first steps to be taken in the interest of clearer public thinking and quieter public nerves.

Time of the Essence

Dr. Arthur J. Compton

NYT MR. ATTLEE'S MISSION

Prime Minister Clement R. Attlee comes to this country with a single avowed purpose: in his own words, "To discuss with President Truman and the Prime Minister of Canada the problems to which the discovery of atomic energy has given rise." His principal adviser, Sir John Anderson, is not a scientist but a diplomat with financial experience. The President himself, as he said in his message of Oct. 3, regards these discussions as "an effort to work out arrangements covering the terms under which international collaboration and exchange of scientific information might safely proceed." Last week's statements by Foreign Commissar Molotoff and former Prime Minister Churchill, the rather guarded comment of Foreign Secretary Bevin and the proposals made by Capt. Harold E. Stassen in this city Thursday evening, all emphasize the necessity for facing the issue boldly and candidly.

By this time we know that there is no "secret" about the basic nature of the bomb. There are merely some processes of manufacture which have been worked out in this country, are already fully known to the Canadians and the British and can be duplicated or paralleled in a comparatively short time elsewhere. Russian physicists, for example, are believed to be well advanced in the study of atomic fission. If we shared our experience with them they might perhaps be able to produce some bombs in 1946. If they have to work out the process for themselves they may not be at the production stage until 1948 or 1950. But for them, for us, for Canada, Britain and the world at large, the secret that must be brought into the open is not how to make bombs but how to make sure that bombs are never again put to use. The members of the United Nations may differ as to how this is to be achieved, but they have a common interest that it shall be achieved.

It would be childish to attempt international control of the atomic bomb without also controlling other types of bombs existing or to be developed, as well as rockets, pilotless planes, "death rays" (if such are possible) and other weapons intended primarily for the wholesale slaughter of civilians. The new bomb is not a thing in itself—it is a symptom of a change in the character of war. It is still true that they that take the sword shall perish with the sword, but a new and dreadful clause has been added—that their cities, their peoples and their civilizations shall also perish.

In the light of these terrible truths the discussions now beginning cannot have the character of a whispering behind doors. They concern not the bomb itself but the whole question of science applied to destructive uses. The problem of seeing to it that science is used for good purposes and not for evil is unspeakably difficult. It must be solved, and a start may be made during the discussions which are now beginning.

The solution must be on a basis which will make for international confidence, and this means much more than the passing around of "secrets." It means that dangerous political tensions shall not be permitted to arise among the Big Five—Russia, Britain, France, China and the United States. It means that the international police force, under the UNO, shall really be international and really a police force. It means that this country, and every other country, shall make compromises of interest and compromises of sovereignty if these are required to keep peace and good-will.

STATESMEN FACE PROBLEMS OF THE ATOMIC AGE

By JAMES B. RESTON

WASHINGTON, Nov. 10—Like all British Prime Ministers, Clement Attlee is the servant of the British Cabinet and the "back-benchers" in the House of Commons. Since they can bring down his Government at any time, he must be sensitive to their desires, and their desires at the moment are for more information about the future of the atomic bomb. That is why Mr. Attlee is in Washington.

He has other reasons for coming here. He wishes to try to persuade the Truman Administration—and what is equally important, the Federal Legislature—that a loan to Britain of at least \$4,000,000,000 at little or no interest is an investment in world economic recovery which will benefit the United States as well as Britain.

And now that the New York election is over, he also has a chance of inducing Mr. Truman to announce the agreement about the creation of the Anglo-American commission to study the plight of the Jews and to recommend some kind of solution of the problem of Palestine.

Three Hard Questions

These three questions—to say nothing of Anglo-American differences with Soviet Russia—present Mr. Attlee with an important political mission—important to his country, important to the world and important to his own political future. He is under considerable pressure at home to urge placing the atomic bomb at the disposal of the United Nations Security Council—his Cabinet is said to favor this procedure with certain safeguards of unlimited inspection—and he is now faced, on his first mission here as Prime Minister with an American Congress which is not too receptive to Britain's appeal for an interest-free loan, to British policy in Palestine, or to a policy internationalizing the atomic bomb.

The Attlee mission, which will deal primarily with the bomb and last only four or five days, is further complicated by the fact that no clear policy has emerged within the Truman Administration about some important aspects of the future of the bomb and by the additional fact that what policy the Administration does have is based on certain assumptions which are not accepted by many experts on the development of atomic energy.

An Assumption

First among these is the assumption that we do have the exclusive secret of how to manufacture the bomb. The President has said publicly that we do. The British have seemed to support this contention in public by saying that others would have the secret within five years. In private, however, both British and Canadian officials say that their experts have all the essential information they need to produce the weapon.

Second is the assumption, inherent in President Truman's Navy

With British and Canadians We Seek A Safe Policy for the World

Day speech in New York, that since the United States would never use the bomb for aggressive purposes the world should trust us. It may seem strange to many Americans who believe, with much justification, that this is the most moral and fair-minded nation in the world, but the fact is that very few nations, if any, are willing to rest their security on this American promise.

The Russians, for example, recall that after the last war we sent an expeditionary force into their coun-

try to oppose the Bolsheviks. They are aware of the fact that even today some of our citizens are fond of talking about the impossibility of the Communist and capitalist worlds living together, and discussing, even on the floor of the House of Representatives, the possibility of war soon against the Soviet Union.

Nor is this uncertainty about the future policy of the United States restricted to the Soviet Union. Whether we like it or not the fact remains that in the minds of many men who must, like President Truman, look first to the security of their own country, the United States is one of the great question marks in the world today. The general fear, admittedly, is not that we shall turn aggressive, but that we shall retreat into isolation again, but even this uncertainty is a factor because such a development would leave the fate of the world and the power of the bomb in the hands of nations in whom the world has even less trust than in the United States.

Was Use of Bomb Wise?

Moreover, it is obvious here that everybody in the world is not satisfied that we used the bomb wisely in the first place. No less an authority than the Secretary of State himself has insisted that the bomb did not end the war, but that Japan was beaten and suing for peace when it was dropped on Hiroshima.

And this has raised the question as to whether the United States did, when confronted with the decision of using the bomb, exhaust every other possibility before it obliterated Hiroshima and much of its population.

The third assumption, suggested last week by Senator McKellar, is that the bomb can be "outlawed." What he proposed was that we should keep the secrets we have and agree not to use the bomb in the future. Against this proposal stands the history of the bomber and the submarine and the habits of men fighting for their native

countries. Few men, even in this country, believe in the efficacy of such an embargo when the security of a nation is at stake, and the whole history of the past war proves that the German soldier, storming into ancient lands, was thoroughly convinced that he was fighting for the defense of his own country.

The fourth assumption is that the bomb makes war less likely. It may be that this is correct, but the question that is raised here is whether it is correct enough to

serve as the basis of a national and international policy. Certainly, no rational man would lightly start a war of atomic power, but wars are not started by rational men, as the history of the past twenty-five years has proved, and the bomb surely gives to irrational men the opportunity, never before present in the history of the world, to cripple in a single night even so large and powerful an industrial nation as the United States.

Because some men accept these assumptions as correct and others do not accept them, the President is confronted with a great many sharp and conflicting proposals about what we should do.

Suggested Action

Among these proposals are the following:

(1) Keep the secrets of the bomb and outlaw it as a weapon of future war; (2) turn it over to the Security Council of the United Nations Organization and use it to enforce the peace; (3) call a conference of the United Nations to amend the charter of the United Nations Security Organization and put the bomb at the disposal of a security council which could take action against any nation, large or small, that broke the rule of law (this would mean abolition of the veto power now held by the United States, Soviet Russia, Britain, France and China), and (4) decide first among our own officials and scientific and political experts whether the above assumptions are correct and form a United States policy based on the facts, whatever they are; then, in consultation with the British and Canadians, who share many of the secrets already, work out a broad international policy.

Capt. Harold Stassen, who is emerging from the Navy on to the national political scene and who will be released from his official duties within the very near future, came out this week for international control of the bomb, though he emphasized that this could be done only if the international organization which controlled it had

the unlimited right to investigate how atomic energy was being developed in the various countries.

There is more support for this policy than there is confidence that it can be carried out. If the Administration does listen sympathetically to any ideas Mr. Attlee may put forward about letting the Security Council of the UNO control the bomb, it will do so only on the basis that we must know at all times what is being done with the development of the bomb in all countries, including the Soviet Union.

Demands for Inspection

But in view of Russia's reticence about letting its allies know what is going on in the industries of the Soviet Union, and in view of Foreign Commissar Molotov's statement this week that the Soviet Union would have atomic energy in the future, there is not much confidence in the capital that the U.S.S.R. would agree to the rigorous inspection which we would certainly demand.

Consequently the tendency here now is to go slowly on changing the decision not to give up the industrial processes of manufacturing the bomb. Some of our officials are proposing that the United States should agree to the use of the bomb only (1) in self-defense after an overt act of aggression against the United States and (2) when called upon to use it by the Security Council of the UNO in accordance with present voting procedure which would give the United States a veto on its use.

The officials who make this proposal concede that this would not meet the demands of those who want to internationalize the bomb, but they have almost concluded that there is no way at the moment of reconciling the two extreme factions existing both in the executive and legislative branches of the Government—those who want the United States to keep it and those who contend that no one or a few nations should monopolize the production of such a weapon.

Expected Results

About all that is expected of the Attlee mission, therefore, is an agreement on closer consultation among the United States, Britain and Canada on the bomb and a commitment by all three to "consult" with the other nations on their ideas of what should be done with it. Beyond that, few observers expect more than what they call "a better atmosphere."

If Mr. Attlee can suggest a solution to the problem nobody would be happier than the top members of the Truman Administration. They have been under fire about the bomb ever since the day the first one exploded in the desert of New Mexico, and there are few people close to the President who are absolutely sure about their own conclusions. The only thing everybody agrees on is that the issue of war or peace in an era of robot and atomic bombs is an issue of annihilation or survival. But that doesn't make anybody any happier.

What of the Bomb?

Authoritative Explanation Made Of May-Johnson Bill

The writer of the following letter was until recently, in civilian capacity, procurement counsel for the Army Services Forces. He and Brig. Gen. Kenneth S. Royall, now Under-Secretary of War, were the two men called by the War Department to draft the legislation for the control of atomic energy.

TO THE EDITOR OF THE NEW YORK TIMES:

As one who participated in the drafting of the May-Johnson bill (HR 4280), I have been amazed to read some of the extravagant statements which have been made by its critics. Now that the House Military Affairs Committee has completed its study of the bill, the time may be appropriate to analyze this measure and to explain the purposes which animated its sponsors.

As soon as it became apparent that the release of the first atomic bomb was imminent, the Secretary of War, with the approval of the President, appointed an interim committee to advise him on the steps which should be taken to insure that the potentialities of this new source of energy would be developed for good and not for evil. The membership of the committee included the president of the New York Life Insurance Company, the president of Harvard University, the president of the Massachusetts Institute of Technology and Dr. Vannevar Bush, as well as representatives of the State, War and Navy Departments.

Three Main Factors

At early meetings of the committee it became apparent that three things need to be done as soon as possible. First, it is necessary to insure the successful continuance of the projects which are now being conducted under the supervision of the Manhattan Engineering District of the War Department. The first step has been successfully taken in the development of the most powerful weapon known to man, but it is recognized that this is but the beginning. If, to borrow the words of General Marshall, the security of the United States is to remain in our own hands, leadership in the field of atomic weapons will have to be maintained. For this purpose new legislation is obviously necessary, as the imminent lapse or repeal of war powers will make virtually impossible the successful prosecution of the projects now under way, as well as those for which a future need may appear.

Second, it is necessary to take prompt steps to protect the nation against the hazards inherent in the release of atomic energy. Until our knowledge of nuclear physics is vastly extended it seems unthinkable that the release of atomic energy in substantial quantities should be permitted except under strict control. The statement in the first section of the May-Johnson bill that the misuse of atomic energy by design or through ignorance may inflict incalculable disaster upon the nation is fully supported by the testimony of all of the scientists who have testified in connection with the proposed legislation.

Peace Adds to Problem

Third, it is necessary to prevent the disclosure of information which can properly be classified as a military secret. Those who have worked under the supervision of the Manhattan Engineering District have gained much information of great military value. Up to this time the War Department has determined by regulation the extent to which this information can be communicated, and violation of those regulations has carried criminal penalties.

With the return of peace a special problem will be presented. Many persons may leave the service of the War Department and take with them the information which they have gained. Some of this information will be such that publication should not and probably could not be prevented, but there will be much information of a character which nearly everyone will agree should be communicated only in accordance with policies established by the Government after full consideration of the needs of the national defense.

In order to meet the needs which I have outlined, legislation is clearly required to confer upon some governmental agency a large measure of the authority now being exercised by the Manhattan Engineering District under war powers. It was the view of the interim committee that the exercise of such great powers in time of peace should not be committed to military control, and for this reason the committee proposed the creation of a commission to be appointed by the President.

Administrator Needed

After careful consideration it was concluded that it would be impossible to obtain on a full-time basis the kind of men who ought to serve on such a commission. For this reason it was determined to make the compensation of the commissioners nominal, and to free them from restrictions on other activities. It was recognized that under such circumstances the commissioners could not give attention to the details of administration, and for this reason provision was made for an administrator with broad powers to be exercised subject to the supervision and control of the commission.

Many provisions of the bill were designed to meet the first of the needs which I have outlined. After careful study the House Military Affairs Committee has made little change in these provisions except for that which undertook to establish the relationship of the commission and the General Accounting Office on a basis similar to that now existing between that office and the Tennessee Valley Authority. That provision was eliminated from the measure, largely because of opposition of the Controller General.

More controversial are those sections of the bill which are designed to meet the second of the needs which have been outlined. In order to protect the public against the uncontrolled release of atomic energy, it was necessary to vest in the commission powers adequate for that purpose. A large measure of control could be obtained through transfer to the commission of the physical properties now in the possession of the Government and operated under the control of the Manhattan Engineering District.

However, to make control effective, it was thought necessary to vest in the commission the authority to take possession of any other property by which the release of atomic energy in substantial quantities could be accomplished. For this reason the bill conferred on the commission powers of condemnation, the breadth of which has been the subject of some criticism. The changes made in the bill by the House Military Affairs Committee should go far to allay any fears which have been aroused in this connection.

There has been much discussion of the extent of the regulatory powers conferred upon the commission by Section 13 of the bill. This section, it has been charged, empowers the commission to stifle all development in the field of nuclear physics. I believe that anyone who reads Section 13 of the bill in its entirety will agree that it does not authorize the commission to control research or experimentation in the field of nuclear physics, unless there is involved the release of atomic energy in amounts which the commission believes would constitute a national hazard, or would be of military or industrial value.

Regulatory Power Urged

It is true that as originally introduced the bill left to the judgment of the commission the determination as to what amount of energy may constitute a national hazard, or be of military or industrial value. As revised by the House Military Affairs Committee, the authority of the commission in this respect is eliminated and the question is left for the courts to decide. I think it is safe to say that legislation finally enacted by Congress should contain a grant or regulatory power at least as broad as that contained in the bill which has been approved by a majority of the House Military Affairs Committee.

The provisions of the May-Johnson bill which provoked the greatest outcry, and led to the most extravagant charges, are those designed to prevent the disclosure of military secrets. Section 17 of the original bill authorized the commission to establish and provide for the administration of security regulations covering the communication of information relating to or connected with research on the transmutation of atomic species, with the production of nuclear fission and with the release of atomic energy.

Some Lack of Understanding

It does not appear to have been generally understood that this section did not authorize the commission to prevent or limit the dissemination of information developed as a result of research and experimentation which were not subject to the commission's control under Section 13, or that of its predecessor, the Manhattan Engineering District. That, however, is the clear meaning of the language, and this has been emphasized by the action of the House Military Affairs Committee in limiting the authority of the commission to make such regulations to cases where required by the national defense or by considerations of military security.

This provision will not satisfy those who believe in complete freedom of exchange of scientific information, nor will it satisfy those who believe that future discoveries of military significance which may be made by scientists no longer in the employ of the Government should be subject to security classification. The real question is whether a better method can be devised to meet the views of the great majority who believe that military secrets should be protected without sacrifice of scientific progress.

Wisdom Is Needed

To the interim committee the only solution possible in the present state of knowledge seemed to be to delegate to the commission the authority to make necessary regulations with a clear exemption of those fields in which no limitation of communication was desired. It must be conceded that a great deal will depend upon the wisdom and forbearance of the commissioners, but those who have wrestled with this problem may be permitted to doubt whether any more acceptable solution can be found.

A final criticism relates to the failure of the bill to prohibit or encourage the communication of information regarding atomic weapons to other nations. The failure of the bill to touch upon this subject was deliberate. The interim committee felt that prompt legislation was urgently needed for the reasons previously advanced, and that consideration of the international aspect of this problem should not be permitted to delay the setting up of the machinery necessary to make effective whatever policy might finally be determined upon after full discussion.

Whatever judgment may ultimately be passed on the activities of the interim committee, I hope that I have said enough to make clear that it has faced many difficult problems which permit no ready answer, and that discussion of its work need not be conducted in the mood of denunciatory violence which has been so commonly evidenced during the past few weeks.

WILLIAM L. MARBURY.

Baltimore, Nov. 8, 1945.

NYT
11/11

Challenge of the Atom

*My purpose is * * * to discuss world affairs in the light—the terrible light—of the discovery of atomic energy.*

In these words Britain's Prime Minister Attlee last week summed up the scope and significance of the talks which he begins today with President Truman and Premier King of Canada. It has become more evident every day that the atomic bomb is the world's No. 1 issue. On both sides of the Atlantic debate, on the bomb's future is taking on a new sense of urgency.

Whatever other issues remain unsettled among the Big Three—debates on boundaries, bases, "democratic" Governments and control commissions—are overshadowed by the bomb. It has become a "test case" in the world's new effort to build a peace based on good faith, compromise and joint action.

Revolution in War

The problem is unique because the bomb is unique. Other weapons are kept secret as a matter of course and without straining international relations—jet planes, electronic devices, perhaps poison gas. But these are of limited effect, and defense keeps nearly apace with offense. The atomic bomb produces not only a bigger explosion than any known before, but a different explosion—disintegration. One plane with one bomb, in which the lethal ingredients weighed perhaps only a few pounds, destroyed 60 per cent of Hiroshima, a city of 375,000; 200 bombs could cripple industrial America. Bombs can be made bigger and they can be carried in rocket missiles, faster than sound. The consensus among scientists is that there is no defense against such an attack—unless the world disperses and perhaps buries its cities.

With this knowledge as a starting point, there have developed a great many viewpoints on what should be done with the secret of the bomb. The three principal ones are: (1) keep the secret as it stands now, primarily in American hands; (2) give it to the Security Council of UNO; (3) use it as the basis for creating some new form of world government. The three viewpoints may be summed up as follows:

For Keeping the Secret: Convinced that the United States would never use the bomb for aggression, mistrusting what other nations (most specifically Russia) would do with it, holders of this view say it would be folly to part with the knowledge the nation now has. They hold that America, as the world's greatest arsenal, might well be the first target for aggression. We must, they say, keep the weapon for defense. Senator Ellender of Louisiana has said "I fear that if we should divulge the secret it * * * may fall into the hands of unscrupulous leaders who might use it against us." A less rigid view is that the secret should be kept at least until the nations have shown their capacity to live together in peace. Senator Capper of Kansas has said "If [we] can get some dependable assurance that Russia's foreign policy will not conflict with our own, the proposition [of sharing] might be considered."

Weapon for Peace

For Sharing the Secret: One of the prime arguments of this school is that there is little if any "secret" to talk about. Scientists and statesmen say the laboratory technique is well known, that the basic production processes have been revealed. Britons have said they know all they need to know to go ahead; Dr. L. M. Oliphant, leading British atomic expert, declared last week that any major industrial country could find out all it needs to know in six months. From this premise it is argued (1) that the United States would be building its defenses on a false assumption; (2) that trying to withhold the secret would undermine international good-will.

The proposal is that all the secrets, and the power to control production, be vested in the Security Council of UNO. This is made up of eleven nations, but all military forces for stopping aggression are under the Chiefs of Staff of the Big Five. It would mean that Russia would become a full partner in atomic knowledge and would have a top role in deciding its use. The condition attached, however, is that Russia exchange full details of her own developments and allow free access for inspection.

For a New Approach

A modification of this was suggested last week by Capt. Harold E. Stassen. He proposed a "World Stabilization Force"—five international squadrons, with five atomic bombs each, spaced around the world to halt any aggression.

Many see grave menace in selfish nationalism. On this point Captain Stassen said last week: "The narrow concept of absolute nationalistic sovereignty belongs in the same historical discard with the divine right of kings. * * * Principles of government must stand the test of service to the people if they are to be respected." This idea seemed to be in Mr. Attlee's mind last week when he said "The question that faces us today is * * * what kind of a world society is necessary?"

A number of leading figures have said most of the current arguments are ignoring "the atomic revolution." UNO, they say, is an admirable effort but no guarantee against war; it can fail to act against aggression, it can break up entirely. Either war, atomic bombs could be loosed at a moment's notice.

What is needed, this school holds, is a revolution in government, a breakdown of nationalism. President Robert M. Hutchins of the University of Chicago, Dr. Albert Einstein and a group of Harvard and M. I. T. scientists are among those who have publicly taken this stand.

All these arguments have entered into the thinking of the Great Power leaders. No flat and final decisions have been announced, but these developments reflect attitudes in the Big Three capitals:

WASHINGTON: President Truman said six weeks ago that he would make the final decision on the atomic secrets—that he alone would have to make it and would take full responsibility for it. Clues to what his decision will be have been few and inconclusive. He has said that only the United States has the essential know-how for producing the bomb now and that that knowledge would not be given to other nations. But he has twice said that there would have to be talks with "other nations" (besides Britain and Canada) and that those talks could not wait upon completion of the United Nations Organization—a statement that left the way open for the eventual linking of the two.

Britain's Concern

LONDON: In the immediate background of Mr. Attlee's trip to Washington is British concern over the bomb, on three counts. They are: (1) a feeling that the United States is staking out a larger claim on atomic secrets than it is entitled to; (2) a feeling that if America intends to "sit tight" on that claim or use it for her own trading purposes she will be flouting Anglo-American amity; (3) an even wider feeling that there can be no solid understanding with Russia on European settlements or anything else until the bomb issue is resolved.

In part Britain's attitude stems from the idea that "after all, we have to live here" (on the edge of Europe). There are those who feel that amity with Russia must be established immediately if Britain is to be secure; there

are others who, apparently like Mr. Churchill, feel that existing differences are too grave to warrant letting Russia have the secret. Mr. Attlee's one statement, on Aug. 12, promised "full cooperation" with America in making the atomic bomb an "overwhelming influence toward world peace."

MOSCOW: Until last week there had been only guarded press comments on the atomic secrets, most of them concerned with the effects on the capitalist economy. But on Tuesday, at the October Revolution celebration, Foreign Commissar Molotoff said: "The discovery of atomic energy should not encourage a propensity to exploit the discovery in the play of forces in international policy or an attitude of complacency as regards the future of peace-loving nations." He said the secret could not be kept; "we will have atomic energy, and other things, too."

SLAV CONGRESS ASKS ATOMIC BILL DEFEAT

Five hundred representatives to the fourth annual conference of the American Slav Congress of Greater New York urged yesterday that the atomic energy secret be divulged to United Nations Organization members and its military use be controlled by the UNO Security Conference. The delegates, meeting at an all-day session at the Hotel Roosevelt, called on other organizations to help defeat the May-Johnson bill.

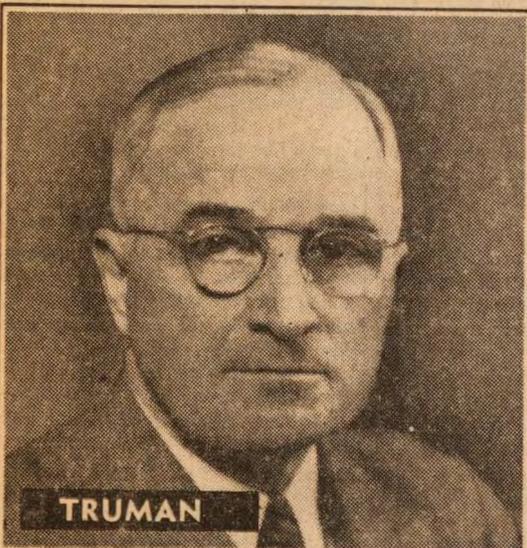
In a resolution, one of twelve adopted unanimously at the meeting, the congress members declared that atomic energy is held at the present as a "blackmail threat to other nations and definite threat to world peace and unity."

The conference went on record as opposing proposals for compulsory military training. It urged Congress to vote down the "free press" amendment to the \$550,000,000 United Nations Relief and Rehabilitation Administration appropriation.

A petition, to be signed by the members and sent to Congress, termed the amendment a "violation of our agreement with the forty-four members of UNRRA and a blow to Allied unity."

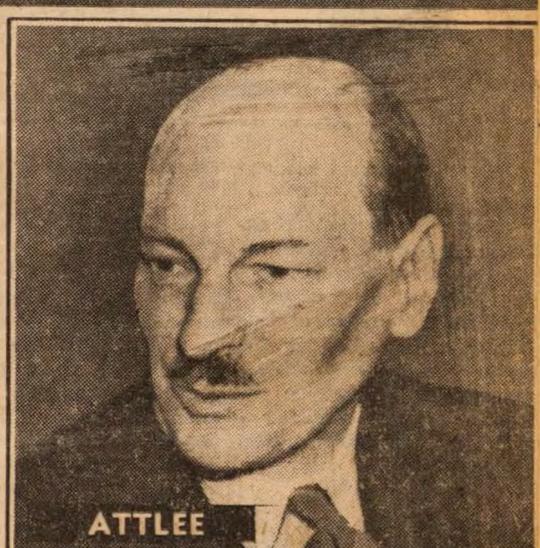
Other resolutions called for passage of the Marcantonio anti-poll tax bill, for legislation to establish a permanent Fair Employment Practices Commission and for passage of the Full Employment Bill. The conference also called for the abolition of the House Committee on Un-American Activities.

SIX VIEWS ON "THE WORLD'S MAJOR CHALLENGE"



TRUMAN

"In our possession of this weapon, there is no threat * * * We regard possession of this new power * * * as a sacred trust. * * * The world knows that trust will not be violated."



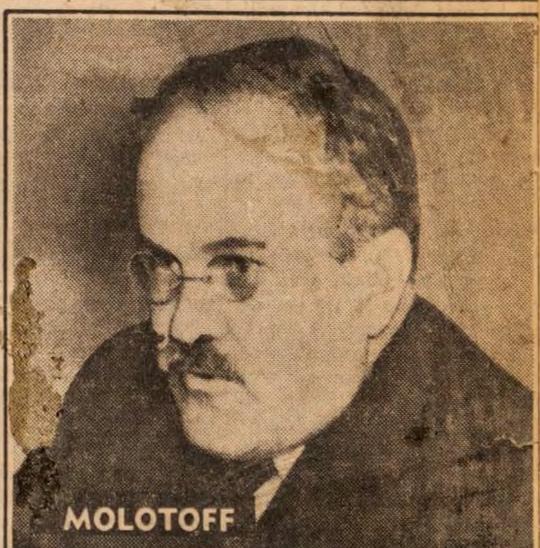
ATTLEE

"President Truman has spoken * * * of plans for the future control of this bomb. * * * It is the intention of His Majesty's Government to [promote] the objects thus foreshadowed."



CHURCHILL

"I trust we are not going to [urge sharing the secret with Russia.] * * * If the [case] were reversed and we * * * asked for access to Russian arsenals it would not be granted."



MOLOTOFF

"It is not possible * * * for a technical secret * * * to remain the exclusive possession of some one country or some narrow circle of countries. * * * We shall have atomic energy."



BEVIN

"The United Nations Organization is * * * the only way, in my judgment, which can create a world organization * * * united enough to hold in check this * * * scientific discovery."



STASSEN

"I advocate placing the control of the atomic bomb definitely on the world level. * * * The world needed government on a world level before. * * * Now it has become imperative."

The Atomic Bomb: The Facts and the Issue

Here is an article that gives insight into the problems that confront the statesmen.

By HARRY M. DAVIS

WASHINGTON.

LIKE a swarm of electrons circling around the nucleus of the atom, a fog of rumor, argument and alarm has already surrounded the hard shell of known data about atomic energy. A series of important facts were disclosed in the Government announcements of Aug. 6. Many more were given out in the report on "Atomic Energy for Military Purposes," written by Professor Henry DeWolf Smyth of the Manhattan Project at the request of Maj. Gen. L. R. Groves. Little in the way of hard fact—much in the way of conjecture and argument—has been added since to the fund of public information.

But these things have happened since Aug. 6: Japan has surrendered, our armed forces have begun demobilizing, Congress is considering a bill for the control of atomic research, scientists who worked on the project are warning us that any next war would be catastrophic, and many citizens are voicing the need for a world government to prevent such a catastrophe. The meeting of the British and Canadian Prime Ministers with President Truman has atomic bomb at the top of its agenda.

As the statesmen come together, what are the principal facts we know about the atomic bomb? They are these:

FACT NO. 1—Atomic bombs exist and explode.

This was the one big secret of secrets—

until Hiroshima. The importance of this single, overpowering fact cannot be over-emphasized. Much of the effort of the best scientists on the project was devoted to figuring out theoretically whether an explosion would be possible, since by its very nature the atomic bomb could not be tested on a small scale. In fact, according to Smyth, "initially many scientists could and did hope that some principle would emerge which would prove that atomic bombs were inherently impossible." The answer came out the other way. Now that we have demonstrated this fact, scientists of other nations will not have to waste time proving it over again. They can start right away on the job of making bombs.

FACT NO. 2—We spent two billion dollars on the project.

This seems like a lot of money, but many nations can afford the sum. It's cheaper than clothing and feeding a mass army. Besides, it shouldn't cost nearly as much for another nation that might have started a similar project after Aug. 6. For the reasons, read further.

FACT NO. 3—Two entirely different substances can be used in the making of an atomic bomb.

One of them is the scarce variety of uranium metal which has an atomic weight of 235, usually referred to as U-235. The other material is plutonium, a man-made element not known to exist in nature. Because the United States was pioneering an unknown field, we made both. Another nation can choose either one at its convenience, thereby reducing its expenditure of money, effort—and time.

FACT NO. 4—Both bomb materials are made from uranium ore.

U-235 is obtained by separation processes, plutonium by atomic synthesis followed by separation. Uranium ore exists not only in North America but also in Europe and Africa. The known resources are fairly limited, but intensive exploration may be expected to unearth more.

FACT NO. 5—U-235 was separated by two different processes.

One method is electromagnetic, employing a modification of the cyclotron, previously well known as an atom-smashing machine. Physicists of many nations

have cyclotrons. The other method depends on the diffusion of gases through porous membranes, involving old principles but new techniques. Both methods were employed successfully on a large scale in the plants in Tennessee. Several other possible methods were considered. Another nation might save time by concentrating on the one process but suitable to its industrial establishment.

FACT NO. 6—The bomb is small.

An odd characteristic of the atomic bomb is that it cannot be made to explode if it is smaller than a "critical size," and that it cannot be prevented from exploding if it is larger than that critical size. In fact, the method of setting off the bomb is to bring two or more parts of it rapidly together so that the critical size is suddenly attained. The figures on the critical size for the actual bomb have never been revealed, but Smyth cites early estimates that the weight of U-235 needed would be somewhere between 1 and 100 kilograms (roughly from 2 to 200 pounds). It is reasonable to guess that the bombs which leveled Hiroshima and Nagasaki were about the smallest that would work. From this two conclusions can be drawn: (a) that the "infernal machine," smuggled and planted in an enemy city, may become the great menace of the future, and (b) that future atomic bombs, assembled

from more pieces, will be bigger and far more devastating.

FACT NO. 7—The factories are big.

A glance at the photographs released by the War Department of the plants and housing developments at Hanford and Oak Ridge is enough to show that, using presently feasible processes at least, an atomic bomb factory cannot be hidden. It takes vast quantities of raw materials to produce the explosive ingredients. Thus we have no reason to fear that a mad genius in some underground hideaway might produce atomic bombs and threaten mastery of the world. We can also draw the inferences that (a) only well-industrialized nations will be able to go into the atomic energy business in the near future, and (b) international inspection of national bomb production would be technically practical.

FACT NO. 8—Our factories are producing more bombs.

General Marshall told a Congressional committee that two big plants are producing "right now" and "building up a reserve."

FACT NO. 9—The power of these bombs is overwhelming.

The eyewitness accounts of the flattening of Hiroshima and Nagasaki, and the killing of tens of thousands by just two bombs, have given ominous meaning to what scientists call "a factor of ten-to-the-sixth," that is, a number with six zeros. This means that, pound for pound, atomic bombs explode with a power more than a million times greater than that of ordinary explosives. The bomb dropped on Hiroshima was equivalent to 20,000 tons of TNT. And it was probably the smallest such bomb that could be made. Bigger bombs, perhaps using more advanced detonating devices, may well add more digits to that factor of ten-to-the-sixth—and correspondingly wipe out human beings by the millions.

FACT NO. 10—Destruction is reaching the saturation point.

The concurrent development of radio-controlled, rocket-driven missiles means that there is little hope of preventing the arrival of atomic explosives. Dr. L. M. Oliphant, leading British scientific expert on both atomic bombs and radar, has stated that if we do not get rid of war we must "face up to the fact that within a quarter of an hour of war's being declared the cities of this country or other countries, engaged in war will be laid in ruins."

THESE, then, are the outstanding facts about the atomic bomb made public by official sources, together with their immediate inferences.

From these publicly known facts, and from the public statements of scientists who know the additional undisclosed facts, we can draw three conclusions that are fundamental to the Governmental and international decisions now in the making: (1) we can gain little toward permanent personal or national security

through a policy of strict secrecy; (2) such a policy would hamper our own progress toward the useful application of atomic energy, and (3) a global system of control over atomic weapons seems necessary for our survival.

IN the initial blast of excitement that followed the Hiroshima explosion there was much justified self-congratulation on our voluntary censorship system that had kept the big Manhattan project out of the papers and off the air until the bomb spoke for itself. This left a popular impression that tremendous secrets still remained untold. Statements from all sides now make it clear that this impression was erroneous.

President Truman has reported that the fundamental scientific principles of the bomb are well known, and that the information exclusive to the United States, Britain and Canada is the technical know-how of bomb manufacture. In making this statement the President also pronounced a policy—that in the present state of the world the United States would not divulge that technical know-how.

The Association of Los Alamos Scientists, including men who worked on the fabrication and testing of the bomb in New Mexico, has declared as follows: "It is certain that other countries by independent research can achieve the technical design and industrial methods of producing atomic power which now are the secrets of the United States, Great Britain and Canada." A group of scientists at the Army establishment at Oak Ridge, Tenn., have stated: "It would be foolish to suppose that scientists and engineers in other countries would not be able to redevelop at least one of the methods we have used or develop new methods."

Evidently there is no single passageway toward an atomic bomb to which we hold an exclusive key. Instead, there are various roads of varying difficulty and it is only a question of time before other nations break through by one route or another toward the deadly goal.

THE point that the atomic scientists have been making, both in the statements of these organized groups and in individual testimony before Congress, is that it would be a fatal delusion to think we are safe because of the secrets we possess, or that we would be safer through the accumulation of still more secret know-how. That still leaves the question, however, of what to do with our secret information—publish it, sit on it, or parcel it out in the proper directions as a medium of international bargaining. The War Department took a first step by publishing the Smyth report. What about the next steps?

Here it is important to distinguish very carefully between two kinds of technical information. One pertains to weapons technology; the other, to the science of nuclear physics.

Weapons technology deals with the method of putting together the nuclear explosives into an instrument of destruction and detonating it at or over the target. This falls into the normal category of military secrecy, like the design of a gun, not to be released until compromised. There is general agreement that this kind of deadly know-how should be carefully guarded until we can rid ourselves of the fear of war.

In the second category are data of physical science, the kind that the men in university laboratories normally went after and published as a contribution to knowledge. It is information expressed in equations and tables of numbers. It leads to theories about the essential nature of the universe, and it can also lead—if permitted so to be used—to the useful application of the energy in the nucleus of the atom.

ACTUALLY it appears that our treasure of secret information in this category is not very rich. The Manhattan Project exploited the international fund of public knowledge of 1940. It brought, according to Dr. J. Robert Oppenheimer, former head of the bomb-construction laboratory in New Mexico, "no fundamental discoveries, no real increase in our understanding of nature, and not even any great scientific questions for the future to answer."

Nevertheless, the policy to be adopted for this category is crucial. Many of the scientists, like Oppenheimer, are going back to their universities, and they are itching to return to their fundamental attack on the secrets of nature and to the exploitation of the new-found atomic energy for the use of all. But as things stand at the moment, they do not know whether it will be legal for them to conduct such research without a license, nor can they carry along for further exploitation the facts and figures that they accumulated in the Government laboratories.

These scientists are asking for the unrestricted use of the physical facts. They argue that even within the United States the quest will progress faster if the facts are free and open. And that is certainly true of the world as a whole.

The history of science proves this theorem, and the best example is in the early, pre-secrecy history of atomic energy. Becquerel and the Curies in France discovered the radioactivity of uranium and radium; Einstein while in Switzerland explained the source of radioactive energy; Bohr in Denmark postulated the working model of the atom; Rutherford in England pioneered the transmutation of atoms; Lawrence in California developed the cyclotron; Chadwick in England discovered the neutron; Fermi in Italy showed what neutrons could do to uranium; Hahn and Meitner in Germany evoked the explosive fission of U-235. All this information was quickly circulated throughout the world, and the discovery of fission was

carried promptly by the press.

A story on Page 2 of THE NEW YORK TIMES of Jan. 29, 1939, was headlined:

ATOM EXPLOSION FREES 200,000,000 VOLTS

It was the same kind of explosion—only this time with many more atoms—that raised those awesome clouds over New Mexico and Japan. It was only by virtue of the discoveries of European scientists that the United States was able to proceed with the segregation of enough fissionable atoms to make a bomb. And behind that lay the spectacular advance of fundamental physics in the preceding fifty years, with the spark of mathematical thought and the tidings of experimental results flying free across national boundaries.

Energy unlimited beckons us. With more knowledge of the atomic nucleus, or even by fully exploiting our present knowledge, we have the promise of enough power resources to banish from the world such causes of war as poverty and hunger. And the fastest way to arrive at this age of atomic power is to remove the shackles from science. The past of science proves that its future will come closer if scientists of all nations can work freely together toward a common human goal.

But this implies a need for global control of atomic weapons. Can we entrust our technical know-how, our hard-won findings in atomic physics and chemistry, to a world in which no mechanism has yet been established for the preservation of peace?

AT the moment America's power is at its crest. Even without counting our technical secrets, we have overpowering strength because our plutonium and uranium separation plants are in being, not just on paper; because we have a stock of city-smashing bombs and are steadily producing more; because we have the bombers with which to deliver them to any target on earth. The only assurance of safety any other nation has today is its trust in our good intentions. Within a few years, if the predictions we hear are correct, we will have to place equal trust in the good intentions of our neighbors, and all the nations on earth will be our neighbors.

The saturation point to destruction, in the case of man-to-man combat, was reached in the last century when revolvers went into mass production. Atomic bombs brings us to the saturation point for the destruction of whole countries.

When that point was reached for personal quarrels, laws were enacted against the carrying of concealed weapons. The only personal safety of the man in the street is in those laws and the police who enforce them. The logic of the atomic bomb seems to call for a world-wide Sullivan Law with respect to nations, and an armed global police to enforce it.

BIG 3 TALK ASKED

British Prime Minister Would Put All Science Gains in UNO Body

WANTS SOVIET GUARANTEE

NYT 11/12
Truman, Attlee and King Talk
Aboard Yacht After Visiting
Tomb of Unknown Soldier

By SAMUEL A. TOWER

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 11—A proposal to internationalize all scientific developments, including the secrets of atomic energy, through the Security Council of the United Nations Organization has been placed before President Truman by Prime Minister Clement R. Attlee of Great Britain, it was learned today. The proposal was contingent upon an exposition by the Soviet Union of its aims and policies.

Together with Prime Minister William L. Mackenzie King of Canada, Mr. Truman and Mr. Attlee paused briefly this morning, in the midst of their conversations on the atomic bomb, the instrument that may banish strife, to honor the war dead in ceremonies at Arlington Cemetery. Then the three leaders went aboard the yacht Sequoia and resumed their discussions.

Attlee's Proposals

Aboard the yacht, the British Prime Minister was authoritatively reported as having offered the following three-point program to the conferees:

That the United States, Great Britain and Canada, the three holders of the bomb secret, agree to share all the information on atomic energy with the members of the Security Council of the UNO.

That all future scientific discoveries be shared by members of the United Nations.

That the three countries yield their information on atomic bombs only if they receive iron-clad guarantees that the other nations will work, with honesty and frankness, in cooperation with the UNO.

Before initiating the program the three countries would have to obtain from the Soviet Union a firm understanding on its policies and objectives through a definitive statement of its additional political, territorial and economic desires, according to Mr. Attlee's views. If acceptable to the three countries and accompanied by a Russian pledge to subscribe wholeheartedly to the UNO, the desires would be met.

If such a declaration were not forthcoming from Russia, then it was understood, Mr. Attlee proposed retention of the atomic secrets by the three countries now possessing them, but with a guarantee not to use them except in cooperation with the United Nations.

Wants Another Big 3 Parley

Two immediate steps were said to have been suggested by Mr. Attlee at the shipboard session—first, that the countries of the three conferees make the necessary approaches to the other member nations of the UNO, and, secondly, the holding of another conference of the Big Three.

The British leader was said to have laid particular stress on the internationalization of all scientific developments, not only atomic, in the belief that the discovery of the utilization of atomic energy had merely placed the world on the threshold of research into far more potent scientific evolutions.

However, it was learned that he regarded as impracticable the possibility of any formal international inspection, since it would involve the detailed investigative efforts of thousands of top-flight scientists.

In addition to the two Prime Ministers, the President's guests aboard the yacht were reported to be James F. Byrnes, Secretary of State; Admiral William D. Leahy, Chief of Staff to the President; the Earl of Halifax, British Ambassador; Sir John Anderson, chairman of the British Atomic Energy Committee, and Lester R. Pearson, the Canadian Ambassador, plus members of their secretarial staffs.

Before setting out on their cruise down the Potomac River, the leaders of the three countries, twice victorious in conflicts with Germany, journeyed to Arlington National Cemetery in a combined observance of the first peacetime Armistice Day in four years for the United States and in six years for Great Britain and Canada.

In contrast to the unseasonal warmth of the past week, the day was cold and sombre, with a misty drizzle, as the procession of seven cars, including Secret Service men and newsmen, filed out from the White House to start the pilgrimage across the river.

Following a route that took it past the Lincoln Memorial and within sight of the new Jefferson Memorial, the Presidential party arrived at the cemetery about 10:45 A. M. and was greeted by a salute of twenty-one guns on the south bank of the Potomac.

A few minutes early, the party waited at the amphitheater adjoining the Tomb of the Unknown Soldier of the first World War while Mrs. Dwight D. Eisenhower, wife of the Supreme Allied Commander in Europe, placed a wreath on the tomb. After her action she came over to the party and briefly exchanged greetings.

At the appointed time of five minutes to 11, the three leaders advanced with bared heads before the amphitheatre and stood at attention while the United States Army band played the three national anthems, "The Star-Spangled Banner," "God Save the King" and "O Canada."

At one minute to 11, as the last strains of the music died away, the three stood, for one minute, in silence before the tomb.

Then Mr. Truman and the two Prime Ministers laid wreaths of chrysanthemums on the tomb, honoring through the soldier "known but to God" not only the American dead of World Wars I and II, but also the dead of our Allies. There was a muffled roll of drums and then, as the throng of onlookers, heavily sprinkled with uniforms, stood hushed, the bugle sounded "Taps."

There were no speeches, only the solemn, expressive actions.

Wreath at Canadian Cross

From the Cenotaph the distinguished group proceeded to the near-by Canadian Cross, erected by the Canadian Government in honor of American citizens who served in the Canadian Army in the first World War. While his companions stood at attention, Mr. King went forward and placed a wreath at its base.

Farther along the winding avenues of the cemetery the party paused at the small, flat marble stone marking the grave of Field Marshal Sir John Dill, British representative on the Combined Chiefs of Staff, who died while on duty in Washington last year. Here, Mr. Attlee came forward and laid a wreath of yellow chrysanthemums over the stone.

The President wore a gray tweed topcoat, a gray hat, a dark gray suit set off by a striped blue tie.

His visitors were clad in black coats, suits and hats.

Others in the Presidential party at the cemetery included James Forrestal, Secretary of the Navy; Robert P. Patterson, Secretary of War; Tom C. Clark, Attorney General, and Field Marshal Sir Henry Maitland Wilson, British representative on the Combined Chiefs of Staff.

As the Chiefs of State left the cemetery and moved over Arlington Memorial Bridge, spanning the Potomac River, there was again the booming of a twenty-one-gun salute. The party proceeded to the Washington Navy Yard, where the President's yacht was anchored.

In the cemetery, however, observances of Armistice Day were still going on, as representatives of veterans' organizations added floral tributes to the three wreaths already resting by the Tomb of the Unknown Soldier.

In an Armistice Day message, marking the twenty-seventh anniversary of the holiday, Edward N. Scheiberling, national commander of the American Legion, called upon the United States "never again" to "isolate itself from the rest of the world" and to accept its responsibilities in contributing to world peace.

The President and his yachting guests returned to the White House shortly after 9 o'clock. No official statement indicating what had taken place during the day's conversations was issued.

Soviet Views on Diplomacy

LONDON, Nov. 11 (Reuter)—Written before receipt of word from Washington of Mr. Attlee's move, a Moscow dispatch tonight said that several Soviet newspapers today had vigorously denounced "atomic diplomacy" as an instrument of advocates of an "anti-Soviet bloc," and equally denounced "the domination of one power" over such an important matter. Pravda, organ of the Communist party, referring to an article published in a London weekly on atomic energy, said these discussions "remind us that even now there are people who have not learned anything from the second World War." "It seems to these people that it is possible to return to old times and to build a European policy on the creation of anti-Soviet blocs," said Pravda.

Pravda accepted the view of The London Observer—which had criticized another London periodical—that "it is hardly necessary to prove that the perspectives of atomic diplomacy are as little consolation to its supporters as are the perspectives of preserving the secret of the atomic bomb. Technical secrets on a large scale cannot today remain the monopoly of any one country."

Endorsing this view, the Pravda article said: "A post-war world policy of the domination of one power as well as the policy of the equilibrium of forces as is painted by supporters of the Western bloc are doomed to bankruptcy."

POST FOR DR. MEITNER

Physicist to Join Faculty of the Catholic University

Dr. Lise Meitner, Austrian nuclear physicist whose uranium researches played an important part in the development of the atomic bomb, will join the faculty of the Catholic University of America in Washington in February as a visiting professor, it was announced last night by Msgr. Patrick J. McCormick, rector of the university.

Msgr. McCormick, here to attend an annual reunion of Catholic University alumni at the Hotel Pennsylvania, said Dr. Meitner would join the university staff on Feb. 1 and would lecture in the physics department during the second semester ending in June.

TODAY and TOMORROW

By WALTER LIPPMANN

HT On 'Sharing the Secret' 11/13

IN THE three months since the atomic bombs were dropped on Japan, American scientists have already done an inestimable service. They have provided the knowledge which enables us to define the problem, and therefore to see, not to be sure the full ready-made solution, but where to look for it.

Every one who has followed the discussion now knows that it is impossible for this government to keep the secret of the atomic bomb. That much no serious person any longer denies; no one pretends that we have more than a head start in the production of atomic bombs. But this discussion carries with it as its corollary another, which is equally significant though it has not received the same attention. If one, two, or three governments cannot keep "the secret," then five governments, separately or as the Security Council, are also unable to keep the secret. We are dealing, in other words, with a large body of developing scientific knowledge and its application in untold ways to countless unpredictable ends. Any public policy is bound to be falsely conceived if it rests on the notion that any government, or a league of governments, or even a world government, can prevent some scientists from discovering anything which other scientists have already found out. If in a field of knowledge like this one, public men, who are as a matter of course ignorant, attempt to outwit men of science, they are certain to fail. The true conclusion and the major premise of all public policy is, I submit, that governments cannot govern the development of the science and technology of atomic energy. That belongs to the men of science and the engineers. What governments can do, and must do, is to form public policies which are favorable to and consistent with the civilized use of atomic energy.

What, then, are we to think of Mr. Attlee's proposal to share our knowledge of atomic energy with the members of the Security Council? We shall think all the better of it, I believe, the more clearly we have grasped the idea, and its implications, that the development of atomic energy cannot be governed by governments.

Suppose it is agreed in principle that Britain, Canada, and the United States will share the secret with the Soviet Union, France, and China. How in fact do we go about sharing it? Not, as might at first be supposed, by calling a meeting of the Security Council at which Mr. Byrnes takes a sealed envelope out of his pocket, opens it and hands carbon copies of the great secret to Mr. Molotov, Mr. Bidault, and Mr. T. V. Soong. For Mr. Byrnes, not being a nuclear physicist, would have only the dimmest idea of what he was divulging, and Messrs. Molotov, Bidault, and Soong would be quite incapable of discussing the "secret" which had been "shared" with them. It would be largely gibberish to all the members of the Security Council.

The fact of the matter is that if Mr. Byrnes had such a memorandum, it would have been written for him by Dr. Bush and his associates, and the only Russians, Frenchmen, and Chinese who could make head or tail out of it would be a certain number of scientists who are already advanced students in the field of atomic science. What, therefore, would happen at

the meeting of the Security Council when the secret was being shared? Mr. Byrnes and Mr. Molotov would be bound to discuss, not the secret of atomic energy, but how Russian scientists, French, Chinese, are to share the secret.

The primary political question would, therefore, be not how a few governments are to share this secret but how the scientists are to share it. They are the only people who can share it because they are the only people capable of understanding it. If tomorrow morning Messrs. Bush, Conant, Urey, Oppenheimer, along with Einstein, Bohr, Fermi, offered to share the secret with me, I could no more take advantage of their kind offer than I could become an operatic singer by having a good, long, hush-hush and heart-to-heart talk with Miss Lily Pons.

When we talk of sharing this secret with the Security Council, this can mean only that we shall propose agreements and arrangements by which all men who work in the general field of atomic science are enabled to share their knowledge, past, present, and future. I say all men because it is absurd to suppose that this knowledge can be shared by scientists who happen to be citizens of five states, and not shared with Bohr of Denmark, who knows all about it already, or with the physicists of Oslo, Stockholm, Prague, Milan, Turin, Rome, Vatican City, Buenos Aires, Calcutta, Bombay, and every other place where men are working in scientific research.

The only thing governments can do with this secret is to do with good grace, and in the general interest of mankind, what is going to happen to this secret anyway. That is to make this knowledge universal knowledge, and to diffuse it as widely as possible. This will make the community of scientists the guardians of mankind against the pernicious use of this knowledge. No one else can be the guardians. For they alone, and not statesmen, soldiers, officials and journalists, can possibly know enough about the whole subject to detect, to infer, to surmise, whether any government is attempting to make a sinister and secret use of atomic energy.

To share this knowledge with the scientists of the world would mean, not that our government handed over the secret to other governments and then all the governments retired into secrecy again: it would mean that all the leading men of science in the field would have to meet and meet regularly, and to come to know each other, and to correspond, and to visit one another and exchange publications. Under these conditions it would still be possible, of course, but it would be difficult, for the conspicuous men in this field to lie to one another, or go into hiding, or lead a double life. But if among them there were criminals who meant to fool their colleagues, they could certainly fool the amateurs and ignoramuses much more easily.

This is not the end, but it is the beginning, of public policy. On this foundation, and on no other, it seems to me, can an international policy be formed which may bring the governments, which might exploit atomic energy malevolently, under a regime of law that mankind will have reason to believe in. That will be a long and difficult labor. It will be quite impossible if, misunderstanding the nature of scientific research, we precipitate or permit a race of armaments to develop.

Atomic Power Is Promised to The Red Army

HT Troops Hear Zhukov Deputy in Ceremony for Soviets Killed in Berlin Battle 11/13

BERLIN, Nov. 11 (AP).—A Russia strong and prosperous, in which "we will also have atomic energy," was promised Sunday to Red Army soldiers as they dedicated here a huge marble and granite memorial to their comrades who fell in the battle for Berlin.

The promise was made by Lieutenant General Telegin, chief deputy to Marshal Georgi K. Zhukov, at ceremonies on the same day Russia's western allies observed the armistice which ended the first world war.

The monument stands in the Tiergarten, just west of the Brandenburg gate. The Americans, British and French each contributed an honor company of troops for the ceremony. On the speakers' platform were the Berlin district commanders of the three western Allies, Zhukov and a dozen other Soviet marshals and generals.

"Six months ago the Red Army and its Allies smashed German Fascism," said Telegin, the principal speaker. "It is fitting we raise a monument here in the former capital of the aggressors. Now, together with our Allies, we are building peace for the world."

"Though millions of our best died in this bloody fight against the Fascist aggressors, our Russia remains great, healthy and strong. In years of peace we will rebuild at home for prosperity and the good life which your valiant fight in defense of our country deserves.

"We will have the benefit of new inventions and scientific advances, and we will also have atomic energy."

The unveiling of the huge, seven-shafted semi-circular marble and granite monument was the highlight of the Russians' week-long celebration at Berlin of the anniversary of the 1917 Bolshevik Revolution.

Five battalions of Soviet troops drawn up in the street in front of the monument were joined by the 325th anti-tank company of the American 82nd Airborne Division, a company from the British 2d Devonshire Regiment and a company from the French 49th Infantry Regiment.

After the ceremony all the troops passed in review before Zhukov, the other Soviet generals and the Allied commanders, American Major General James M. Gavin, British Brigadier W. R. N. Hindle and French Major General Geoffrey de Beauchesne.

Will the Atomic Bomb Lose Us

HT

Our Victory?

11/13

When the first atomic bomb fell on Japan on August sixth, it was a shock felt 'round the world. The whole earth was rocked and shaken. Men's minds everywhere were jangled. Uncertainty and fear gripped a troubled world.

For we simply were not ready for the impact of that bomb. Its terrible presence, coming upon us suddenly, has distracted us from going ahead with our part in fashioning durable peace. That peace is now in a mess. If the mess continues, there will be no peace, just another anxious breathing spell between wars.

And it *will* continue, unless the American people get straightened out with the guidance of their President and other leaders.

HOW DO THE PEOPLE FEEL?

The American Association for the United Nations has tried to measure the minds and feelings of the American people on the vital subject of the peace.

There is confusion. The people are fuzzy on the atomic bomb, on the *specifics* of our foreign policy, on the United Nations Organization. And there is a strong, loud minority trying to blur the public mind more on these subjects.

It is this Association's sincere belief that there is only *one person* who can clear this fuzziness, who can set us back on the road to world co-operation and peace. That person is President Truman.

FALSE WORDS

The old isolationist bunch and the new nationalist bunch are rallying around three slogans, three cynical and trouble breeding slogans. They are:

1. Keep the secret
2. Keep the bases
3. Let's not be Santa Claus

We brand these proposals as extremely dangerous and utterly opposed to the solemn reasons for which our people fought, suffered and died.

Keep the secret refers, of course, to the secret of the atomic bomb.

The scientists who developed the bomb say that *we can't keep the secret*. By fatuously attempting to do so, we will invite the most ruinous armament race in history.

And any other country, forced to compete in secrecy, is likely to come up with a deadlier bomb than ours.

The way to security is not by trying to hold tight to an elusive secret, but by trying to set up effective control through the United Nations.

Keep the bases means keep the Pacific islands we took and necessarily converted into naval bases. Keeping these bases on the basis of armed possession may contribute to a new imperialism. We can them under trusteeship, under the United States Organization, legally, honestly, decently.

Let's not be Santa Claus. What's the matter with being Santa Claus?

It's a nice thing to be, and God knows we can afford it.

We suffered less than any other country fighting this war. Our homes are intact. Our bodies are clothed. Our stomachs are filled. We have plenty we can share. That's the humanitarian side of it.

There's also a practical side. Helping the peoples who fought so valiantly with us to become our partners in a prosperous world pays dividends in markets for American goods.

THE PEOPLE SHOULD KNOW

We respectfully request President Truman to tell the people these things.

Tell them we must take the lead in giving a world-wide solution of the atomic bomb muddle.

Tell them we will keep control of necessary bases, *but under the honorable conditions of the United Nations Organization, of which we are a member.*

Tell them we *must* help soften the terrible misery of our friends, even though it may mean a little tightening of belts, a degree or two less heat in our overwarm homes.

It's true we all are concerned with the under-our-noses domestic problems like re-conversion. But the greater problem of international co-operation, and peace, is firm in our minds and hearts.

Talk to the people, *now*, President Truman, *now*, before the United Nations Organization holds its first meeting on January second, and solidify their determination to *make the United Nations work!*

Talk to them *now*, to still the impatient and cynical who would kill the United Nations Organization before it's born. Talk to them *now* so that meeting which starts on January second can start in an atmosphere of understanding and confidence and the whole-hearted support of the people of the United States.

AMERICAN ASSOCIATION FOR THE UNITED NATIONS, INC.

45 East 65th Street, New York 21, 1945.

BUtterfield 8-8000

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Your contribution—sent promptly—will help to place this message in other newspapers throughout the country.

LEAD ATOM NICKED, RUSSIANS REPORT

Cosmic Rays Hurl Protons
Out, Says Izvestia Dispatch
From Kapitza Expedition

NYT 11/15
MOSCOW, Nov. 14 (AP)—The newspaper Izvestia today said that Russian scientists, one an expert in atomic research, had discovered that cosmic rays knocked protons out of lead, and termed the discovery "of outstanding interest." Izvestia, describing an expedition studying cosmic rays at Mount Alageoz, near Lake Karagel, in the Armenian Socialist Republic, said that the discoveries might have a direct bearing on Soviet investigations of atomic energy. One of the scientists, it said, is Professor Peter Kapitza, a Russian authority on atomic research, who built a three-ton power magnet for the expedition.

[The Izvestia report did not say why the discovery that protons were knocked from lead by cosmic rays was considered important. Protons—one of the three kinds of primary particles which form all chemical elements—are heavy, positively charged bits of electricity.]

[Lead is among the heavy chemical elements whose splitting, if it could be achieved, probably would yield enough atomic energy for either power or bombs. Allied experiments have not disclosed methods of splitting lead atoms. The appearance of protons when lead atoms are hit by cosmic rays is not necessarily a sign that they were split.]

Unofficial reports recently had said that Professor Kapitza, who worked for thirteen years at Cambridge, England, as a protégé of the late Lord Rutherford, a pioneer in atom-splitting experiments, was engaged in atomic research in the Armenian mountains.

Study Atomic Movements

A Russian scientist last May in describing Professor Kapitza's latest published work said that "his brilliant experiments with subjects subjected to strong magnetic fields at low temperatures are throwing light on movements in the atomic structure of matter."

The current studies at Mount Alageoz began last August. The first atomic bomb was dropped on Japan Aug. 6.

The expedition's equipment consists of fifty tons of instruments carried to Mount Alageoz over a special road, which, Izvestia said, was built in "record time."

The laboratory where these ex-

periments were conducted is located 10,662 feet above sea level at Lake Karagel, which the Soviet small encyclopedia of 1937 describes as being at the foot of Mount Alageoz, an extinct Armenian volcano with rich sulphur sources. Mount Alageoz is located between Erevan, capital of Armenia, and Tiflis, capital of Georgia.

Izvestia said a permanent station was built for observing cosmic rays and a "powerful permanent magnet" was set up there.

Izvestia quoted the expedition chief as saying that observation of cosmic showers had proved that new kinds of showers exist.

Professor Kapitza in 1942 received the Faraday Medal from the Institute of Electrical Engineers for his work in the utilization of intense magnetic fields. He holds the Order of Lenin, the Hammer and Sickle Medal and the Hero of Socialist Labor in recognition of his discovery of a new method for producing liquid hydrogen.

Says Rays Are Separated

MOSCOW, Nov. 14 (U.P.)—The Armenian Academician Alikhanyan said that the strong magnetic field enabled the scientists at Mount Alageoz to separate the component parts of cosmic rays and measure their energy. He added that a third component, possessing special properties, was discovered in addition to the known components of cosmic rays, mesotrons and electrons. The third component, he said, was broken up into charged particles similar to protons.

Observing the particles through special apparatus, an Academy statement said, the Academicians were able to make the first photographs of them. It appeared, according to the statement, that under the impact of cosmic rays on a thin zinc plate, a large number of heavy particles, or protons, were created. At the same time, it was said types of cosmic showers were discovered.

Considerable importance was attached in foreign quarters to today's announcement. It came one week after the statement by Foreign Commissar Vyacheslav M. Molotov that Russia would have atomic energy "and many other things," and it apparently implied that Russia was not lagging far behind the Western Allies in the development of the atomic bomb. Also, it was made during the Washington talks between President Truman and Prime Ministers Attlee and William L. MacKenzie King.

Newspapers here are not publishing news of the Truman-Attlee-King talks, and the reported proposal that the bomb secret be disclosed in exchange for Russian cooperation has not even been hinted at.

Today's statement emphasized that research at the Mount Alageoz station continued.

Russia Not Asleep on Atoms

PM By United Press 11/15
MOSCOW, Nov. 15.—Moscow

newspapers displayed prominently on their first pages an announcement by the Russian Academy of Sciences that its members, studying cosmic rays at a remote laboratory in the Caucasus Mountains, had made discoveries which might aid greatly in Soviet development of atomic power.

In August, the Academy statement said, 50 tons of scientific equipment was delivered to the cosmic ray research laboratory at Alagez, 10,660 feet up in the Armenian Caucasus Mountains along a new painfully built 20-mile highway. A three-ton magnet was constructed by Academician Peter Kapitza.

The Armenian academician Alikhanyan said that the Dovong mag-

netic field enabled the scientists at Alagez to separate the component parts of cosmic rays and measure their energy. He added that a third component, possessing special properties, was discovered in addition to the known components of cosmic rays, mesotrons and electrons. The third component, he said, was broken up into charged particles similar to protons.

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ARMY DENIES HOPE TO CONTROL ATOM

Patterson Expresses Doubts
on Secrecy and International
Control of Its Use

NYT 11/15
Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 14.—Secretary of War Robert P. Patterson, reaffirming the War Department's denial that it wanted to establish a "militarist" stranglehold over the scientific development of atomic energy, expressed doubt today that the secret of the atomic bomb could be kept from other nations.

He also expressed his personal belief that international control over the use of atomic energy could be successfully achieved. He declined to suggest what form the international control might take.

Mr. Patterson again urged the speedy passage of the May-Johnson Atomic Energy Bill. He declared that, in sponsoring the bill, the War Department "is seeking to divert itself of the power it now has in directing atomic-energy research and to place power in the hands of a separate agency."

He said that prompt action was necessary "to secure a broad-gauge handling of atomic energy for the benefit of the nation as a whole and in order to integrate our present plant, experience and scientific talent into this broader management before these assets are lost."

"It has been contended by some that the War Department, in sponsoring this legislation, is attempting to retain control over this field for purely military purposes." To the contrary, Mr. Patterson asserted, the department "recognizes that the problems we now face go far beyond the purely military sphere."

"We initiated action to divert ourselves of control," he said. "We followed the recommendations of a committee composed entirely of civilians in preparing legislation; we consulted with and in the main adopted suggestions of interested civilian agencies of Government."

"The final and complete answer to the charge of 'militarism' is that the bill provides that control be turned over to a commission of nine appointed by the President and approved by the Senate. Under the commission is an administrator appointed by the commission."

Mr. Patterson replied, in response to a question, that he had no opinion whether the administrator should be a civilian or a military man. The answer, he suggested, could depend on the situation in which the country found itself and, if a long period of peace prevailed, he would "hope that emphasis would be placed on civilian development of atomic energy."

Replying to another query, Mr. Patterson acknowledged that atomic scientists had definite ci-

vilian uses of atomic energy in mind, but he said that he was not free to disclose their nature.

Threat of Atomic War Held Basis Of Misunderstanding With Soviet

The major misunderstanding between Soviet Russia and the western democracies "lies in the potential threat of atomic war," the Very Rev. Hewlett Johnson, Dean of Canterbury Cathedral, said last night at a rally in Madison Square Garden under the auspices of the National Council of American-Soviet Friendship, Inc.

"This threat it lies in our hands to remove," the 71-year-old churchman, who flew here to address the meeting declared. "The generous confidence of the western powers will go far to uproot the many deep suspicions of our great eastern ally."

Dean Acheson, Under-Secretary of State, told the meeting that never in the past had there been any place on the globe where the vital interests of the American and Russian people had clashed,

and that there was "no objective reason to suppose that there should now or in the future ever be such a place." He said the paramount interest of both nations was in peace, but it was complicated by the desire of both nations for security and the mutual difficulty of understanding.

Joseph E. Davies, who expressed confidence that the difficulties between Russia and the United States could be composed, was another speaker. He said no Government or people had a better or more consistent record of effort to preserve peace and security for mankind than the Soviet Union and added that there was nothing in any Soviet statement of foreign policy that conflicted with President Truman's Navy Day address.

Nikolai V. Novikoff, Soviet charge d'affaires; Corliss Lamont, chairman of the National Council

of American-Soviet Friendship, Inc., the Rev. Stephen H. Fritchman and Paul Robeson were others who addressed the meeting. Messages of greeting were read from President Truman, Secretary of War Robert P. Patterson, General of the Army Dwight D. Eisenhower, Admiral of the Fleet Ernest J. King, and others.

At the close of the mass meeting, which was held to commemorate jointly the twenty-eighth anniversary of the founding of the Soviet State and the twelfth anniversary of the establishment of diplomatic relations between its government and the United States, a message of greeting was despatched to Marshal Joseph Stalin.

Dean Johnson said he had spent three months in Russia last summer, going wherever he wished. He added that he spent an hour with Marshal Stalin and that he also talked to men of science, artists, churchmen, engineers and statesmen.

He said he had talked with many leaders of Russian religious life, including the Patriarch Alexei in Moscow, the Patriarch Gregory in Leningrad, the Catholicus of Armenia, the Patriarch Catholicus of Georgia, the head of the Jewish Community, the head of the Baptist church, and the head of the Moslem world in Asiatic Tashkent.

"One and all bore witness to cordial relations with the State," he continued. "The church has its own printing press, its own buildings and its own seminary for training priests in its own beliefs and curiously enough at the expense of the State."

"As Stalin remarked in our con-

versation: the State has learned the patriotism of the church and the church has learned the patriotism of the State. The old antagonisms have gone."

Dean Johnson said the youth in Russia were the most ardent advocates of all her new ways; that they were eager to learn boundlessly optimistic and with a gigantic capacity for work.

"Russia's youth are more numerous than we yet recognize," Dean Johnson went on, "let me emphasize that. By 1975 the male population of fighting age of the Soviet Union will exceed that of Great Britain and her colonies, France, Germany and the United States of America all put together. Backed by unlimited resources of all essential commodities, and of a courage of which Stalingrad speaks, Russians could be terrible foes in any future war."

"They could be no less splendid friends in war or peace if once her suspicions were overcome. And Russia seeks both friendship and peace. Russia desires peace, not war."

Mr. Acheson asserted that the "hard core" of the problem of the relations between this country and Russia had two aspects: security and understanding. He said the United States understood "that to have friendly governments along their borders is essential both for the security of the Soviet Union and for the peace of the world."

"But it seems equally clear to us that the interest in security must take into account and respect other basic interests of nations and men, such as the interest of other peoples to choose the general surroundings of their own lives and of all men to be secure in their persons," Mr. Acheson continued. "We believe that that adjustment of interests should take place short of the point where persuasion and firmness become coercion, where a

knock at the door at night strikes terror into men and women."

Mr. Davies said he had heard "a few mad militarists—not among the great war leaders—in this and other countries, who advocate war with Russia now, rather than later." The former Ambassador to the Soviet Union added that such talk was "insanity" and "throwing dynamite around."

"There is reason to believe," he declared, "that if we can avoid war for a generation or two, we and other nations will not only be able to entrust vital self-defense to a World Security Organization with justified confidence in the integ-

rity and honesty of its executives and police force; but that there may also be worked out conditions under which many of our most cherished aspirations in foreign policy may benefit other peoples of the world."

Mr. Novikoff expressed confidence that efforts to remove the obstacles that stand in the way of American-Soviet friendship would be "fulfilled with complete and brilliant success." He said the Soviet Union was a "convinced and ardent supporter" of the United Nations Organization and was ready to cooperate with all who were faithful to its aims.

DULLES ASKS RULE OVER ATOM BY UNO

Letting Assembly Decide Would Promote Amity, He Says at Van Dusen Inauguration

The suggestion that the United States submit the decision on the uses to be made of atomic power to the General Assembly of the United Nations Organization was made last night by John Foster Dulles, adviser on foreign affairs to Governor Dewey and to the American delegation at the recent London Conference of Foreign Ministers.

At a dinner meeting in Riverside Church in connection with the inauguration of the Rev. Dr. Henry Pitney Van Dusen as president of Union Theological Seminary, Mr. Dulles said such procedure would promote trust and fellowship and would show "that we really mean it when we say we are merely a trustee of atomic power."

Mr. Dulles said he disagreed with proposals either to outlaw the atomic bomb or to entrust it to a single world body with "overwhelming military power," since such agreements would do nothing to limit the distrusts between nations.

Mr. Dulles, who is also chairman of the Commission for a Just and Durable Peace, admitted that his program would not satisfy "the many who are panicky and the many who are impatient," but contended that it did offer a possibility of success.

The church of the future will be "strong just in the measure that it is united," declared Dr. Van Dusen, who was inducted earlier in the day as president of the seminary, succeeding Dr. Henry Sloane Coffin. The latter gave the charge to his successor.

Thatcher M. Brown, president of the seminary's board of trustees,

conducted the inauguration, announcing that Dr. Van Dusen also had been inducted yesterday morning as president of Auburn Theological Seminary by its trustees. The latter institution is collaborating with Union Seminary in training theological students.

A procession of 400 religious educators, many of them heads of theological seminaries of long standing, entered the church at the beginning of the exercises. Included were the faculty members and directors of Union and Auburn Seminaries. Among the visitors were Dr. Adolf Keller, who flew from Geneva, Switzerland, representing the theological faculties of Basle, Lausanne, Geneva, Zurich, Bern and Neuchatel, and Bishop A. E. J. Rawlinson of Derby, England. More than 1,500 persons attended the ceremony.

Ruml Foresees Doom Unless —

Beardsley Ruml, chairman of the Federal Reserve Bank of New York, bluntly warning that deadly atomic warfare might erupt in five years, proposed yesterday that the world stave off disaster by taking three steps:

¶ Reduction of national tensions by "patient, conciliatory" diplomacy.

¶ Knowledge of world co-operation and creating the symbolism of world association in a strengthened United Nations Organization.

¶ Creation of a moral and psychological sense of world community so that, in 20 years or less, a world government can be established.

Speaking at the 32d National Foreign Trade Convention at the Waldorf Astoria, Ruml said that an immediate beginning should be made on the program he outlined. Within 20 years, if the world accomplished these antecedent steps, a world government could be established, he said.

Asked whether he feared an inevitable conflict between the western democracies and the Soviet Union, Ruml said he did not.

Congressmen Tense at Atom Announcement

Senators, Representatives Vexed at Being Called In Only at the Last Minute

From the Herald Tribune Bureau 11/16

WASHINGTON, Nov. 15.—The press conference at which President Truman announced the Anglo-American-Canadian policy on atomic energy was one of the most solemn the President has ever held—and there were two widely different reasons why this was so.

One reason, known to everybody, governed the attitude of the men at the conference who had participated in the atomic bomb discussions. They were grave-faced because they were aware of the importance of the pronouncement to be made by the President and were thinking of that alone.

The second reason, known only to a few, concerned the demeanor of the three Senators and two Representatives who were present and who had not participated in the atomic-bomb discussions. They were unsmiling not only because of the seriousness of the Presidential pronouncement but also because they were irked at having been called in only at the last minute, after a complete policy decision had been reached by the

White House and the State Department.

The Senators were Brien McMahon, Democrat, of Connecticut, chairman of the new Senate Atomic Energy Committee; Tom Connally, Democrat, of Texas, chairman of the Foreign Relations Committee, and Arthur H. Vandenberg, Republican, of Michigan. The Representatives were Sol Bloom, Democrat, of New York, and Charles A. Eaton, Republican, of New Jersey. All except Senator McMahon were members of the American delegation to the United Nations Conference in San Francisco.

Senator McMahon sat on a sofa with James F. Byrnes, Secretary of State, and Fleet Admiral William D. Leahy, chief of staff to the Commander in Chief. Senators Connally and Vandenberg and Representatives Bloom and Eaton stood in a semi-circle behind President Truman, Prime Minister Attlee and Prime Minister Mackenzie King.

Observers noted that Senator Vandenberg, gold pencil in his hand, followed the text in a copy as President Truman read. Senators McMahon and Connally and Representatives Bloom and Eaton did the same. When the conference was over a reporter asked one member of the delegation: "When did you get a look at the document?" He replied: "We never saw it until we went in, and we weren't asked to come until about an hour and fifteen minutes before it started." An equally good source said: "And if you think Tom Connally isn't furious, well, you don't know Tom."

stressing that there was no defense against weapons such as the atomic bomb, that no single nation could have a monopoly on them and that it was thus up to "the whole civilized world" to see that new discoveries are used "for the benefit of mankind, instead of as a means of destruction."

It stated that Messrs. Truman, Attlee and King and their advisers had met to consider the possibility of international action to prevent the use of atomic energy for destructive purposes and to promote the use of such energy "for peaceful and humanitarian ends." It stressed the belief of the three that no system of safeguards would in itself provide an effective guaranty against production of atomic weapons by a nation bent on aggression, or the development of other weapons which would constitute as great a threat to civilization.

Then, in a passage which was read with particular interest because it was an obvious appeal to Russia to co-operate in the world reorganization, the document said:

"We are not convinced that the spreading of the specialized information regarding the practical application of atomic energy, before it is possible to devise effective, reciprocal and enforceable safeguards acceptable to all nations, would contribute to a constructive solution of the problem of the atomic bomb.

"On the contrary, we think it might have the opposite effect.

"We are, however, prepared to share, on a reciprocal basis with others of the United Nations, detailed information concerning the practical industrial application of atomic energy just as soon as effective enforceable safeguards against its use for destructive purposes can be devised."

After outlining the procedure under which the proposed United Nations Commission should work, the document concluded with another passage apparently directed at Russia—a passage emphasizing "the overwhelming need to . . . banish the scourge of war from the earth" and adding:

"This can only be brought about by giving wholehearted support to the United Nations Organization, and by consolidating and extending its authority, thus creating conditions of mutual trust in which all peoples will be free to devote themselves to the arts of peace. It is our firm resolve to work without reservation to achieve these ends."

James F. Byrnes, Secretary of State, disclosed later today that advance copies of the joint communique were sent early this morning to Russia, France and China, and that additional copies will be made available to other United Nations powers.

As another development, it was learned that Mr. Byrnes has revised a speech he will make in Charleston, S. C., tomorrow night to include some discussion of the atomic energy conference.

Mr. Attlee saw President Truman for an hour this afternoon, Secretary Byrnes also being present, but neither would comment upon leaving the White House. The British Prime Minister also is scheduled to see the President tomorrow before leaving for Ottawa, where he will address the Canadian Parliament Monday. There was speculation that Mr. Attlee's visit to the White House without Canadian Prime Minister King indicated the two were discussing subjects beyond the atomic energy problem—possibly the proposed loan to Britain and the Palestine situation.

While official sources would not simplify their construction of today's announcement to such an extent, it was clear that in the joint statement the A-B-C powers agreed to just one thing—to talk some more. In other words, all that was agreed to was to sit down with the United Nations and discuss the entire problem before the powers that have the atomic "know-how" agree to give away anything.

Furthermore, it was made clear that Congress will have the final say, inasmuch as no real commitment can be made until Congress ratifies the decisions of the Executive and the State Department.

In proposing that a commission be set up under the United Nations, the A-B-C powers have no intention of trying to dictate the commission's terms of reference. All the A-B-C nations have in mind is that the United Nations Organization take up the matter at its organization meeting, to begin in London between Jan. 2 and 7. This means that the general assembly will have a voice in

whether it or the security council shall pick the nations to be represented on the commission. Assuming that the commission will operate under the security council, the general assembly may not act until after the security council is officially formed in London, as provided by the charter regulations.

All in all, the day's developments tend to make the assembly meeting in London of transcendent importance.

Authoritative sources said that the communique's statement of "our willingness" to proceed with the exchange of scientific information in the interim does not mean that the A-B-C powers are going to extend invitations to other nations to participate. It simply means that the A-B-C powers are "willing." It is therefore up to other nations to make the next move—and presumably this can be taken as a direct invitation to Russia to make the

next move on that point. The theory is that unless Russia already has the "know-how" of the atomic bomb it will be inclined to make overtures for the exchange of scientific information.



Three-Nation Declaration on Atomic Energy

WASHINGTON, Nov. 15 (AP)—
The text of the declaration on atomic energy issued today by President Truman and Prime Ministers Attlee of Great Britain and W. L. Mackenzie King of Canada.

The President of the United States, the Prime Minister of the United Kingdom, and the Prime Minister of Canada, have issued the following statement:

(1) We recognize that the application of recent scientific discoveries to the methods and practice of war has placed at the disposal of mankind means of destruction hitherto unknown, against which there can be no adequate military defense, and in the employment of which no single nation can in fact have a monopoly.

(2) We desire to emphasize that the responsibility for devising means to insure that the new discoveries shall be used for the benefit of mankind, instead of as a means of destruction, rests not on our nations alone but upon the whole civilized world. Nevertheless, the progress that we have made in the development and use of atomic energy demands that we take an initiative in the matter, and we have accordingly met together to consider the possibility of international action:—

(a) To prevent the use of atomic energy for destructive purposes.

(b) To promote the use of recent and future advances in scientific knowledge, particularly in the utilization of atomic energy, for peaceful and humanitarian ends.

Peace Is Best Safeguard

(3) We are aware that the only complete protection for the civilized world from the destructive

use of scientific knowledge lies in the prevention of war. No system of safeguards that can be devised will of itself provide an effective guarantee against production of atomic weapons by a nation bent on aggression. Nor can we ignore the possibility of the development of other weapons, or of new methods of warfare, which may constitute as great a threat to civilization as the military use of atomic energy.

(4) Representing as we do, the three countries which possess the knowledge essential to the use of atomic energy, we declare at the outset our willingness, as a first contribution, to proceed with the exchange of fundamental scientific information and the interchange of scientists and scientific literature for peaceful ends with any nation that will fully reciprocate.

(5) We believe that the fruits of scientific research should be made available to all nations, and that freedom of investigation and free interchange of ideas are essential to the progress of knowledge. In pursuance of this policy, the basic scientific information essential to the development of atomic energy for peaceful purposes has already been made available to the world. It is our intention that all further information of this character that may become available from time to time shall be similarly treated. We trust that other nations will adopt the same policy, thereby creating an atmosphere of reciprocal confidence in which political agreement and cooperation will flourish.

(6) We have considered the question of the disclosure of detailed information concerning the practical industrial application of atomic energy. The military exploitation of atomic energy depends, in large part, upon the same methods and processes as

would be required for industrial uses.

We are not convinced that the spreading of the specialized information regarding the practical application of atomic energy, before it is possible to devise effective, reciprocal, and enforceable safeguards acceptable to all nations, would contribute to a constructive solution of the problem of the atomic bomb.

On the contrary we think it might have the opposite effect. We are, however, prepared to share, on a reciprocal basis with others of the United Nations, detailed information concerning the practical industrial application of atomic energy just as soon as effective enforceable safeguards against its use for destructive purposes can be devised.

For UNO Atomic Commission

(7) In order to attain the most effective means of entirely eliminating the use of atomic energy for destructive purposes and promoting its widest use for industrial and humanitarian purposes, we are of the opinion that at the earliest practicable date a commission should be set up under the United Nations Organization to prepare recommendations for submission to the organization.

The commission should be instructed to proceed with the utmost dispatch and should be authorized to submit recommendations from time to time dealing with separate phases of its work.

In particular the commission should make specific proposals:

(a) For extending between all nations the exchange of basic scientific information for peaceful ends,

(b) For control of atomic energy to the extent necessary to insure its use only for peaceful purposes,

(c) For the elimination from

national armaments of atomic weapons and of all other major weapons adaptable to mass destruction,

(d) For effective safeguards by way of inspection and other means to protect complying states against the hazards of violations and evasions.

(8) The work of the commission should proceed by separate stages, the successful completion of each one of which will develop the necessary confidence of the world before the next stage is undertaken. Specifically, it is considered that the commission might well devote its attention first to the wide exchange of scientists and scientific information, and as a second stage to the development of full knowledge concerning natural resources of raw materials.

(9) Faced with the terrible realities of the application of science to destruction, every nation will realize more urgently than before the overwhelming need to maintain the rule of law among nations and to banish the scourge of war from the earth. This can only be brought about by giving wholehearted support to the United Nations Organization and by consolidating and extending its authority, thus creating conditions of mutual trust in which all peoples will be free to devote themselves to the arts of peace. It is our firm resolve to work without reservation to achieve these ends.

The City of Washington,

The White House,

November 15, 1945.

HARRY S. TRUMAN
President of the United States
C. R. ATTLEE
Prime Minister of the
United Kingdom
W. L. MACKENZIE KING
Prime Minister of Canada

NY THE ATOMIC AGREEMENT 11/16

Meeting in Washington in the first conference of the atomic age, President Truman and Prime Ministers Attlee and King have arrived at an agreement which takes full account of their double responsibility for the welfare of mankind as a whole and for the safety of their individual nations. Their agreement presents no final solution of the awesome problem thrust upon the world by the discovery of "means of destruction hitherto unknown, against which there can be no adequate military defense." In that respect it will fall short of the demands of those who would open all military secrets to all powers irrespective of any considerations of national defense. But the agreement goes as far as is possible in the present state of the world to avert the further use of atomic bombs and similar weapons of mass destruction, and to release atomic energy for peaceful and humanitarian purposes. For that reason it merits the support of all humanitarians as well as patriotic citizens.

The agreement recognizes that no nation can in fact have a monopoly of the atomic bomb; that at the same time there is no effective way of stopping an aggressor nation from using it; and that the only protection against it and similar weapons lies in the prevention of war itself. For that reason, it demands whole-hearted support of the United Nations Organization and the creation of conditions of mutual trust and devotion to the arts of peace. And as a first step toward that end it entrusts to the United Nations the task of working out the rules that must govern the atomic age if civilization is to survive. It proposes the earliest possible creation of a United Nations Commission to survey the whole problem of atomic energy and to make recommendations to the United Nations Organization on the two vital aspects of the problem. The first is how to outlaw the use of atomic weapons and establish effective safeguards by way of inspection of all armaments to protect complying nations against violations or evasions by would-be aggressors. The second is how to promote the exchange of basic scientific knowledge for peaceful ends and devise controls of atomic energy to limit its use to peaceful purposes.

That is a tremendous and exceedingly delicate task for a commission. Its recommendations will present equally tremendous and delicate problems to the United Nations Organization, especially its Security Council, where the veto of any Big Power can prevent agreement. In fact, the problem of atomic energy seems now destined to provide the first real test of the efficacy of the United Nations Organization. The way it solves that problem will go far to determine its future usefulness.

But in entrusting the problem to this organization, the three countries furthest advanced in the knowledge of atomic energy have shown both their faith in the United Nations, and their good will toward all nations. They have already made available to the world all the basic information essential to the development of atomic energy for peaceful purposes. They declare their willingness to exchange any further fundamental scientific information and literature with all nations that will "fully reciprocate." That should not only meet the complaints of those who charge the American Government with attempts to strangle science, but should also promote scientific knowledge throughout the world.

At the same time, in line with President Truman's Navy Day speech, the three Government heads have likewise agreed to keep detailed information about the technical processes for manufacturing atomic bombs a secret until such time as it is possible to devise "effective reciprocal and enforceable safeguards acceptable to all nations." The agreement makes no explicit conditions for sharing the secrets of the atomic bomb, but there is no mistaking its implications. It declares that in the absence of the necessary safeguards,

NY The Atomic Bomb 11/16

A first reading of the communique which has issued from the conference of the President and the Prime Ministers on the atomic bomb leaves one with the leaden feeling that this statement—essentially temperate, reasonable and constructive within presently practicable limits—would have been of admirable effect if it had been issued two or three months ago. Why this much, at least, could not have been said at once passes comprehension. But instead the weeks were frittered away with Mr. Truman's ill-considered pronouncements, with the grotesque May-Johnson bill, with the ignorant outgivings of local chauvinists, with the inability to grasp the fact that the bomb was poisoning our relations with the Russians as well as the rest of the international atmosphere, and with a procrastination that required the initiative of the British Prime Minister to overcome. Whether the damage that has been done in these three months can now be repaired by this hopeful but still very tentative advance toward international control of the new horror remains to be seen. One can only hope for the best.

Beginning with the very salutary recognition that to monopolize the knowledge of nuclear energy is quite impossible, the joint statement specifically offers three things: First, the three nations are prepared to exchange basic scientific information (though only of the rather vague sort already released in connection with the atomic bomb) with any power which will reciprocate; second, as soon as, but not until, enforceable safeguards against the military misuse of atomic energy have been agreed upon, they will share on a reciprocal basis the details of the technical application of the basic knowledge; third, they propose a United Nations commission which, though it is apparently not to be made party to the technical details, will be charged with studying and answering all the questions raised and left open by the first two proposals.

The statement, quite obviously, is addressed to Soviet Russia. Issued three months ago, it would have represented a sound beginning to which the Russians might have been expected to respond in kind. After all the mistrust which has been sown by the bungling since then, one is less sure of the reception it is likely to receive in the Kremlin. If the Russians are able to rise to the deadly, over-all importance of this question of military-scientific development, they will use the Truman-Attlee-Mackenzie King gesture as an opening toward a genuine international solution. If they take the narrowly suspicious view which certain aspects of the statement would seem well calculated to engender, and to which the Russians, it must be granted, are a good deal too prone at the best of times, then the statement will simply be another empty set of words and the proposed U. N. O. commission simply another powerless wraith upon the international scene. In that case there will be nothing to do but try over again. One must hope for the best from this attempt. But, whatever its fate, the matter itself is too dire to be allowed to go by default.

NY THE ATOMIC ENERGY BILL 11/17

There is general agreement on the necessity of domestic legislation for the control of atomic energy, wholly aside from the international aspects of the problem. Such control is provided in the May-Johnson bill, which has now been substantially revised in committee. The amended bill is an improved measure, but further changes are needed.

The bill emphasizes freedom of research, but only when atomic energy is released in negligible amounts. If atomic energy is ever to run street cars and factory machinery the amounts will have to be large in terms of horsepower. Industry is thus throttled before it has a chance to experiment, and its patents may be subject to confiscation. Moreover, the commission which the bill proposes to create could grant rights to some companies and deny them to others, in its discretion.

The majority report on the bill considers it "absolutely essential that in the control of this tremendous form of energy the United States be able to secure the services of the ablest and most outstanding persons available." These happen to be the men who developed the bomb. Their spokesman has testified that they had to ignore irksome Army regulations to perform their task, that the original research organization is no longer intact and that its former members have no intention of returning to the Government service. Where, then, is the commission to recruit "the ablest and most outstanding persons available"?

The commission should be clearly and specifically responsible to the President or to Congress. It should restrict secrecy to technology alone; that is, to such plant processes which are really secret and to the design and construction of the bomb, and thus preserve the distinction that President Truman has drawn between fundamental scientific knowledge and the military uses of atomic energy. In short, a discovery which has unlimited possibilities in peace should not become the exclusive property of a Government body dominated by military thinking. Above all, there should be no undue interference with industrial, medical and scientific research.

BRITISH STILL SPLIT OVER ATOMIC PLAN

Press Reaction to Washington
Accord Shows Division—
Debate Next Week

NYT 11/16
By SYDNEY GRUSON

By Wireless to THE NEW YORK TIMES.
LONDON, Friday, Nov. 16—The British Labor Government, with the consent of the Conservative opposition, postponed debate on the atomic bomb communiqué from Washington in the House of Commons yesterday until Prime Minister Attlee's return from America. But the immediate reaction, as mirrored in the London press today, indicated that the policy enunciated in the communiqué would not heal the differences of opinion here on sharing of the atomic secrets.

Herbert Morrison, leading the movement in Mr. Attlee's absence, read the communiqué to a hushed House. Requesting no debate or even questions about the communiqué, Mr. Morrison suggested the House would have an opportunity of discussing it during a foreign affairs debate scheduled for next Thursday and Friday if the Prime Minister had returned.

However, editorial comment reflected what is expected to be the general reaction among the various factions most seriously embroiled in the argument as to whether the secrets of the bomb should be imparted to the Soviet Union. Winston Churchill, who spoke so strongly against disclosing the secrets, is expected to repeat these urgings in next week's debate.

Differs on Safeguards

The Times of London, which has previously condemned the idea of conditional sharing of the bomb secrets, expresses disapproval of the validity of the argument in the communiqué that "specialized information regarding the practical application" of atomic energy should be withheld until acceptable safeguards have been devised.

"This is clearly a case where exceptions, once admitted, are apt to create precedents and end by nullifying the principle at stake," The Times says. "Long-term diplomatic drawbacks of secrecy in encouraging unwarranted suspicion and mistrust may well outweigh on any view of the transaction such temporary advantages as may be thought to derive from it."

On the other hand, The Daily Herald, organ of the Labor party, in whose ranks are some of the most outspoken advocates of unconditional sharing of the atomic bomb secrets, says that the three nations' insistence on complete reciprocation of information and operating control through the United Nations Organization of atomic energy before the remaining secrets are disclosed is justified.

The general public's disinclination to take sides in this division of opinion is illustrated by the neutral attitude of The Daily Telegraph. The formation of a commission, spoken of in the communiqué, The Daily Telegraph says, "is a plain invitation to Russia to join in devising methods to make such discoveries innocuous for war and fertile for peaceful purposes." The Daily Telegraph notes a "rather visionary or vague element" in the commission's terms of reference regarding safeguards and the elimination of major armaments and comments: "It is most difficult to conceive how these things could be done."

The Times describes the policy set out in Washington talks as an "important advance in the direction of international control of atomic energy." On the fact that it does represent a unified policy on the part of the three powers holding the bomb's secrets there probably will be general agreement.

It remains to be seen what Moscow's reaction will be and whether the statement eliminates the fears and distrust that all sections of the British leadership recognize to be the result of the bomb policy up to now. The Washington statement is expected to go a long way, if not the whole road, toward meeting the objections voiced so vigorously by the British scientists who have been advocating the widest possible interchange of information about secrets of atomic energy and the bomb.

These are men, headed by Prof. Marcus Laurence Oliphant, whom Capt. Raymond Blackburn, Labor M. P., is believed to have had in mind when he declared to the House of Commons on Oct. 30, that "unless a progressive attitude is adopted I believe the scientists of Britain and America might take independent action."

Professor Oliphant's View

Professor Oliphant asserted a few days later in a speech at Birmingham that British scientists "have not the guts" to make a declaration about the bomb because "they are so tightly tied up with the Official Secrets Act and they are afraid that if they open their mouths they will find themselves in jail." He added that "perhaps I will find myself in jail before long but I do feel that these things have to be said as they have been said on the other side of the Atlantic."

Both Foreign Secretary Ernest Bevin and Mr. Churchill warned the scientists of the consequences of independent action, evidently with Captain Blackburn's and Professor Oliphant's statements in mind and with an additional challenge from Sir Leonard Hill, that "scientists must claim the right to full publication of all research and developments, whether in the universities or in industry."

The lines of the controversy that the Washington statement may ease, even if it does not settle it, have been clearly defined both in the press of Britain and in the utterances of various members of the Houses of Commons and Lords and others.

When after Mr. Attlee's arrival in Washington the press here reported a British plan to share the atomic bomb secrets on condition that the Soviet Union agreed to cooperate fully and to state its definitive political and territorial aims, the equally sober-minded Manchester Guardian and The Times of London disagreed strongly.

USE OF B-36 PROPOSED

AAF Projects Its New Giant Plane for Atomic Bomb Tests

WASHINGTON, Nov. 16 (AP)—The Army Air Forces hope to use the new B-36 bomber in tests of the atomic bomb on such targets as naval vessels, AAF officials said today.

The B-36, which will dwarf any aircraft now flying, is now well along in construction. It is described as having range and bomb-carrying capacity far greater than the B-29 Superfortress, which carried the atomic bombs dropped on Hiroshima and Nagasaki.

The B-36 can take off with 20,000 gallons of fuel and with what is described as a "normal" bomb load. It is powered with air-cooled engines at present capable of developing 3,000 horsepower, and equipped with three-bladed, nineteen-foot propellers. The B-29 has a normal gasoline load of about 8,000 gallons.

SCOT UNDAUNTED BY ATOM

Scientist Offers to Record His 'Reactions' From Bombed Fleet

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 16—Sir James French, Scottish scientist, let it be known today that the atomic bomb could not intimidate him.

He said that if the United States dropped a bomb on a fleet he would be willing to board one of the ships and record his reactions.

"So far as the atomic bomb is concerned," he declared in a speech at Glasgow, "it is only the beginning. We may be taking a really serious view of it in about fifty to 100 years."

TODAY and TOMORROW

By WALTER LIPPMANN

HT The Atomic Declaration 11/17

HAD the declaration on atomic energy been made in August instead of in November, it would have been greeted as an inspired act of statesmanship. But in these three months of delay, the international atmosphere has, as the New York Herald Tribune points out, been so poisoned that we must now use these proposals to begin repairing the mischief that, made sooner, they would have done so much to prevent.

There is nothing in the declaration that could not have been said in August, proposed at Potsdam, announced to the world after the surrender of Japan. The British and the American governments knew in July, as a result of the experiment in New Mexico, that the bomb had been successfully manufactured. Nothing is now known about the international problem that was not known then to the high officials of both governments, and their failure to prepare a plan can perhaps be explained but it is not easily excused. The only explanation is that the State Department and the Foreign Office did not foresee the grave political importance of the atomic bomb.

While there is no use crying over spilt milk, it is important that this failure be admitted now. The confession should do something to reduce the suspicions, which are by no means confined to the Soviet Union, that Great Britain and the United States have not been acting as trustees of this terrible weapon but have been disposed to regard it as a military asset to be used in weighing the balance of power decisively in their own favor. These suspicions, which unfortunately are not entirely groundless, it will now take a great deal of effort inside both governments and among the other nations to dispel.

If the declaration can now be treated on its merits, it contains everything that any one could ask or desire as the beginning of an international solution. All depends on whether it is followed quickly by constructive proposals designed by men of vision and knowledge. For this is not a matter that can be left to the Philistines who have thus far made such an unholy muddle of it.

It is plain that a great opportunity has been opened up by the declaration that we intend to make available to all nations "the basic scientific information essential to the development of atomic energy for peaceful purposes." This can and should be used to create, under the auspices of the United Nations Organization, some kind of congress or institute to which all men of science who deal with atomic energy would belong. Through it they would exchange information, to it they could come for guidance and help in their research, in it they would become personally acquainted.

This is the best possible safeguard that can now be established against the sinister and secret use of atomic energy for sabotage and war. The close association of men of science is the highest and most effective form of "inspection." For it would be impossible for any government to manufacture atomic energy without its own most eminent men of science knowing about it. It is very hard to hide the eminent scientists of any country, and it would be extremely difficult for them, if they were in regular

contact and correspondence with their colleagues in other countries, to practice concealment and deception.

The declaration looks beyond this to what would be in effect international legislation to regulate the production and use of atomic energy in peace and war. It will be the business of the commission to propose such legislation—no doubt in the form of conventions and treaties—to the United Nations Organization. It is here, of course, that there will be the greatest skepticism, mankind having so much reason to be disillusioned about the sincerity and effectiveness of international agreements.

However, there is a way, I believe, by which the commission can deal with its task which opens up immense possibilities for good. That is to invoke the principle that rules and regulations agreed to by the governments shall become binding upon individuals. Thus a violation of the agreements would become, like piracy, a crime for which the individual could be tried and punished. This is the principle we are invoking in the Nuernberg trials, and there is every reason why in regulating atomic energy we should make it a personal crime to do whatever the United Nations agree is to be forbidden.

This is not an unprecedented proposal. In Article III of the Washington Treaty of 1922 dealing with submarine warfare and poison gas, it is set down that "any person in the service of any power who shall violate any of those rules, whether or not such person is under orders of a governmental superior, shall be deemed to have violated the laws of war and shall be liable to trial and punishment as if for an act of piracy and may be brought to trial before the civil or military authorities of any power within the jurisdiction of which he may be found."

Here, as every student of our own "Federalist" papers knows, is the principle by which the reign of a wider law can be extended over the smaller law of separate sovereign states. It is by making the individual, not his national government, accountable under international law that we shall make a real advance in the authority of international law.

Here too, I submit, is the essential truth in the growing conviction that in the atomic age an association of governments is not enough to keep the peace and that there must be a "world government." Plans for world government which call for a world legislature and a world executive take hold of the problem at the hardest and least hopeful and probably also the least desirable end.

The right end at which to begin is, I believe, to establish the principle that there are crimes for which an individual anywhere can be tried and punished under international law, crimes for which his own government cannot give him immunity, crimes which no government can order him to commit without the members of that government becoming themselves international criminals.

That will not give us a world government. But it will give us the foundations, which can be enlarged, of a true world community of individuals, over and above any leagues or alliances of sovereign states.

Langmuir Urges Atom Pact, Says War Might Strip Earth

Nobel Winner Pleads for Understanding With Russia, Holding She Could Beat Us in Bomb Race—Cut in Cost Cited

By WILLIAM L. LAURENCE

Special to THE NEW YORK TIMES.

PHILADELPHIA, Nov. 16—If an atomic bomb war is ever allowed to come to pass the whole earth may become uninhabitable, Dr. Irving Langmuir, Nobel Prize physical chemist and associate director of the General Electric Research Laboratories, declared today. At a joint meeting of the American Philosophical Society and the National Academy of Sciences held at the University of Pennsylvania, he said that such a war would release tremendous radioactivity in the atmosphere which would be distributed by winds.

The subject of the meeting, the first of its kind, was atomic energy and its implications. It brought together for the first time the leaders in atomic bomb development and social scientists to give the world a true picture of what might lie in store for it in the not too distant future if wise measures were not taken to prevent the use of the atomic energy as a military

weapon. All agreed that the only way to prevent it was to prevent war.

Prof. J. Robert Oppenheimer of the California Institute of Technology, who directed the development of the atomic bomb at Los Alamos, N. M., told the distinguished gathering, which included eight Nobel Prize winners, that atomic bombs in the future would be very cheap to produce, and that if ever used again "they may be made by the thousands or tens of thousands."

Dr. Arthur H. Compton, chancellor of Washington University in St. Louis, a Nobel laureate, who directed the plutonium development project at the University of Chicago, warned that one-tenth of any country's population would be destroyed in the first night of atomic bombing and that no city of more than 100,000 would remain as an effective operating center after the first hour of the war.

The United States and Britain, Dr. Langmuir said, should invite the Soviet Union to an atomic energy conference in the hope of finding effective means of removing the sense of insecurity that, he said, Russia now has as a direct result of our handling of the atomic bomb problem.

Phases of Insecurity Itemized

"If the United States is shortsighted enough to engage in an atomic armament race," Dr. Langmuir said, "the condition of insecurity resulting from the threat of the atomic bomb will probably develop in four stages."

"There will be a period in which we alone will have the atomic bomb and during this stage we may perhaps acquire a stockpile sufficient to wipe out all the cities of any nation that we might wish to attack," he asserted.

"In the second stage one or more other nations have begun to produce atomic bombs but have not yet acquired a sufficient stockpile to wipe out all our cities.

"In the third stage one or more other nations will have enough bombs to wipe out all our cities.

"If the armament race continues, a fourth stage will probably be ul-

timately reached in which one nation (possibly not the United States) has bombs of such high power, or in such large numbers, that in one surprise attack an enemy nation can be so completely incapacitated that no retaliation can occur.

"It may well be that it will take a thousand times more power for bombs to reach Stage Four than to reach Stage Three, but we can have no assurance that Stage Four will not be reached with the further development of nuclear knowledge and the improvement of technical processes."

Dr. Langmuir continued:

"There are many reasons for thinking that Russia might reach Stage Four before we do. For example, Russia, as in her preparations for her war against Germany, may be willing to forego any increase in living standards and devote 10 per cent or more of her producing power in a five-or ten-year-plan for the development of atomic energy and bombs.

"We, on the other hand, may conceivably dissipate our energies in increasing our standard of living, in building a strong but obsolete navy and in shortening our hours of labor.

World Merger by Stages

"World control of all atomic energy seems the only alternative. We cannot expect that nations can quickly relinquish absolute sovereignty. World control or world government must grow by stages, but the sooner the process begins the more likely it is to succeed.

"As a first step the United States and Britain, perhaps in con-

nection with the forthcoming UNO meeting, could propose an atomic energy conference to which Russia would be invited to make proposals as to effective means of removing the insecurity which all nations now feel.

"We must explore the possibilities of mutual understanding and cooperation between nations. A long-range program which will lead to this better understanding should be planned at the forthcoming UNO meeting.

"We must break down the barriers between ourselves and Russia. Neither of us has the desire to go out and conquer the world. The Russians desire peaceful development as much as we do."

The time scale in which Russia may develop atomic bombs, Dr. Langmuir said, will depend on the feeling of security she has.

If Russia went "all out on it," he said, she would have atomic bombs in two years. "In one year more," he went on, "she could have atomic bombs to destroy all our cities. They would reach the final fourth stage sooner than we can."

Discusses Nagasaki Bomb

Dr. Oppenheimer said that the atomic bomb dropped on Nagasaki, Japan, "would have taken out ten square miles, or a bit more, if there had been ten square miles to take out."

"Because it is known that the project cost us \$2,000,000,000 and we dropped just two bombs, it is easy to think that they must be very expensive," he continued. "But for any serious undertaking in atomic armament—and without

any elements of technical novelty whatever, just doing the things that have already been done—that estimate of cost would be high by something like a factor of a thousand.

"Atomic weapons, even with what we know today, can be cheap. Even with what we know today, without any of the new things, the little things and the radical things, atomic armament will not break the back of any people that want it.

Three awards of the National Academy of Sciences were presented at a dinner tonight to Donald W. Kerst of the Physics Department at the University of Illinois, Theodosius Dobzhansky, Department of Zoology, Columbia University, and Dr. Vannevar Bush, Director of the Office of Scientific Research and Development, Washington.

The Cyrus B. Comstock prize of \$3,000, awarded every five years, was presented to Professor Kerst for "his pioneer work in connection with the development of the beta-tron and the results which he has obtained with this new and powerful scientific tool."

The Daniel Giraud Elliot Gold Medal for 1941 was awarded to Dr. Dobzhansky in recognition of the "high merits of his work, 'Genetics and the Origin of Species,' second edition published in 1941."

The Public Welfare Gold Medal was presented to Dr. Bush in recognition of his "outstanding service in bringing to bear the scientific and engineering talent of this country upon problems of research connected with the war effort."

MOSCOW DISTRUST BELIEVED GROWING

U.S.-British Statement Viewed as a Further Step in Pursuit of 'Atomic Diplomacy'

By BROOKS ATKINSON

By Wireless to THE NEW YORK TIMES.

MOSCOW, Nov. 16—The Moscow press has so far made no reference to the British-American joint statement about the atomic bomb. From the Moscow viewpoint the declaration looks like a guarded postponement of a decision that has tremendous implications for world affairs.

Fundamentally distrust remains. From the Moscow viewpoint the statement may be regarded as a further development of what a Pravda writer on Sunday termed "atomic diplomacy."

[The Moscow radio, in its first mention of the atomic energy conferences in Washington, broadcast Friday without comment the declaration issued Thursday by President Truman, Prime Minister Attlee of Britain and Prime Minister W. L. Mackenzie King of Canada, The Associated Press reported.

[Diplomatic sources in Moscow reported that preliminary discussions were believed under way for another meeting of President Truman, Generalissimo Stalin and Prime Minister Attlee. There were indications in Moscow that if Premier Stalin had not already returned from vacation he was shortly to do so. In Washington high officials said that they knew of no plans under way now for another Big Three meeting.]

Feeling Is Strong

Although references to the atomic bomb in the Moscow press have been meager, it is a subject about which the Soviet people feel strongly. Foreign Commissar Vyacheslav M. Molotov's references to it in his speech Nov. 6 brought his audience instantly to its feet. His statement that "we shall have atomic energy, too," provoked long and stormy applause.

The recently announced research into cosmic rays under A. J. Alikhanyan is commonly regarded as a Soviet rejoinder to the atomic bomb situation. Under the circumstances, no one imagines research is going to be done on a reciprocal basis in the spirit of the Truman-Attlee-King statement.

How deeply the Soviet people feel about the subject is suggested in a poem to "Tomorrow" by Kir-sanoff, published today. Saluting tomorrow as a radiant promise of progress, the poem says:

"Let no atomic bomb

Remain a puzzle for us!

The magic atom of uranium

We shall refill with creative soul."

It may be said that generally the Soviet people have confidence that their scientists and technicians will protect their interests in atomic energy. Scientific research is one of the Soviet Union's most highly developed fields of activity. Apart from all scientific institutions, where Russia's brightest youths are studying under eminent scientists, there are now 500 scientific parties in the field with more than 10,000 persons studying the natural resources of Russia.

Trend to Amity Seen

During the last fortnight a tiny era of good feeling on foreign affairs has almost imperceptibly developed here. It is not exactly enkindling, but there have been no explosions of anger or scorn toward the West.

Nothing known here indicates that conditions for a resumption of world collaboration have been established, however, and the limited circles available here for information doubt that a second meeting of the Council of Foreign Ministers is near. The supposition is that Russia will not agree to another meeting until she is represented on an Allied Control Council for Japan. There may also have to be more concrete evidence that the Dardanelles question can be settled to Russia's satisfaction.

No one should imagine that Russia is merely sulking. According to the Soviet viewpoint, if Americans do not like Soviet domination of the Balkans, they must explain why the United States dominates Japan, which is much closer to the Russians than the Balkans are to Americans.

Text of Byrnes Speech in Charleston on Atom Bomb Policy

Special to THE NEW YORK TIMES.

CHARLESTON, S. C., Nov. 16
—Following is the prepared text of Secretary of State James F. Byrnes' speech to a "Jimmy Byrnes Homecoming Day" gathering here tonight:

When I accepted Charleston's very gracious invitation to return to the city of my birth and the scenes of my younger days, I thought that nothing I could say here would interest you more than world trade.

Charleston, being one of the oldest ports in America, certainly has a vital interest in the restoration of world commerce.

Since accepting this invitation to be with you I have participated in a conference in Washington which concerns every human being and civilization itself.

Therefore, before expressing some views on international trade, I wish to comment briefly on the efforts we are making to control atomic energy so that it may be used, not for war and destruction, but for the peace and happiness of the world.

The full significance of the release of atomic energy is not quickly or easily comprehended. As it happened, in my capacity as Director of War Mobilization I was well aware of the awesome character of the great experiment that we then referred to as the Manhattan Project.

Later, during the short period I was out of the Government service, it became clear to the scientists that an atomic bomb was an immediate practical possibility. At that time I was asked to serve as the President's representative on the committee, under the chairmanship of Secretary of War Stimson, which laid the plans for the New Mexico experiment.

Despite this experience, I know that I cannot presently evaluate the true impact of this discovery upon the future of the world. But from the day the first bomb fell on Hiroshima, one thing has been clear to all of us: the civilized world cannot survive an atomic war.

Challenge to Our Generation

This is the challenge to our generation. To meet it we must let our minds be bold. At the same time we must not imagine wishfully that overnight there can arise full grown a world government wise and strong enough to protect all of us and tolerant and democratic enough to command our willing loyalty.

If we are to preserve the continuity of civilized life, we must work with the materials at hand, improving and adding to existing institutions until they can meet the stern test of our time.

Accordingly, the President of the United States and the Prime Ministers of Great Britain and Canada—the partners in the historic scientific and engineering undertaking that resulted in the release of atomic energy—have taken the first step in an effort to rescue the world from a desperate armament race.

In their statement they declared their willingness to make immediate arrangements for the exchange of basic scientific information for peaceful purposes. Much of this kind of basic information essential to the development of atomic energy has already been disseminated. We shall continue to make such information available.

In addition to these immediate proposals the conference recommended that at the earliest practicable date a commission should be established under the United Nations Organization. This can be done within sixty days.

It would be the duty of this commission to draft recommendations for extending the international exchange of basic scientific information for peaceful purposes, for the control of atomic energy to the extent necessary to insure its use only for peaceful purposes, and for the elimination from national armaments of atomic weapons and of all other weapons adaptable to mass destruction.

Safeguards Against Violations

The commission would recommend effective safeguards by way of inspection or other means to protect complying states against the hazards of violations and evasions.

Such protection would be afforded by having the work proceed by stages.

As a starting point the commis-

sion might recommend the wide exchange of scientists and scientific information. The next step might be the sharing of knowledge about the raw materials necessary to the release of atomic energy.

The successful completion of each stage would develop the confidence to proceed to the next stage.

A very serious question arises, however, when we reach the stage of exchanging detailed information about the practical industrial application of atomic energy. The thought to be borne in mind here is that up to a certain rather advanced point the so-called know-how of production is the same whether atomic energy is to be stored in bombs or harnessed as power for a peaceful industrial purpose.

And so it was necessary for the conferees to determine in the light of this fact how soon information concerning the practical application of atomic energy should be disseminated.

Only one answer was possible. Until effective safeguards can be developed, in the form of international inspection or otherwise, the secrets of production of know-how must be held, in the words of the President, as a sacred trust—a trust in the exercise of which we are already under definite international obligation.

No Threat in Our Action

Under the Charter of the United Nations we have pledged ourselves not to use force except in support of the purposes and principles of the Charter. The suggestion that we are using the atomic bomb as a diplomatic or military threat against any nation is not only untrue in fact but is a wholly unwarranted reflection upon the American Government and people.

It is one of the inherent characteristics of our democracy that we can fight a war only with the genuine consent of our people. No President in the absence of a declaration of war by the Congress could authorize an atomic bombing without running the risk of impeachment.

No one who knows the peace-loving temper of our people can believe that our Congress would adopt a declaration of war contrary to our solemnly undertaken obligations under the United Nations charter.

The history of 1914 to 1917 and of 1939 to 1941 is convincing proof of the slowness of Congress to declare war. There is surely no reason to believe that it would be more eager to engage in a future war more terrible than any we have known.

While we consider it proper and necessary, therefore, to continue for a time to hold these production secrets in trust, this period need not be unnecessarily prolonged.

As experience demonstrates that the sharing of information is full and unreserved, it is to be hoped that the exchange for peaceful purposes can be extended to some and eventually to all the practical applications of atomic energy and of other scientific discoveries. This is the objective we seek.

Must Act With Boldness

It is our purpose and grave duty to act in our relations with other nations with the boldness and generosity that the atomic age demands of us. No officials of Government have ever been called upon to make a decision fraught with more serious consequences. We must act. But we will act in a manner that will not undermine our safety or the safety of the world.

Our declaration of willingness to exchange immediately the basic scientific information and our plans for the setting up of a commission under United Nations sponsorship have been sent by me to members of the United Nations Organization. We look forward to their cooperation.

No one appreciates more keenly than those who have advanced these proposals that they represent a very modest first step in what is certain to prove a long and difficult journey. I wish to emphasize our conviction that the creation and development of safeguards to protect us all from unspeakable destruction is not the exclusive responsibility of the United States or Great Britain or Canada. It is the responsibility of all governments.

Without the united effort and unremitting cooperation of all

the nations of the world there will be no enduring and effective protection against the atomic bomb. There will be no protection against bacteriological warfare, an even more frightful method of human destruction.

Atomic energy is a new instrument that has been given to man. He may use it to destroy himself and a civilization which centuries of sweat and toil and blood have built. Or he may use it to win for himself new dignity and a better and more abundant life.

If we can move gradually but surely toward free and unlimited exchange of scientific and industrial information, to control and perhaps eventually to eliminate the manufacture of atomic weapons and other weapons capable of mass destruction, we will have progressed toward achieving freedom from fear.

Goal Is to End All War

But it is not enough to banish atomic or bacteriological warfare. We must banish war. To that great goal of humanity we must ever rededicate our hearts and strength.

To help us move toward that goal we must guard not only against military threats to world security but economic threats to world well-being.

Political peace and economic warfare cannot long exist together. If we are going to have peace in this world, we must learn to live together and work together. We must be able to do business together.

Nations that will not do business with one another or try to exclude one another from doing business with other countries are not likely in the long run to be good neighbors.

Trade blackouts, just as much as other types of blackouts, breed distrust and disunity. Business relations bring nations and their peoples closer together and, perhaps more than anything else, promote good-will and determination for peace.

Many of the existing restrictions on world trade result from present-day conditions and practices, largely growing out of the war.

Many countries, and not least Great Britain, had to sacrifice their foreign earning power to win the war. They have sold most of their foreign stocks and bonds, borrowed heavily abroad, let their foreign commerce go, and lost ships and factories to enemy attack.

World Trade Problems

Their needs for foreign goods are great and pressing but they lack foreign exchange, that is, purchasing power to buy abroad. Without aid they cannot see their way to buy as they used to abroad, not to speak of the additional things they need from abroad to rehabilitate their shattered and devastated economies.

In a situation of this kind what can a country do? It can seek to borrow the foreign currencies it needs, which will enable it to apply the liberal principles of trade which must be the basis of any permanent prosperity. Or it can draw in its belt. It can reduce the standard of living of its people, conserve in every way the foreign currencies that it finds hard to get, and transfer its foreign trade by Government decree to countries whose currencies are easier to obtain.

In the latter way lies increased discrimination and the division of the commerce of the world into exclusive blocs. We cannot oppose exclusive blocs if we do not help remove the conditions which impel other nations, often against their will, to create them.

We must not only oppose these exclusive trading blocs but we must also cooperate with other nations in removing conditions which breed discrimination in world trade.

Whatever foreign loans we make will of course increase the markets for American products, for in the long run the dollars we lend can be spent only in this country.

The countries devastated by the war want to get back to work. They want to get back to production which will enable them to support themselves. When they can do this, they will buy goods from us. America, in helping them, will be helping herself.

We cannot play Santa Claus to the world, but we can make loans to Governments whose credit is

good, provided such Governments will make changes in commercial policies which will make it possible for us to increase our trade with them.

In addition to loans, lend-lease settlements, and the disposal of our surplus war materials, we have been discussing with Great Britain the principles of commercial relations—principles we want to see applied by all nations in the post-war world.

Pursues Hull's Principles

These are the same liberal principles which my friend and predecessor, Cordell Hull, urged for so many years.

They are based on the conviction that what matters most in trade is not the buttressing of particular competitive positions but the increase of productive employment, the increase of production and the increase of general prosperity.

The reasons for poverty and hunger are no longer the stinginess of nature. Modern knowledge makes it technically possible for mankind to produce enough good things to go around. The world's present capacity to produce gives it the greatest opportunity in history to increase the standards of living for all peoples of the world.

Trade between countries is one of the greatest forces leading to the fuller use of these tremendously expanded productive powers. But the world will lose this opportunity to improve the lot of her peoples if their countries do not learn to trade as neighbors and friends. If we are going to have a real people's peace, world trade cannot be throttled by burdensome restrictions.

Some of these restrictions are imposed by Government decree; others by private combination. They must be removed if we are to have full employment.

To do this it will be necessary to agree upon some general rules and to apply them in detail. We shall shortly submit to the peoples of the world our views about these matters.

We intend to propose that commercial quotas and embargoes be restricted to a few really necessary cases, and that discrimination in their application be avoided.

Wants Tariffs Reduced

We intend to propose that tariffs be reduced and tariff preferences be eliminated. The Trade Agreements Act is our standing offer to negotiate to that end.

We intend to propose that subsidies, in general, should be the subject of international discussion, and that subsidies on exports should be confined to exceptional cases, under general rules, as soon as the period of emergency adjustment is over.

We intend to propose that Governments conducting public enterprises in foreign trade should agree to give fair treatment to the commerce of all friendly states, that they should make their purchases and sales on purely economic grounds, and that they should avoid using a monop-

oly of imports to give excessive protection to their own producers.

We intend to propose that international cartels and monopolies should be prevented by international action from restricting the commerce of the world.

We intend to propose that the special problems of the great primary commodities should be studied internationally, and that consuming countries should have an equal voice with producing countries in whatever decisions may be made.

We intend to propose that the efforts of all countries to maintain full and regular employment should be guided by the rule that no country should solve its domestic problems by measures that would prevent the expansion of world trade, and no country is at liberty to export its unemployment to its neighbors.

We intend to propose that an international trade organization be created, under the economic and social council, as an integral part of the structure of the United Nations.

World Trade Parley Sought

We intend to propose that the United Nations call an international conference on trade and employment to deal with all these problems.

In preparation for that conference we intend to go forward with actual negotiations with several countries for the reduction of trade barriers under the Reciprocal Trade Agreements Act.

Just when the negotiations will commence has not been determined. They will be announced in the usual way, as required by the act, and due notice will be given in order that all interested persons may be heard before the detailed offers to be made by the United States are settled.

Success in those negotiations will be the soundest preparation for the general conference we hope will be called by the United Nations Organization.

By proposing that the United Nations Organization appoint a commission to consider the subject of atomic energy and by proposing that the organization likewise call a conference to enable nations to consider the problems of international trade, we demonstrate our confidence in that organization as an effective instrumentality for world cooperation and world peace.

After the first World War we rejected the plea of Woodrow Wilson and refused to join the League of Nations. Our action contributed to the ineffectiveness of the League.

Now the situation is different. We have sponsored the United Nations Organization. We are giving it our whole-hearted and enthusiastic support. We recognize our responsibility in the affairs of the world. We shall not evade that responsibility.

With other nations of the world we shall walk hand in hand in the paths of peace in the hope that all peoples can find freedom from fear and freedom from want.

ATOMIC SCIENTISTS URGE 3-POWER TALK

Men Who Developed the Bomb
Ask Truman to Call Russia,
Britain to Parley on It

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 16—With Russia apparently holding the key to success or failure of the Anglo-American program for control of atomic energy and with the next move up to the Soviet Union, 90 per cent of the scientists who worked on the development of the atomic bombs that fell upon Hiroshima and Nagasaki spoke today for cooperation at once between the United States, Britain and Russia to prevent a competitive armaments race.

The Federation of Atomic Scientists, through Dr. J. H. Rush, representing the Association of Oak Ridge Scientists, Clinton Laboratories, made public a resolution urging President Truman "immediately" to invite into conference the Governments of Britain and Russia.

Such a tri-power conference, the federation urged, should "discuss the danger created by atomic weapons" and "plan for the joint approach by these three nations to the other members of the United Nations Organization to the end of establishing a system of international cooperation." It urged that there be "made available to all peoples" the peace-time benefits of atomic energy.

Dr. Rush said that the making public at this time of the resolution, which was prepared late in October and was indorsed through personal contact with individual scientists and at meetings of groups, was not with the intention of criticizing or contradicting the declaration on atomic energy that was announced by the White House yesterday.

To Back Truman-Attlee Program

"We feel that this resolution supplements the joint statement by President Truman and Prime Ministers Attlee and Mackenzie King," said Dr. Rush. "If that declaration may be taken as the first step in a series of negotiations which will lead to a world-wide development of a control policy involving all major policies, then, certainly, it is generally commendable."

In the development of the atomic bomb, Dr. Rush said, scientists had had their greatest responsibility. Some, including himself, he indicated, were somewhat alarmed over the potentials of the discovery and thus were eager for prompt international control.

"For the first time bodies of scientists have accepted a certain measure of responsibility for their creations," he said.

The resolution was announced by Dr. Rush and his associate, Dr. Francis T. Ponner, in the office of Representative Helen Gahagan Douglas, Democrat, of California, who is much interested in the scientists' position but did not participate in the press meeting.

Besides calling for the "immediate" United States-British-Russian conference, the resolution recommends that:

"Any domestic policy instituted by the President and the Congress of the United States for the control and development of atomic energy should be in harmony with an international system of control and cooperation and should further provide for scientific freedom and the peacetime utilization of atomic energy in the interests of the whole people."

Chicago University in Warning

Special to THE NEW YORK TIMES.

CHICAGO, Nov. 16—Warning that Government control of atomic research might shackle all science, the University of Chicago in an unprecedented action today approved a resolution protesting such control, and sent copies to President Truman, members of his Cabinet and all members of Congress.

The resolution was approved by the Council of the University and signed by fifty-one professors, Chancellor Robert M. Hutchins, Council President Ernest C. Cowell, Vice President Reuben G. Gustavson and Wilbur C. Munnecke. It expressed special concern over the control proposed in the Johnson-Max bill.

"Nuclear studies occupy such a pivotal position in science today," the resolution stated, "that discoveries in this field may be expected to revolutionize many collateral branches from astronomy to medicine. By controlling nuclear research, all science may be shackled. "The development of mankind requires that the freedom of inquiry and the dissemination of knowledge be protected in order to preserve and enrich our civilization."

The resolution said that, because the atomic bomb was developed under rigid wartime controls, a misconception has arisen that scientific research might be permanently organized in that manner. The true development of science had been made under the free play of imagination, not under control, it asserted.

BOMB SECRECY OPPOSED

Science Society Asks Truman to
Expand Discussions

The American-Soviet Science Society sent a telegram to President Truman yesterday deploring the "serious deterioration in the relations of the United States and other countries, especially the Soviet Union" as a result, in part, of the release of atomic energy.

The executive council of the society, following instructions voted by the science members at a special meeting Thursday night, wired the President that the group believed "the use of atomic energy cannot be kept the secret of one nation or of a group of nations."

"The atomic bomb, therefore, cannot and should not be used as a threat in international relations," the telegram said. The science group urged that "the present discussions among the United States, Great Britain and Canada be immediately expanded into a conference of the Allied great powers to discuss the mechanism to control the military aspects of atomic energy. This step, carried out in the spirit of friendship and cooperation, will immeasurably strengthen the United Nations Organization."

Atomic Hunt in Spain Reported

STOCKHOLM, Sweden, Nov. 17 (AP)—The newspaper Expressen said today it had been informed by a reliable source that twenty Nazi scientists were working feverishly in Spain to solve the secrets of production of the atomic bomb. The paper declared that the experiments were being conducted with the approval of Generalissimo Francisco Franco. There was no confirmation of the report from any other source. NYT 11/18

UNO SHIFT DICTATED BY ATOM PROPOSAL

Preparatory Commission Likely
to Discuss Plan for Board
With Russians Present

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 16—The creation of a commission on atomic power would revolutionize the United Nations Organization, officials agreed today. They were already busy preparing for this lusty newcomer.

The Preparatory Commission meets next Friday. While there are no agenda for it, there would be nothing to prevent the subject's being brought up. One delegate considers it likely that an atomic commission will have to be discussed by the Preparatory Commission to pass it on to the General Assembly, which meets here early in January. When the committee structure of the Preparatory Commission is set up, it is likely that an atomic commission will have to be considered.

Officials are worried about the Soviet Union's attitude. Russia considers the Security Council the main reason for the existence of the UNO. If an atomic commission were attached to the Security Council it would make the council still more powerful, but yesterday's statement by President Truman and Prime Ministers Attlee and W. L. Mackenzie King avoided mention of the Security Council.

It is realized that it would be awkward to go through with the Preparatory Commission as if an atomic commission had never been mentioned or to discuss it in front of Russian delegates, whose country is barred from sharing atomic bomb secrets. Yet these seem today to be the only courses.

Branching of Functions

The Executive Committee of the UNO spent two months in London drawing up recommendations for the structure and functions of the departments and councils of the UNO. Now an atomic power commission would cut across at least three important organs. Its police and military functions would seem to belong to the Security Council, its industrial uses would link it to the Economic and Social Council, and the exchange of scientific knowledge takes up exactly what the United Nations Educational, Scientific and Cultural Organization has just been formed to carry out.

From the viewpoint of officials of the UNO, yesterday's statement on atomic energy raised more questions than it solved. One Foreign Office spokesman acknowledged unhappily that he had read it a dozen times and each time had got a new meaning out of it.

At the same time there was genuine satisfaction here over what seemed to the British to be at least a part victory for their

viewpoint. Foreign Secretary Ernest Bevin in his recent statements stressed the importance of the UNO above all else and that the atomic power commission would greatly strengthen that organization.

No directive, however, has been received in the matter and officials are awaiting instructions. It was said tonight that no reaction from Moscow had been noted and that meanwhile it would be difficult to make decisions.

Soviet Assent Hoped For

The British hope, of course, that the Soviet Union will agree to discuss the whole subject of scientific discoveries and that, meanwhile, the United Nations can go ahead calmly with the world organization. It is realized, however, that things may not work out so smoothly.

Nominations are pouring into UNO headquarters here and today the names of the United States delegates to the Preparatory Commission were received. Edward R. Stettinius Jr. remains the chief delegate, but as he will not be well enough to attend the opening sessions, Adlai Stevenson will again be acting delegate. There will be eighteen members in addition to three now in London.

Forty other nations have sent in nominations. The Soviet Union has not done so, but Moscow has let it be known that there will be fifty members in its delegation, presumably with Andrei A. Gromyko, Ambassador to the United States, again as chief delegate.

Boston's invitation to the UNO to make its headquarters in that city was received today. Nineteen American localities, including New York, have extended invitations.

NYP 11/17
Dr. Abraham Flexner, director of the Institute for Advanced Study at Princeton, N. J., discussed with Dr. Albert Einstein the frequency with which Einstein's name has been appearing on committee lists. "When the Democrats come to you for a statement, you give it to them," Dr. Flexner reminded him. "Political refugees have a problem—they come to you and you lend your name. Soviet relations committees, Palestine committees, atomic bomb committees," Flexner continued. "Do you have to say yes? Why don't you do what I often do—say no?" . . . "But if I did," Einstein shrugged, "your name would be Einstein and mine would be Flexner."

After Secretary of State Byrnes' clarification of our policy in his Charleston speech of Friday night there can be no excuse for misunderstanding what the United States proposes to do with and about the atomic bomb. Mr. Byrnes dwelt upon the points that all peace-loving Americans would like to see emphasized: that we mean to do all in our power to prevent an armament race, with the bomb and perhaps even deadlier instruments as weapons; that we hold our knowledge of the "know-how" of the atomic bomb as "a sacred trust"; that we do not mean to use this knowledge as a threat; that though we consider it necessary to hold certain facts in trust for the time being "this period need not be unnecessarily prolonged"; that we look forward to the day when the exchange of information "for peaceful purposes can be extended to some and eventually all the practical applications of atomic energy"; and that we intend, under the solemn obligations assumed at San Francisco, to work for peace and goodwill with and among all nations. In a chaotic world this is surely an appeal to sanity.

Secretary Byrnes saw no reason why the atomic bomb commission proposed in Thursday's statement by President Truman and Prime Ministers Attlee and King should not be set up within sixty days. Such a commission must include representatives of at least the five permanent members of the UNO Security Council, namely the United States, Britain, France, China and Russia. It could achieve results without learning in full detail what went on at Oak Ridge and in the New Mexico desert. But one finds it hard to believe that such gaps in its information would be significant or lasting. By the time a program can be worked out and put into practice the bomb will contain even fewer secrets than it does today. And the problem will then shift.

Even today, as the three statesmen candidly admitted, "no system of safeguards that can be devised will of itself provide an effective safeguard against production of atomic weapons by a nation bent on aggression." The obvious corollary is that nations which might be bent on aggression must be discouraged in advance by a strong international organization to make such aggression futile. The UNO, of which the Big Five are already members, is such an organization. Its principles are good enough. What seems to be required is, first, some re-examination of the enforcement provisions of the Charter, and, more importantly, a restoration of the good-will and confidence that prevailed at San Francisco.

The confidence has obviously been somewhat dashed in recent weeks, with the failure of the London Conference of Foreign Ministers and some other disturbing developments. This need not mean a diminution in good-will. It is, rather, a growth of fear and suspicion. It is fear and suspicion that have made many individuals in this country and in Britain ask, What about Russia? We have no doubt that the same question has been sincerely asked in Russia with respect to the intentions of Britain and the United States. We can hope that it has now been satisfactorily answered.

The first and most important task of Allied diplomacy is a restoration of mutual confidence. The United States and Britain must lose no opportunity to demonstrate to Russia that they have no desire to return to the old, discredited policy of the *cordon sanitaire* and that they hope, instead, to develop the closest possible ties of friendship and cooperation. Russia, for her part, owes us some reassurances. A frank interchange would surely re-establish the truth, so evident at San Francisco, that the interest of every nation in avoiding new causes of conflict is a thousand times as great as any benefit that any nation could possibly gain

by an antagonistic policy toward any other nation. The universe is a great and perilous sea and mankind is sailing through it in a tiny ship. Harmony in the essentials has become a necessity for survival. And this is the real lesson and problem which the atomic bomb has dramatized.

ATOM PLAN PRINTED IN MOSCOW PAPERS

Official Comment on Tri-Power Statement Still Withheld— UNESCO Role Urged

MOSCOW, Nov. 17 (UP)—The atomic bomb agreement between President Truman and Prime Ministers Attlee and W. L. Mackenzie King was published in Moscow today for the first time, but there was no official comment.

Newspapers carried a 200-word dispatch from London telling Russian readers that the three leaders agreed to retain the secrecy of the bomb pending the development of safeguards against its misuse but had resolved to recommend that a United Nations commission study the possibility of barring the use of atomic energy as an instrument of destruction.

Although the agreement was made public in other countries two days ago and the text doubtless has been available to Soviet officials, there still was no official reaction.

Several private citizens whose opinions were asked unanimously voiced doubts that the proposal would work. One called it a "stalling device." Another remarked that it was clear that the British and Americans intended to retain the secrecy and develop atomic energy independent of other nations. He said that an effective United Nations Organization was not yet in sight and "it may take many years before that is achieved."

Role for New Body Asked

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 17—A strong plea for entrusting responsibility for coordination of scientific research on control of atomic energy to the new United Nations Educational, Scientific and Cultural Organization, set up in London this week, was made tonight by Dr. Harlow Shapley, director of Harvard College observatory, in a broadcast to the United States.

Dr. Shapley, a member of the United States delegation to the UNESCO conference, conceded that the control of atomic energy would be much too big a job for the educational organization, but he expressed his conviction that the United Nations should assign to it the responsibility for coordinating all scientific research.

The commission on atomic energy proposed in the communiqué issued in Washington is "advisable," Dr. Shapley said, "because speed is so important in this race against time." Ultimately, however, the UNESCO should take over the international research aspect of atomic energy, he contended.

In particular, he advocated that UNESCO should have the role of coordinating "pure research on the nucleus of the atom and applied research on the use of atomic energy in industry."

Dr. Shapley maintained that a scientific division within UNESCO should "permit the exchange of scientific workers at all levels so that from top scientists to laboratory technicians they would be able to travel abroad and study at first hand what is being done in other countries."

He also suggested that the new organization should "call international congresses to bring together scientists, politicians and workers in different fields. It should maintain a bureau of scientific surveys

and take a periodic census of research projects in all fields."

Would Bar Bomb by Treaty

WASHINGTON, Nov. 17 (AP)—Kenneth D. McKellar, president pro tempore of the Senate, proposed today that the atomic bomb be outlawed by treaty as a weapon of warfare.

China's Support Indicated

CHUNGKING, China, Nov. 17 (AP)—Official Chinese quarters, while withholding comment, indicated today that China would support the Truman-Attlee-King proposal to create a United Nations commission to control atomic research.

Unofficial quarters said that China would have full confidence in a British-American guardianship of atom bomb secrets, making no mention of Russia as a co-guardian, although she is one of the United Nations.

The Communist New China Daily News observed that any attempt to keep atomic development secret would be "useless and foolish" and would stimulate suspicion.

WARNING TO WORLD URGED

Senator Tunnell Advocates U. S. Keep Atomic Bomb Secret

Senator James M. Tunnell of Delaware, a member of the Senate Foreign Relations Committee, urged yesterday that the United States, while keeping secret the atomic bomb, let every nation know that we are prepared to use force against any violator of the solemn agreement that "must be entered into."

Speaking at a public meeting of the Conference on Atomic Power and Public Policy at 2 West Sixty-fourth Street, the Senator ridiculed the proposition that agreement among all nations concerned in outlawing the atomic bomb could be depended on. He asked what would have happened if such nations as Japan or Germany had been able to produce atomic bombs.

The conference was under auspices of the John L. Elliot Institute of the Society for Ethical Culture and the Conference on the Scientific Spirit and the Democratic State. Other speakers were Dr. I. Rabi, Columbia University Nobel Prize winner; Dr. Morris L. Cooke of Philadelphia and Dr. Edward Condon, technical adviser to the special Senate committee on atomic energy.

Ball Atom Bill Will Challenge Army's Plan

By OLIVER PHILAT
Post Staff Correspondent 11/6

Washington, Nov. 6—Charging that the May-Johnson bill sponsored by the Army is impractical, un-democratic and monopolistic, Senator Ball (R-Minn) today introduced a bill of his own to handle atomic energy.

Ball said his bill is designed to meet objections of scientists to the Army bill, which in somewhat modified form has been reported out by the House Military Affairs Committee.

The House may act on the Army bill in a couple of weeks. The resulting measure will go to the Senate Special Committee on atomic energy, along with the Ball bill and one introduced by Senator McMahon (D-Conn).

Recess may interfere

Because of a proposed Christmas recess, it is not likely that the Senate Committee will get around to thrashing out the differences between the three bills until next year.

Ball proposes a nine-man commission of part-time members. Day to day control of atomic energy would rest with a full-time \$15,000-a-year administrator and a full-time \$12,000-a-year

Fear for Jobs, Quit Atom Work

Washington, Nov. 6 (AP)—Maj. Gen. Groves said today hundreds of workers, key men and scientists are quitting the atomic bomb project because of uncertainty over the future of their jobs.

Groves, in overall charge of the atomic bomb project, said he had lost some of his best men, both at Oak Ridge, Tenn., and Hanford, Wash., as well as at Los Alamos, N. M.

Although Groves would make no estimate of the extent to which this draining off of key workers has cut production, he asserted that there has been considerable slowdown.

deputy administrator, named by the commission.

To keep the commissioners continually informed, Ball provides each one with a full-time \$8,000-a-year assistant.

5 Cabinet Officers

Membership on the atomic energy commission, under the Ball proposal, would consist of five cabinet officers plus four members-at-large chosen "from among the foremost scientists and engineers of the nation."

The Ball bill would set up three advisory boards, one on research, another on commercial applications of atomic energy, a third on military uses. This suggestion came first from Dr. Leo Szilard, representing scientists who worked on the atomic bomb project.

Ball would provide penalties for disclosure of atomic military secrets, but allow free research in the field and on industrial applications.

Oppenheimer For Giving Reds Atomic Secret

Bomb Builder Urges U. S. to Offer Russians Joint Control Over the Weapon

Dr. J. Robert Oppenheimer, the government's chief atomic bomb builder, recommended yesterday that the United States offer Russia joint control of atomic weapons. The ultimate purpose of such an offer, he said, would not be joint use of such weapons but the avoidance of their use.

Dr. Oppenheimer, a forty-one-year-old native of New York who at twenty-five was a full professor of physics at the University of California, was in charge of the actual construction of the bombs at the Los Alamos, Calif., laboratories of the War Department's so-called Manhattan Project.

In New York for a few hours on his way back to Los Alamos, he received the press in the offices of Americans United for World Organization, Inc., of 465 Fifth Avenue, although he is not a member of the organization.

Sees Problem Defeated

"If the United States and Russia collaborate on the control of atomic weapons, then the backbone of the problem of world federation is beaten," he said. "I don't mean at all that Russia is going to atomically bomb us tomorrow or that we are going to atomically bomb them tomorrow. I do think we could afford to go to Russia and ask what she wants to be assured on this subject.

"We must do everything possible to insure the world against the use of atomic weapons and it would be a great assurance if we could say that we will stop the manufacture of them.

"If you take this problem and regard it as a unique pilot plant in which to work out international relations, it will make certain things that look hopeless to us today disappear. In this field let us not insist on national sovereignty."

Comments on Present Plan

Dr. Oppenheimer is one of those scientists who feel that the release of atomic energy has forced them to speak up in the political arena, a place in which he is admittedly not an expert. His attitude toward the plan of the United States, Great Britain and Canada, present possessors of the atomic bomb, to set up a United Nations control commission was expressed as follows:

"There are a few key words in the situation. One is confidence. One is international responsibility. One is co-operation. Perhaps one is control. The evaluation of the situation as presented in this three-power declaration is certainly sound—that the problem of atomic armament should not be mixed up with other problems. Whether this United Nations commission will enjoy the confidence and co-operation of all the powers is a difficult political question which I cannot answer.

"I don't know whether it is enough to say we have decided to do this in order to assure the rest of the world. But if, on Aug. 10 and not Nov. 10, Great Britain, the United States, France, China and Russia had signed such a declaration no one would have doubted that it was a great step forward."

The problem has been falsified by a general belief in the United States that our control over atomic weapons is now an advantage, he said.

Dr. Oppenheimer expects that the May-Johnson bill providing for plenary Federal control over atomic energy will be further improved before it is finally made law by Congress. He accepts it "as a temporary measure" without strong fears of the powers it would give a commission to restrict scientific research and discussion.

"Facts of Nature" Cited
"The facts of nature must not be considered as secret," he said. "But applying them in a policy, for example as to whether the government shall make or not make atomic bombs, could be kept secret. I'm not saying it should."
Dr. Oppenheimer said he felt

with many other scientists that "if we had formal commitments from the major governments that openness of scientific discussion is not only permissible but desirable, we would have come a long way."

His wife's attitude upon reading the May-Johnson bill, he remarked, was: "That's some bill. You keep your nose out of them atoms." But Dr. Oppenheimer said he regarded it as a sincere attempt by the War Department to "get rid of this thing as quickly as possible" by opening atomic energy to civilian control. The prolonged discussion that has now developed around the bill in Congress is not regarded by him as dangerous delay in the military sense.

But, he added, the Manhattan project is meantime operating without direction or guidance and progress in the development of possible other uses of atomic energy will be remarkably poor while the present extreme secrecy and control are continued.

Total Personnel Reduced

While the total personnel of the project has been greatly reduced, the staff of the laboratories in which the bombs were made is probably larger than during the war, he said, but this might only mean that with the pressure off more help is needed to do the same amount of work as before.

Given the original project cost of \$2,000,000,000 for two bombs, the cost of making additional ones may be only around \$1,000,000 each, he reported, and "one could in ten years have a stock pile of 10,000 bombs at the cost of a very small portion of the national income."

As for the long-range potentialities of atomic energy, Dr. Oppenheimer suggested they had been overrated by some. "It doesn't seem at all sure," he said, "that atomic energy will ever replace the normal fuels" for the production of power. While the unit cost of producing atomic power would be comparatively low, he said, the cost of installing the equipment would be relatively high.

WORLDWIDE POLICY URGED FOR ATOM

U. S. Cannot Afford to Insist on Sovereignty in This Field, Says Oppenheimer

NYT — 4/18

Declaring that it is impossible for the United States to have a nationalistic "policy of atomic energy," Dr. J. Robert Oppenheimer of the California Institute of Technology, who directed the development of the atomic bomb at Los Alamos, N. M., said here yesterday in an interview: "Let us in this field not insist on national sovereignty."

Saying that "we could afford to put a great deal into the pot" in exchange for the cooperation and allegiance of all nations, Dr. Oppenheimer added that "if the United States and Russia can collaborate on atomic weapons then the back of the problem of world federation is broken."

This was not to suggest, the scientist emphasized, that any particular dangers existed in the relations between the United States and Russia, or that either country would "atomically bomb" the other. The Soviet was cited, he said, because of the profound differences between Russia and the United States, and if these differences could be resolved, any others that might develop would, by comparison, be easy to settle.

Should Have Acted Sooner

Visiting the city on his way to Los Alamos from the National Academy of Sciences meeting in Philadelphia on Friday, the scientist, speaking in the headquarters of Americans United for World Organization, Inc., at 465 Fifth Avenue, declared that it would have been "an enormous step forward" if the recent offer by the United States, Great Britain and Canada to give the atomic bomb to the United Nations Organization on a reciprocal basis had been made "on the tenth of August by the Big Five powers," referring to the date when Japan sued for surrender a few hours following the second atomic explosion at Nagasaki.

Warning of the dangers of non-cooperation and citing again the ravages at Hiroshima and Nagasaki from atomic explosions, Dr. Oppenheimer visualized more terrible potentialities when he said: "I think I can make the statement that for quite a small fraction of the national income we could, in ten to fifteen years, have a stockpile of 10,000 atomic bombs."

The cost of production for atomic bombs, he said, had been widely misunderstood. Estimating the cost, he declared, was no simple procedure of taking the total cost of this country's atomic production, \$2,000,000,000, and dividing it by two—representing the two atomic bombs we used in the war. Speaking in general terms, and emphasizing with a smile that it was "so hard not to tell lies" and yet keep within the limits of what the Government has ordered be classified information, the scientist estimated that while "we have not yet gone into an ambitious program" the cost of one atomic bomb would

be somewhere between \$500,000 and \$5,000,000.

Key Words of Problem

There are a few key words in the whole problem of the atomic bomb, the scientist said, and these are confidence, international responsibility, international cooperation "and perhaps control."

Very little has been said of the constructive, as against the destructive, use of atomic energy, he agreed, partly because people hesitate to talk about things they do not understand and also because "people feel that with a threat over us it makes no difference if we have a few thousand extra kilowatts."

Revealing that the Manhattan Project, the agency responsible for the development of the atomic bomb, had been greatly reduced in size—"offices which once had lots of people in them are now empty"—the scientist said that he would have favored the passage of a special bill soon after "the damn things were dropped," to provide for an interim organization to guide atomic bomb production until the over-all policy was formally established.

The Manhattan Project, he said, is now "without direction, without guidance, working with reduced personnel and a burden to the people who are working in it."

Early Work on Atomic Energy Impeded by Numerous Fires

By John J. O'Neill

PHILADELPHIA, Nov. 17.—Flames of the plain, ordinary, every-day, earthly variety always threatened and frequently did destroy the early "piles" on the campus of the University of Chicago in which scientists were striving to work out the method for controlling the production of atomic energy substance for use in the atomic energy bomb.

This was revealed today by Nobel Prize winner Enrico Fermi in an address before a joint meeting of the National Academy of Scientists and the American Philosophical Society.

The fires which broke out in the atomic energy pile were caused by the heating of graphite, a close relative of coal, which was used in preventing the escape of neutrons and suffered a heavy bombardment in slowing down the particles from the atomic explosions within. In the manufacturing process used later, the piles were well ventilated and cooled.

The critical experiment came on a day when a government commission was visiting the plant to make a decision as to whether to give further backing to the bomb project as a major war objective. The work was in charge of Dr. Fermi, who had been in this country only about year, a refugee from Italy.

"The Italian navigator has landed on the new world. It is a smaller world than we believed," was the message which went to Dr. James Bryant Conant, president of Harvard College and an executive of the Office of Scientific Research and Development in Washington, in charge of the project.

Dr. Conant, well aware of the danger of the project, wired back: "Are the natives friendly?"

The answer: "Yes."

The exchange of messages occurred on Dec. 2, 1942, when in the University of Chicago's squash court under the west stands of Stagg Field its first atomic fire in history was started by Dr. Fermi and his assistants.

The message signified success. The "smaller world" meant the fire was not as violent as had been expected. "Friendly natives" meant a go-ahead signal for everything on the atomic bomb.

The scientists at today's session were urged by Dr. John Wheeler, of Princeton University, to look

forward to conquering new fields of atomic energy through complete destruction of the fundamental particles of matter which, he declared, would yield 1,000 times as much energy as the splitting of the uranium atom, used in the bomb. Transformations which are now taking place in cosmic rays give the clew to another new source of energy, he declared.

Talk Under Gag Rule

Because Dr. Wheeler was indulging in pure, but well founded speculation, he had free rein to present his ideas, but the other speakers were limited to discussing matters already included in official reports because the atomic security ban is still keeping science under military censorship.

Dr. Harold Urey, Nobel prize winner, discussed the separation of isotopes, an essential process in the production of plutonium, the atomic energy substance of the bomb, but spoke of nothing which was not already known to physicists.

"The most important reason for separating isotopes is not involved in the purposes for which it has already been applied," Dr. Urey declared, "but the great unknown reason. We do not know now the great purpose for which this discovery will be applied. We must wait for the future to reveal the unknown reason."

Dr. Eugene P. Wigner, also of Princeton University, during a discussion of the resonance phenomenon which makes it possible to control the entrance of neutrons into the nucleus of either the uranium 235 or 238 atom in the bomb process, revealed that Russian scientists, during the war, had worked out and published the formulas for the resonance of the uranium 238 atom which is the basis of making the bomb substance, plutonium, and that German scientists had also worked it out, but had not published their findings.

Dr. Wheeler's suggestion for a new source of atomic energy is based upon the possibility of smashing elementary particles such as protons and neutrons so that they will release all their energy. Protons are the hearts, or nuclei, of hydrogen atoms, the most abundant substance on earth and in the universe. The heavy substances now used are among the rarest materials.

Science, Politics and Atomic Energy

A band of scientific liberals has for years been declaring in Great Britain and in this country that science has taken too little interest in the social fate of its discoveries. To this the theoretical physicists, biologists and chemists have replied that it is not their business to indicate what shall be done with the fruits of research. The atomic bomb has compelled these aristocrats of the university and the laboratory to reverse their verdict. To be sure, they are championing only freedom of research, which is threatened by the Administration's May-Johnson bill, but discussion of even this phase of the issue has impelled consideration of the social effects of atomic energy.

Scientists' Views Attacked

The scientists who gave us the bomb and who have protested against a policy of secrecy have been roughly and unjustly attacked by Mr. Churchill and Mr. Bevin. Both statesmen have declared that they do not intend to let the scientists mix in politics. The scientists have no such intention. They have been asked how the use of atomic energy should be controlled. They have answered, merely by way of suggestion, that there should be no restriction of research, that the issue of war itself should be faced and that some international body should make certain that no bombs are being made.

The scientists are alone qualified to express an opinion on both the military and the industrial potentialities of atomic energy. Yet, despite their considered opinion that there is no secret

about the way atomic energy can be released from uranium 235 and plutonium, the May-Johnson bill would place research in atomic physics under strict control and even impose a censorship on nuclear physicists.

No Protest From Industry

It is astonishing that not a word of protest against the Administration bill has come from industry. How are we ever to run trains, drive factory machinery or light cities with atomic energy if engineers may not release it in amounts measured in thousands of kilowatts. Probably less than a pound of uranium 235 or of plutonium, the active elements of the bomb, can light the whole of New York or Chicago. Much less can also wipe out large sections of either city. We want to keep atomic energy a military secret, yet make the utmost use of it in peace. The two purposes clash. We can't keep the method of releasing atomic energy a military secret and at the same time use it in industry.

The May-Johnson bill would undoubtedly cripple research in atomic physics if it is passed in its present form. Every nuclear physicist would be subject to supervision, and he could publish nothing without permission. If we carry out this policy of secrecy, Europe will surely do the same. As a result, there would be no free exchange of knowledge, with the probable result that not only would industry suffer but the Army would be unable to improve the bombs it has.

W. K.

May-Johnson Bill on Shelf, Maybe to Stay

PH Action on Atom
Awaits Findings of the
McMahon Committee

Washington, Bureau

WASHINGTON, Nov. 14. — A strange quiet has settled over the explosive May-Johnson Atomic Control Bill which apparently is destined for a long rest on the House calendar pending clarification by the Senate and the president of the whole atomic question.

A report that President Truman has changed his position on the measure, which he once asked to have passed as quickly as possible, is reflected in the reluctance of House leaders to make any predictions on when, if ever, the House will act.

The Army's attempt to steam the bill through under forced draft has failed and the ultimate responsibility for formulating atomic legislation now rests with the McMahon committee of the Senate.

Visit Project

McMahon's 11-man group will visit the Oak Ridge bomb project next week and will commence its open hearings November 28. The committee is expected to hear from scientists, labor, consumer groups and veterans. These groups had little or no chance to be heard by the House military affairs committee which reported the bill favorably to the House.

A coalition of liberals and scientists has meanwhile convinced the White House and large segments of Congress and public opinion that the May-Johnson bill is dangerous, piecemeal legislation and that any final measure should integrate both foreign and domestic atomic controls.

This is the approach now being taken by the McMahon committee and it is apparent that the Truman-Attlee-King atomic conferences have dramatized the necessity for shelving the May-Johnson bill until some clear view of the U. S. atomic policy emerges.

Opposed

Meanwhile, the National League of Women Voters which claims some 55,000 members voiced unequivocal opposition to the May-Johnson bill.

The League's board declared that legislation should be enacted only after "careful discussion of all issues. . . . That the bill does not provide democratic controls over the commission it proposes and does not take into consideration the necessity for an international policy."

Sen. Francis J. Myers (D., Pa.) in a nationwide broadcast warned last night "we can't hide the atomic bomb for long, any more than we were able to hide behind the oceans of the Atlantic and Pacific. We can't keep the atomic secret for long."

RUSSIAN CHARGES ATOM IMPERIALISM

Moscow Writer Says the Bomb
Is Signal for 'Reactionaries'
to Urge Anti-Soviet War

By BROOKS ATKINSON
By Wireless to THE NEW YORK TIMES.

MOSCOW, Nov. 18.—The atomic bomb is being used in international power politics against the Soviet Union, according to the New Times today. In the sharpest and frankest article yet published about current international affairs A. Sokoloff writes:

"The atomic bomb is a signal for reactionaries all over the world to agitate for a new crusade against the Soviet Union."

During a period in which the Anglo-Soviet-American coalition is passing through its greatest crisis, Mr. Sokoloff declares, persons abroad are trying to undermine peace by slander and deception. Failure of the London Foreign Ministers conference, the atomic bomb, Allied policy in Germany and the Far East—all are being used by enemies of peace to provoke war between the Anglo-Saxon countries and the Soviet Union, he thinks.

Specifically, he accuses the Hearst and McCormick press in the United States and a "reactionary" Catholic press in Britain of following this policy. Mr. Sokoloff thinks some writers are trying to establish a mutuality of interest between the United States and Britain. He charges that London observers are now repeating the Hitlerite description of Soviet Russia as a colossus with feet of clay.

Quoting Paul Winterton to the effect that the Soviet Union could be reduced to a second-rate power by the atomic bomb and that Britain and America now had a chance to assert their influence over Europe, Mr. Sokoloff writes:

"What is this if not an appeal for elimination of the Soviet Union from participation in European affairs? Can hypocritical phrases about moral leadership mask the appetite of the imperialist who dreams of eliminating from the path of his imperialist dreams the Soviet Union?"

Mr. Sokoloff says incitements to war require the Soviet Union to maintain the utmost vigilance. He says the atomic bomb has altered the views of some foreigners who formerly advocated international collaboration. Commenting on the statements of a writer in The Manchester Guardian, Mr. Sokoloff writes:

"Isn't it clear that his words contain a frank appeal not only for isolation of the Soviet Union but for attacking her as quickly as possible?"

The atomic bomb in itself is not responsible for anti-Soviet trends of thought, according to Mr. Sokoloff, but is responsible for "attempts to use the atomic bomb in the game of foreign power politics." He believes anti-Soviet movements are motivated by several reasons. He thinks some reactionaries "would greet a new war as a means of escaping the necessity of solving complicated economic problems having to do

BILATERAL TALKS ON ATOM DOUBTED

Byrnes Says Assembly of UNO
Will Be First to Receive
Anglo-U. S. Proposals

NYT

11/22

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 21.—The proposal to have the Assembly of the United Nations Organization name the commission to formulate atomic energy controls probably will be made when the Assembly meets in London in January by the United States, Britain and Canada jointly as the signers of the recent declaration calling for a commission on the question James F. Byrnes, Secretary of State, said at his press conference today.

However, Mr. Byrnes added that a decision had not yet been made on just how the matter would be submitted to the Assembly.

He said that he knew of no plan for our considering the subject with the Soviet Union or other nations on a bilateral basis in advance of the Assembly meeting.

Byrnes Awaits Replies

WASHINGTON, Nov. 21 (U.P.)—Mr. Byrnes said that none of the other United Nations had replied to the Anglo-American-Canadian proposal to establish an atomic energy commission within the United Nations Organization.

Copies of the tri-power atomic

declaration were sent to the other United Nations last week.

Lord Cecil Asks Quick Action

LONDON, Nov. 21 (AP)—Viscount Cecil of Chelwood, one of the three men who drafted the League of Nations covenant, expressed the conviction today that the atomic bomb should be placed under international control as soon as possible.

The white-haired Nobel Prize winner, erect and vigorous at 81 years of age, declared in an interview that it would be "sheer madness" to leave so powerful a weapon in the hands of individual nations.

He expressed "full accord with the main conclusion, 'recently announced by President Truman and Prime Minister Attlee and Canadian Prime Minister King, and added:

"The sooner the full control of the manufacture and use of the atomic bomb and any similar weapons is placed in the hands of an impartially constituted international authority, the better it will be for the peace of the world."

Lord Cecil said that he did not "pretend to understand" the Soviet Union's post-war attitude.

"They took a leading role in the establishment of the United Nations Organization," he said, "and yet they seem to be relapsing into unilateral action and the old power diplomacy."

"If this is due to suspicions about the United States and Great Britain, it would be well if we could put those suspicions at rest. The sooner we take Russia into our confidence on the atomic bomb, the better it will be."

with reconversion, unemployment and the struggle for markets."

Mr. Sokoloff suspects they may be trying to avoid a solution of such unpleasant questions as the situation in India, the national liberation movements in Indo-China and Indonesia and political problems in Syria, Palestine, Greece and Spain.

"On the other hand," he writes, "it is unquestioned that adventurers who are preaching anti-Soviet crusades are encouraged by certain tendencies to be noted in recent United States and British policy. In England some newspapers discreetly describe this tendency as a policy of 'narrower international collaboration.' In the United States they bluntly call it a 'big stick policy.' These tendencies evoke alarm and unrest among people of common sense."

Mr. Sokoloff believes responsible people in Britain are against the transformation of Britain into an appendix of the United States or vice versa. "Responsible people in the United States express well-founded doubt about joining the United States unconditionally in the objectives of British foreign policy in Europe in which the United States is by no means directly interested," he writes.

Although he reports that foreign writers describe Soviet Russia as the incarnation of secrecy, he cites a British Member of Parliament as saying, "What's the use of asking others to show their hands if

we keep trumps up our sleeves?"

Mr. Sokoloff vigorously asserts the Soviet Union is proving not only by words but by deeds that it is fighting for the preservation of peace and security "in our country, which once and for all is freed from imperialism and there no longer exists social groups who want to break the peace." "It is unthinkable in our country," he writes, "to have a situation such as exists in foreign countries where official representatives sing hymns of praise to international collaboration while influential newspapers and magazines openly make appeals for war."

Scientists of the World, Unite!

BY RICHARD SCHLEGEL

(Of the research staff of the Palmer Physical Laboratory at Princeton University)

THE application of physical science has reached a vicious climax in the atomic bomb. The ideal of offensive warfare, a weapon of total destructiveness against which there is no defense, has been realized. And we, having just emerged from a struggle to maintain reason and humanity in the world, now find that we are the generation which will determine whether or not our civilization has the wit to keep itself alive.

Two facts should be clear to all. First, that the atomic bombs used so far are of "baby" size in respect to destructive power compared with those which can be—and perhaps have been—manufactured. Second, that the industrial capacity and wealth required for manufacturing the atomic bomb can easily be overestimated. Uranium is required, but the United States has no monopoly on that—rather, the indications are that our deposits are smaller than those of many other nations. The method of manufacturing the fissionable isotope required for an atomic bomb is very simple, as a reading of the Smyth report* will tell one. To be sure, an understanding of nuclear physics is necessary, and some old-fashioned engineering must be applied to carry out the new processes. And we gather from the Smyth report that some ingenious technology is involved in the actual fashioning of the bomb. But other nations too have nuclear physicists and engineers. Since the Smyth report outlined the method of producing the required fissionable material, any group working on atomic energy now knows at least one right path. As far as physicists of other countries are concerned, perhaps there never was any secret about the fundamental processes. The only "secrets" now are probably those of detailed manufacturing techniques, and any industrial nation can be expected to work out such details for itself.

The unearthly destructiveness of the bomb and its potential availability to all nations are two components of our crisis; the third is the historical fact that nations have always periodically waged war upon one another, using the strongest weapons at hand. We cannot change the fact that men know or will know how to build the bomb. Our contemporary urban world can be saved only if there is no use of atomic energy in war. The prime question facing us today is whether or not we can save ourselves from being blown to bits.

It is becoming clear to a large part of the American public, and to many of our legislators and officials, that international control of atomic power must be achieved within the next few years, before every nation in the world with any claim to military power has its own supply of atomic explosives. The temporary military advantage which we enjoy because we have already built atomic bombs should give us strength and confidence to lead the way to such control, and—in all realism—to urge any recalcitrant nation to join the

* "Atomic Energy for Military Purposes." By Henry De Wolf Smyth. Princeton University Press.

control organization. How this organization shall be formed, how it shall function, what will be the details of international inspection and control of atomic-power installations—these are problems which in the next one or two years will test the ability of the nations to meet the crisis. We are fortunate to some extent at least in that the atomic bomb came to a world which had already experienced the San Francisco conference and the formation of the United Nations Council. A hopeful new beginning had been made in world cooperation.

If the nations give up the right to use atomic power for military purposes, they to a large extent give up their right to make war. For modern war is not fought as a rough international game, within the bounds of certain rules. Rather, every conceivable resource of destruction is employed. If possession of atomic-energy weapons is the exclusive prerogative of an international authority, every nation will be inferior to the supreme military power of that authority. Thus international control of atomic energy is equivalent to the creation of an international governing body to which the individual nations have surrendered their sovereign right to make war. In effect, the international control of atomic power will bring a world authority which can enforce universal peace.

To achieve this in the next few years will be difficult indeed, but the alternative may be fearful enough to force even the least imaginative to desire the world authority. It is literally true that all other issues, domestic and international, are of small importance compared with the problem of atomic-energy control. The leaders of all nations must act with a passion for unity that transcends the fears of individual nations—must act so, that is, if any nations are to survive.

It is perhaps fortunate for the world that scientists are probably more international-minded than any other professional group. They can be expected to be on the right side in the coming critical months. Scientists are not politicians or statesmen, and we would not expect them to be responsible for the detailed organization of an international authority. But clearly scientists must serve as advisers to an atomic-energy control body and to a large extent determine its policy, since it is they who understand the possibilities and dangers of atomic power, as well as the requirements for development and manufacture. I suggest that an international scientific council be established for the purpose of advising the international control authority.

The council would consist of representatives of an organization of all scientists working on atomic energy—or perhaps eventually an organization of competent scientists generally. The elements of such an organization already exist in the United States, for the "Manhattan District" workers

at Chicago, Oak Ridge, Columbia University, and Los Alamos have formed associations—and have also, incidentally, made a plea for international control of their product. These associations are now being drawn together into a national federation of atomic scientists which, with similar groups of men who have worked on atomic power in Canada and England, could serve as the framework of the international organization. Russian nuclear physicists and other scientists engaged in the problem would be expected to join at the earliest possible date. The goal, of course, would be for qualified scientists from all the nations to belong.

Beyond its advisory capacity, the international organization would have great power in that its members would be the guardians of the working knowledge of atomic energy. Since scientists, as I have said, have usually a more international point of view than other men, they could be relied on to develop their strongest loyalties to the welfare of mankind in general and not to be swayed by nationalistic interests. It is imperative that such a group should not take part in political and economic conflicts. If there should be a breakdown in the international political organization the scientists could withhold the use of atomic-power weapons from all nations. One can hope such a code and tradition of conduct would grow up among this group that the world could trust them to do everything possible to prevent the military use of atomic power.

It is my belief that the existence of an international scientific council such as I have described would greatly increase

the confidence of the peoples of the world in the international control body, and that the declared policy of the scientists not to allow their weapons to be used in warfare would give people everywhere a sense of security. Further, the organization would have great value as a symbol and example in these days of first strivings for "one world." The actual setting up of a world scientific council would require the support of statesmen. Its formation could presumably be discussed in connection with the planning for an international atomic-power control authority. As has been pointed out, some provision must be made for an advisory body of scientists which will work with the control authority. Existing plans for a scientific office to be attached to the United Nations Organization might be utilized to some extent.

One of the most important functions of the proposed scientific organization would be to insure that laboratories and libraries remain free and open to all throughout the world. Secrecy about actual manufacturing details connected with atomic bombs might be in the interest of international security. But the May-Johnson bill now before Congress shows how far non-scientists, though well intentioned, might go in blocking fundamental scientific communication and research in order to preserve a specific manufacturing secret which they considered vital.

With the military use of atomic energy under international control, and to a degree under the guardianship of scientists themselves, we could face the "atomic age" with bright hopes.

The Scandal of the Waterfront

BY MAURICE ROSENBLATT

(Former editor of the City Reporter; a special agent for the army's criminal-investigation department until a month ago)

THE longshoremen's strike in New York, labeled in the headlines another heart-breaking defeat for 35,000 American dock workers, stands as the most promising attempt of recent years to rid the city of its waterfront scandal. The root of that scandal, an archaic system of hiring called the "shape-up," is a device, like the poll tax, which for all its simplicity has complex and far-reaching effects.

At one time the shape-up was everywhere the accepted method of longshore hiring. It dates back to the days when men carried cargo from the pier to the ship's hold. A foreman at a pier entrance at hiring time sizes up the longshoremen standing around in a wide semi-circle, chooses the huskiest, and turns the rest away. The system is bad because the shape-up takes place at all the piers at the same time, and in consequence labor supply cannot be adjusted to the demand. Moreover, the opportunities afforded for favoritism are subtle and many.

On the West Coast Harry Bridges's International Longshoremen's Union did away with this system, established a central hiring hall, rotated available jobs, and gave the longshoremen a chance to live like decent citizens. In Liverpool and most other modern ports the shape-up is a thing

of the past. But in the port of New York it is still used, indefensible as it is. In New York, though machinery does the lifting, and experience and skill count for more than muscle, the hatch boss still scans the men in the shape-up and selects his workers. The chosen may work a couple of hours or well into the next day. Few jobs could be more haphazard. Scattered over the waterfront, the men are ignorant of when and where they will be needed. In war time this often meant that ships went unworked and cargoes unmoved while idle longshoremen unsuccessfully sought work a few blocks away. In normal times a surplus of labor is almost inevitable at all points.

The power of the hiring foreman is absolute. Upon his nod depends the longshoreman's bread and butter. To secure his favor the men have often kicked back to him a share of their wages, an ancient practice described by the Maritime Labor Board as extortion that men are forced to pay for the right to work. In certain locals before the war the kick-back was the expected thing, like the social-security tax. Dock workers report that the custom is reappearing.

Tribute is often exacted in more devious ways. In some parts of the port longshoremen are required to borrow

The Nation Associates

announces its

Annual Forum

on

WHAT IS THE ANSWER TO THE ATOMIC BOMB?

December 1, 2, 3, 1945

Hotel Astor, New York

Is Security Possible With the Atomic Bomb?

Should We Share the Secret of the Bomb With the Soviet Union?

Who Should Control the Bomb on the Domestic Level—on the International Level?

Is World Government the Answer?

These are among the questions which the Forum will seek to answer. Leading these discussions will be:

Judge Thurman Arnold
Lt. Kingman Brewster
James B. Carey
Stuart Chase
M. J. Coldwell
Rep. Helen Gahagan Douglas
Thomas K. Finletter
Judge Jerome Frank
Lt. Cord Meyer, Jr.
Walter Millis
Edgar A. Mowrer
Boris Pregel
Prof. L. N. Ridenour
Prof. Henry De Wolf Smyth

Speakers at the Dinner Forum on Dec. 3 include:

Dr. Herbert V. Evatt
Foreign Minister of Australia
Prof. Harold Laski
Chairman, British Labor Party
Dr. Leo Szilard
Metallurgical Laboratory, University of Chicago
Mrs. Franklin Delano Roosevelt
Freda Kirchwey
Leon Henderson, Chairman

Reservations for the dinner at \$7.50 per person and admission cards for the Conference may be secured at the offices of:

THE NATION ASSOCIATES

20 Vesey Street

New York 7, N. Y.

LINDBERGH CHARGES HE WAS MISQUOTED

Charles A. Lindbergh asserted yesterday that development of the atomic bomb had made "imperative" a world organization for control of destructive forces.

The noted flier also added: "I have not changed my belief that World War II could have been avoided."

Mr. Lindbergh made the comments in a statement concerning what he described as "an inaccurate account" of remarks he made at a private meeting of Midwestern Congressmen in Washington Nov. 8.

His statement yesterday follows:

"An inaccurate account has been printed describing my remarks at a private meeting in Washington. These times are too critical and too dangerous to justify unnecessary division of opinion among Americans on vital international policies.

"I have not changed my belief that World War II could have been avoided, but the issue between so-called interventionists and isolationists is past except from an academic standpoint. We fought the war together and we face the future together as Americans—a future that is more fraught with danger than the war itself.

"In an era which has developed the atomic bomb, and which will develop trans-oceanic rockets capable of carrying atomic bombs, the necessity for world organization for the control of destructive forces is imperative. The only alternative is constant fear and eventual chaos.

"I believe that President Truman, Prime Minister Attlee and Prime Minister Mackenzie King, have, in principle, taken a wise and courageous stand—a stand based on the preservation of our civilization, offering justice to all nations and asking only justice in return. So long as I believe that the policy of the Administration is to the best interest of my country, I shall give it my utmost support."

Mr. Lindbergh did not elaborate on his reference to the "inaccurate" reports. The famous flier telephoned his statement to The Associated Press.

Julian Huxley At Atom Rally

Julian Huxley, noted British scientist, will fly here to address the atomic bomb rally at Madison Square Garden Dec. 4. Prof. Robert Chambers, president of the Union of Biological Sciences, announced today.

The meeting, sponsored by the Independent Citizens Committee of the Arts, Sciences and Professions, will inaugurate "a public campaign for international control of the atom bomb and for the elimination of secrecy in scientific investigation," Prof. Chambers said.

In addition to Dr. Huxley, speakers at the crisis meeting will include Sen. Tobey (R-N. H.), Dr. Harold C. Urey, chairman of the Institute of Nuclear Physics; Dr. Harlow Shapley, director of the Harvard College Observatory and R. J. Thomas, president of the UAW.

"Dr. Huxley is exceptionally well qualified to represent the British scientists at this meeting," Prof. Chambers said, "not only because of the quality of his work as a biologist, but because of his forthright leadership in public affairs. As one of the spokesmen of British science, he has urged that science be given equal prominence with education and the arts in the new UNO branch."

Washington Tid-Bits By Peter Edson

WASHINGTON, Nov. 19.—Republican Congressmen have been working nearly two months on National Chairman Herbert Brownell's idea to present the country with a GOP platform, but they haven't come up with anything yet. "We're making progress," says Committee Chairman Charles A. Halleck of Indiana, "but we want to get as broad a cross section of opinion as possible." It has been suggested the platform be ready for the national committee meeting in Chicago in December. The Congressmen supposed to be doing the drafting aren't making



any promises, and may not come up with anything until after Jan. 1.

In the meantime Washington observers note that it's easier to find out where the CIO's Political Action Committee stands than it is to find out what the Republican party is thinking about.

The PAC grinds out statements on any and all issues, making it a really effective political propaganda organization, whether you agree with its views or not. Progressive Republicans are needing their party to catch up to the PAC.

One principal reason for deterioration of military government in Germany is that the high-point men in AMG—the experienced graduates of military government schools—are coming home fast. Their replacements are either low-point men who lack the experience or young officers planning to stay in the regular Army who haven't even been

briefed on what happened at Potsdam. This helps explain why the Army wants to turn German government over to civilians. Trouble is State Department hasn't trained anyone for the job either.

Leo Szilard, atomic bomb scientist, didn't know the whole story when he told Congressmen that it was the scientists who persuaded President Roosevelt to tell Secretary of State Ed Stettinius the bomb was being built. Mr. Szilard's idea was that U. S. delegates would then shape the United Nations Organization Charter, written at San Francisco, to meet the new atomic age conditions. Actually Mr. Stettinius and some of his top military advisers knew about the bomb long before the San Francisco Conference. So did Foreign Minister Anthony Eden and Clement R. Attlee, who was then Deputy Prime Minister.

Politicians get the best going over they have had in years in the new Russel Crouse-Howard Lindsay play, "State of the Union." A political boss comes on the stage after a telephone call and says, "After that, I need a drink."

Cracks the political press agent in reply, "You must have been talking to Sen. Taft."

Says a lady from Louisiana married to a Southern Republican judge, "Oh, we vote Democrat down South, but we've got a good Republican record in Congress."

Trying to explain the Hatch Act provisions which seek to prevent quiet money contributions to political campaign funds, Ralph Bellamy, as the liberal young businessman star of the play, says to his wife, Mary, played by Ruth Hussey, "Whenever human nature begins to behave like human nature, they pass a law repealing human nature."

RADIO TODAY

MONDAY, NOV. 19, 1945

WAAT	970	WE
WABC	850	WE
WBBR	1330	WH
WBNX	1380	WH
WBYN	1430	WT

6:30-6:45—"The Atomic Bomb," Maj. Gen. Leslie Groves—WABC.]

New Role Seen For Submarine In Atomic Age

NYHT 11/21
It May Become the Navy's
Most Powerful Arm, the
Bearer of Future Bombs

By Leo Cullinane

WASHINGTON, Nov. 20.—Existing and contemplated developments may give the submarine a far more important role in America's Navy than it has had in the past, it was learned today. Informed sources visualized undersea ships half again as large as present ones.

These sources foresaw submarines carrying six or more planes. They said rocket guns would be part of the armament and that they are being installed now in some submarines and the torpedo tubes removed.

They believed the atomic bomb—to be launched from the submarine or carried from the submarine by plane—was also very much in the cards.

They said the submarine of the future would be far faster and would have a far greater range. (American submarines can now easily cross the Atlantic submerged, and official sources said the range of United States submarines was between 10,000 and 12,000 miles.)

Can Attack from Afar

They said the increased range of the submarines plus the range of the planes may enable these craft to launch devastating attacks far offshore, instead of having to close in on targets as they do now.

All these things have come to

light even before the atomic bomb tests on surface warships can be carried out.

There is not much official doubt as to what an atomic bomb can do to a battleship, aircraft carrier or a fleet of warships, provided they are in close formation. There is a definite feeling in the Navy, however, that such a bomb will lose much of its effect in an underwater blast—the only kind that can really damage a submarine.

Therefore, as some authorities see it, the submarine, which played such an important part in the Pacific war in strangling the Japanese shipping lifeline, may become the most powerful single arm of the Navy in any future war, although high naval authorities still insist there will always be a "balanced fleet."

The Navy believes submarines are "ideal" for rocket use. The weird prospect of a fusillade of rockets zooming out of the water with no ship in sight was put forth in some quarters as a distinct probability. In fact, it was this probability that led Admiral H. Jonas Ingram, commander in chief of the Atlantic Fleet, to warn in the closing days of the war that Germany planned a submarine attack on the East coast.

Atomic Torpedoes

A possibility is that torpedoes which some submarines will still carry may be equipped with atomic warheads to blast an enemy harbor or some other suitable target.

A distinct advantage of a submarine launching an atomic bomb is the element of surprise. Any long-range bomber plane can be detected and perhaps shot down more than 200 miles away. But a submarine, surfacing at night near an enemy shore, or perhaps not surfacing at all, and launching an atomic bomb by rocket or small plane can achieve a complete surprise.

CONANT FOR INSPECTIONS

Harvard President Says Nations
Must Evolve Plan on Bomb

Special to THE NEW YORK TIMES.

CLEVELAND, Nov. 20.—Heavily industrialized nations soon must evolve a plan for the interchange of scientific information and a system of inspection and control of the atomic bomb, President James Bryant Conant of Harvard University said here today. He expressed his views on changes in a luncheon talk before 600 members of the Chamber of Commerce and the Harvard Club of Cleveland.

A key man in the development of atomic bombs as former director of the Office of Scientific Research and Development, Dr. Conant said he now spoke as a private citizen.

"A secret armament race in respect to atomic bombs must be avoided at all costs," he said, commending the action taken last week by President Truman and Prime

Ministers Attlee and King as "the first step" in this direction. Dr. Conant added he was an "enthusiastic supporter" of President Truman's stated policy that we are not using our present knowledge as a threat and that we wanted to see the whole matter handled through the United Nations Organization.

"I hope the whole country will rally behind the Administration in this matter," he continued. "I also hope the Administration in turn will proceed rapidly through appropriate diplomatic action to translate the words into definite deeds."

The immediate issue, he said, is to develop mutual trust between Russia and the United States. As a solution he suggested the delivery to Russia of "periodic cargoes" of our atomic bomb knowledge and also of our other industrial and engineering knowledge and skill.

He said that this delivery of scientific knowledge cargoes to Russia should not be a one-way deal.

"In turn, we would expect Russia to welcome our technical and scientific men, and with us work to set up an international agency for inspection and control of atomic energy through the United Nations," Dr. Conant said.

As a token of good-will Dr. Conant suggested that an interchange of scientists and scientific information should take place without delay.

Earlier in his talk Dr. Conant emphasized that there was no basic scientific secret behind the atomic bomb. The United States, he added, does have a vast amount of technical information and engineering work that would require a visit of several weeks in this country by several hundred technical men before it could be imparted to other nations.

RADIO TODAY

TUESDAY, NOV. 20, 1945

WAAT . 970	W
WABC 880	W
WBBR 1330	W
WBNS. 1380	W
WBYN. 1430	W

3:30-4—What's On Your Mind? Forum: "What Would You Do With the Atomic Bomb?" Dr. Leo Szilard, William L. Laurence, Rev. Dr. John S. Bonnell, Clarence Streit; Alice Pentlarge, Moderator—WQXR.

ATOM BOMB FORUM

WJT 11/20
4 Speakers to Discuss Problem Over WQXR Today

Four speakers will discuss "What Should You Do With the Atomic Bomb?" on a forum broadcast from 3:30 to 4 P. M. today over Station WQXR. The program will originate in Times Hall, 240 West Forty-fourth Street, and the speakers will be Dr. Leo Szilard, physicist of the University of Chicago; William L. Laurence, science reporter for THE NEW YORK TIMES; the Rev. Dr. John Sutherland Bonnell, pastor of the Fifth Avenue Presbyterian Church, and Clarence Streit, president of Federal Union, Inc.

Dr. Szilard worked on the atomic bomb project. Mr. Laurence was chosen by the War Department to write official releases on the project. Dr. Bonnell will consider the question from the moral viewpoint. Mr. Streit will speak on the atomic bomb's political implications. The broadcast will be the thirtieth in the series, "What's On Your Mind?" held each Tuesday.

ATOMIC BOMB IS SEEN MAKING UNITY URGENT

The invention of the atomic bomb and other horrible weapons of destruction has given a great urgency to the need for better international understanding and cooperation to the end that the menace of war may be eliminated, it was agreed yesterday by the four participants in a panel discussion on the question: "What Would You Do With the Atomic Bomb?" The program was held in Times Hall, 240 West Forty-fourth Street, and was broadcast over WQXR from 3:30 to 4 P. M.

The speakers were Dr. Leo Szilard, physicist of the University of Chicago; William L. Laurence, science reporter for THE NEW YORK TIMES; the Rev. Dr. John Sutherland Bonnell, pastor of the Fifth Avenue Presbyterian Church, and Clarence Streit, president of Federal Union, Inc.

The four speakers agreed that the atomic bomb had created a new and great danger for civilization. All agreed, also, that all nations must utilize every resource to bring about an international situation that will preserve peace. The United Nations Organization was suggested as the most practical instrument for that purpose.

Dr. Szilard said he saw no aid in "international bargaining" by making and storing a stock of atomic bombs in this country.

Mr. Laurence and Dr. Bonnell emphasized that atomic energy could be used for the benefit of mankind rather than for its destruction, just as fire and water are essentially useful though dangerous if wrongly applied. Mr. Streit thought that the bomb could help to insure peace and to lead toward an eventual world union of nations.

Truman Suggests UNO Assembly Name Atomic Safeguards Board

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 20—President Truman believes that all nations should have a voice in selecting the proposed commission to formulate safeguards against the use of atomic weapons in war, and he suggested today that its members be designated by the General Assembly of the United Nations Organization at its scheduled meeting Jan. 2.

The proposal for the commission on atomic energy control was contained in the declaration by the President and Prime Ministers Attlee of Great Britain and King of Canada, in which they agreed to share their knowledge of atomic energy release for industrial purposes as soon as the safeguards had been formulated by the commission and adopted by member nations.

Meanwhile, the President said,

this country is going ahead with the manufacture of the atomic bomb for experimental purposes and with a view to learning more about the application and control of atomic energy for peacetime industrial purposes. This explanatory clause was taken to mean that the United States was going ahead with the processing of U-235 (uranium) and plutonium, or U-239, without so much emphasis on the manufacture of the delicate and expensive bomb mechanism, but the President did not elaborate.

Mr. Truman said he was not pessimistic about the outlook for the establishment of permanent peace throughout the world and at one point referred to his conversations with the British and

Canadian Prime Ministers as the first step toward active implementation of the United Nations Organization as a force for lasting world peace.

At his regular weekly news conference Mr. Truman heard a reporter's observation that, although the world was technically at peace again, many people had the idea that there was no real peace in the world. He wondered if the President would like to say something that would be heralded by the people as "a beacon." But he was having difficulty phrasing his question and Mr. Truman asked with a chuckle what kind of beacon the reporter was talking about.

The reporter tried again, this time suggesting the President might consider "offering the people something to shoot at." When the laughter had subsided, Mr. Truman agreed to attempt a serious reply to the request and replied substantially as follows:

It isn't so much a matter of giving the people something to shoot at as it is the necessity of going ahead as rapidly as possible in the establishment of a real workable world peace, and the conference, which was held last week was a first step toward implementing the United Nations Organization as the fundamental organization through which we can get peace in the world.

It is necessary to establish confidence between the various Governments in the world in order to have that peace, and that takes a little time and an exchange of viewpoints and ideas. Every country is having exactly the same sort of trouble that we are having and every country is trying to meet its domestic troubles and not paying as much attention to international things as they will later on.

Face Greatest Age of All

The Chief Executive is not pessimistic on the final outcome. We will have permanent peace in the world. It is necessary that we have permanent peace. We are on the threshold of the greatest age in the history of mankind and must grasp that opportunity because the other road leads to utter destruction.

President Truman was told of published contentions that possession of the know-how of atomic energy was several steps removed from the knowledge of the atomic bomb and vice versa and was asked clarify the picture.

The Chief Executive replied, however, that he could not answer the request intelligently, since it required a scientist who was familiar with all the P.D.Q.'s of the equation. He was dead certain, though, of the determination of the United States, Britain and Canada that the discovery of atomic energy should be used for peacetime industrial production.

Attainment of that objective would require some time, the President added. It would necessitate a lot of research and information, but he said we will finally arrive at that stage. We will have to, he said, or there will be utter destruction.

DR. COMPTON URGES A YEAR OF TRAINING

Tells House Group That Atom
Bomb Increases the Need for
a Large Army Reserve

NYT 11/22
By ANTHONY LEVIERO

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 21—Sneak attacks by atom bombs, swarming down from the stratosphere or introduced by Trojan Horse technique, would not be decisive but an invasion following such attacks might defeat the United States if this country lacked a trained reserve, said Dr. Karl T. Compton today in urging universal military training before the House Military Affairs Committee.

The president of the Massachusetts Institute of Technology, who has taken a leading part in technological war developments, expressed the opinion that the growing role of science in war increased rather than diminished the need for a large, ready reserve.

Dr. Compton appeared as a supporter of President Truman's plan for one year of training for 18-year-olds, but other witnesses recommended variations, including a modified Swiss program, and the National Guard as the basic structure for compulsory training.

Asks Daily Pay for ROTC

Another development bearing on the controversial training issue was the introduction in Congress today of a bill authorizing payment of \$1 a day to young men and women between 18 and 24 years of age who attend accredited military schools or take ROTC courses in high schools and colleges.

The bill was drafted by Representative Wood of Georgia, whose aim is to encourage the study of military science without placing youths under compulsion.

Meanwhile, the Bureau of the Census announced there were 20,500,000 men in the military age group of 18 to 35 years. An estimate subject to revision, the figure was computed as of Oct. 31.

The Congressional committee has received estimates that 1,200,000 boys reach the age of 18 each year and that between 850,000 to 900,000 would be found fit for service under a universal program.

Seen As Aid to Jobless

Dr. Compton said universal training would "help to relieve the unemployment that apparently looms ahead during the reconversion period," and would be better than a dole. Without widespread training for an emergency, in his opinion, "we might be licked al-

most before we got started." He made this statement of his beliefs:

"Scientific research is essential to national security as well as to national prosperity. Scientific trends in warfare increase, rather than decrease, the need for universal military training as a security measure.

"The advent of the atomic bomb gives added emphasis to the need both for more scientific research and for a more adequate program of military training. I believe these actions for internal strength should accompany the most sincere international efforts to prevent wars from breaking out."

In answering those who have said the atomic bomb and other technical developments reduce the need for a large military establishment, Dr. Compton said a trained and disciplined citizenry would be "an enormous asset" if atom bombs borne by rockets or smuggled in, were used against us. He added:

"If we should suffer such an attack, the next stage would be actual invasion of our country for purposes of occupation. This, and not the bombing, would bring defeat.

"Our country is so big that we should have a chance to resist invasion even then, if we were prepared with munitions and could call to arms very quickly an ade-

quate army which did not need six months or a year's training before it could function."

The plan to base compulsory training on part-time, weekly and summer camp service in the National Guard was proposed by Omar B. Ketchum of the Veterans of Foreign Wars, though the continuous training year plan would also be acceptable to his organization. The alternative plan, he explained, was designed to meet objections of those who feel a year would be too great a gap during a youth's educational period.

Tells Views of the VFW

The VFW stood for maintenance of peace by force, if necessary, Mr. Ketchum declared. He concluded:

"And so far as the Veterans of Foreign Wars is concerned, let me assure you we are for compulsory training, whether you approve one year of continuous citizen training as recommended by the President or a home training plan as we have suggested."

In favor of the continuous-year plan was Millard Rice of the Disabled American Veterans, who told the committee the best preparation for peace is preparation for war and vice versa.

It was his opinion that the two world wars might have been

avoided if the United States had had trained manpower and if its industrial and scientific resources had been ready for immediate mobilization.

Asked what alternative he favored failing a one-year plan, Mr. Rice suggested a four-month training program.

The modified Swiss plan, with citizens trained for combat against paratroop attacks and munitions stored in handy community depots under Federal control, was suggested by Dr. Frank B. Gigliotti of the Regular Veterans Association.

Organized "Dagger" Units

A First Division veteran of World War I, he said he is a Presbyterian minister and had organized "cloak and dagger" units for the Office of Strategic Services in this war.

Dr. Gigliotti, whose organization is made up of veterans of the regular Army, Navy, Marine Corps and Coast Guard, said the Swiss plan was recommended because many letters were received by his group objecting to the one-year plan.

Basically, his system would require four months' training of men 18 to 21 years of age, after which they would be attached to reserve units for three years.

ATOMIC SCIENTISTS URGE ATTENDANCE AT CRISIS RALLY

The Assn. of Manhattan Project Scientists at Columbia University today urged all who are interested in the furtherance of world peace to attend the atomic bomb "crisis meeting" scheduled for Madison Square Garden on Dec. 4.

"The presence of speakers such as Secretary Wallace, Dr. Harold C. Urey, Dr. Julian Huxley and Sen. Tobey (R-N.H.) insures a profound discussion of the implications of the liberation of atomic energy," said Dr. Irving Kaplan, executive chairman of the association.

The meeting is sponsored by the Independent Citizens Committee of the Arts, Sciences and Professions. NYT 11/24

Eden's Talk in Commons

LONDON, Nov. 22 (AP).—An abridged text of former Foreign Secretary Anthony Eden's speech in the House of Commons today:

I had hoped the Prime Minister would tell us a little more about what steps are to be taken now to give effect to the conclusions reached in Washington. As I understand it, a really new departure at the Washington discussions was that the three powers there charged with this particular responsibility decided it was their duty to take the initiative in this matter in relation to the other nations of the world, and their initiative had been to ask that a commission of the United Nations should be set up which would, by stages it was hoped, and by agreement, deal with this subject.

Who is going to compose that commission? Presumably it would be the members of the Security Council. Are there to be any others as well? If so, who else, and have the invitations gone out? If they had not, when would they go out and who would send them? When would this commission meet? Those were the kinds of questions which we had in mind when we read the admirable basis of work agreed on in Washington.

As I understand, the commission was to proceed by stages. In view of the immense intricacy of this subject, I think that is right. As I see it, what will happen is if these invitations are accepted the United Nations commission will meet together and will first exchange this information.

If this exchange is accepted by all of them they had the first stage in the creation of international confidence and would move to the next stage, to the control of atomic energy to the extent necessary to insure its use for peaceful measures.

The other thing we would like to know is if communications have gone to other nations since the talks were completed. Have any communications gone to Russia about the outcome of the talks?

Moscow Got Text

[Attlee interposed here and said the Washington declaration was communicated to the Russian government before it was made public.]

I am much obliged. I think it was useful to get that out.

[Attlee interposed that the United Nations Organization would itself set up the commission, saying "Therefore until you have got the United Nations Organizations I cannot tell you what the composition of the commission would be. It would be a matter for the United Nations."]

Is the conception that there will be a special meeting of the United Nations Organization to set up this commission? Otherwise it may be a long time before anything will happen. I understand there is an acting chairman and his suggestion is that some one should send a communication and ask for the commission to be set up, otherwise, we may have to wait a long time before even the preliminary stages were taken.

This is what seems to be the fundamental of this problem: the truth is that by the discovery of this atomic energy, science has placed us several laps ahead of

our international political development and yet unless we can catch up politically to the point we have reached in science and thus command the power which at present threatens us, we are all going to be blown to smithereens.

Mr. Byrnes put it well when he said the civilized world cannot survive atomic war. I agree with the Prime Minister that no set of rules is going to enable us to survive a future war when this weapon is latent for use, and no safeguards by themselves are going to provide an effective guaranty. They have got to be accompanied by the acceptance of the rule of law among nations.

During this war we had thought at San Francisco to lay the foundations of a new world order. But the truth is that all the events of recent years have tended the same way: to narrow the world and bring us closer together and therefore to intensify the shocks and sharpen the reactions before the shock absorbers are ready.

Question of Sovereignty

Every succeeding scientific discovery makes greater nonsense of oldtime conceptions of sovereignty, yet it is not the least use deluding ourselves. It is yet true that national sentiment is still as strong as ever and here and there it is strengthened by this further complication—the differing conceptions of forms of government and differing conceptions of what words like freedom and democracy mean. So, despite some stirrings, the world has not been ready to abandon or to modify its old conceptions of sovereignty.

Now atomic energy has come to enforce the call for something more. The world family is smaller today than was the European family at the end of the last war. I have thought much of this business of atomic energy both before and since that bomb burst on Nagasaki, and for the life of me I have been unable to see and I am still unable to see any final solution that will make the world safe from atomic power other than we all abate our present ideas of sovereignty. We have got somehow to take the sting out of nationalism. We cannot hope to do this at once. But we ought to start working for it now, and that I submit should be the first duty of the United Nations.

We should make up our minds where we want to go. I know in this respect where I want to go. I want to go to a world where the relations between nations can be transformed in a given period of time, as the relations between England, Scotland and Wales have been transformed.

In the light of discoveries about atomic energy, I think that the San Francisco Charter should be reviewed, particularly with respect to the veto, which is an anachronism in the modern world.

An Increase of Mistrust

Nobody here will deny that there has been an increase of suspicion and mistrust recently between the Soviet Union and the other two great partners in victory, the United States and ourselves. We all deplore that, and if I make some remarks upon it I hope it will be under-

stood that those remarks are made by one who always has been convinced, and is still convinced, that the future peace of the world depends upon understanding between ourselves, the United States and Russia.

We want the fullest Russian participation in all world affairs on equal terms. Many times Russian statesmen have spoken to me and Mr. Churchill of their need for security and the anxiety they feel for friendly relations with their neighbors. We have never disputed that.

The Russians had gone very far in making arrangements with all their neighbors. Against whom are all these Russian arrangements being made? I know the answer. They have given it to us many times. They are made against a possible resurgence of German plans for domination of Europe. The Russians are not as convinced as some people that the Nazi spirit is entirely dead.

Any arrangements between us and our Western neighbors are no more aimed against Russia than are Russian arrangements with her neighbors aimed at us. I think it is desirable that that should be plainly stated, because I am convinced it is the literal truth. We know that Russian arrangements are not aimed against us. There continues to be in Britain amongst virtually all sections of the people a deep desire for friendship with Russia as close and as cordial as we have with the United States of America. But there is another unhelpful influence which militates against this and which I think should be mentioned. It is the difficulty of getting information out of Russia and out of territories controlled by the Soviet Union.

Full Freedom of Press

I would beg our Russian friends to believe that they could make no greater contribution to real understanding between our countries than to allow foreign correspondents in their territory or in territories under their control the same full freedom as is allowed Russian correspondents here. (Cheers). We have got to get to know each other and that involves freedom to speak and to comment across frontiers. Drop those barriers of censorship and you will blow away in one gust much of those black fogs of suspicion.

We have read with some concern in the press of recent disturbances in northwest Persia and of a decision by the Persian government to send troops to deal with those disturbances and a report that those troops were turned back by the Soviet authorities.

I must say that I find it impossible to reconcile such action either with the Anglo-Soviet-Persian treaty of 1942 or with the Tehran Declaration of 1943. That declaration said "the governments of the United States,

the U.S.S.R. and the United Kingdom are at one with the government of Iran in their desire for the maintenance of the independent sovereignty and territorial integrity of Iran."

From 1940, and still more in 1941 when Russia was attacked, Persia became the happy hunting ground for German agents. The moment that Russia was attacked we had need of those communications through Persia as the only alternative route to the northern convoys, the full story of whose gallantry I pray somebody will one day write as it should be written. To deal with the German agents and to prevent sabotage to the railway it was necessary to take certain military steps. We did so but we made it plain it was only to insure our supplies to Russia that we intervened in Persia and that we wished to interfere as little as we could with Persian sovereignty.

The Russian Pledge

We were most anxious not to revert to that past and pernicious policy which was called the "spheres of influence" in Persia.

In view of that, when the German war began to come to an end, we became anxious to withdraw our troops and we first raised this matter at Yalta. No decision was reached then about the withdrawal of troops, but the Russians there did affirm to us their determination to stand by the Tehran agreement. Later, at an early stage of the Potsdam conference, we raised the matter again, and our desire then was to arrange for an early withdrawal, even before the treaty obligation came into force.

The treaty obligation is to withdraw six months after the close of the Japanese war. In London, agreement was reached to withdraw by March 2.

Our task in Persia and our only task was to guard the lines of communication and supply and not to interfere in the internal affairs in Persia. Those lines of supply are no longer of any importance except for the maintenance of our troops and the Soviet troops who are there. I am afraid this incident is not the only occasion when the Soviets have refused permission to Persians to move their troops and gendarmerie about in the area under their control, and in consequence it is not very surprising that suspicions have been raised.

Two Steps for Russians

There are two steps that our Russian allies could take that would remove suspicion. They could make it plain that they have no objection to the free movement of Persian troops in their area and that they would be prepared to give those forces opportunity to move and act when they reached the area. I might also add here as else-

where the Soviet Union would greatly strengthen its case and remove suspicion and charges by inviting the press of the world to go and see for themselves what is going on in that area and allowing them freely to publish their observations.

I do think it is better in the long run for our relations with Russia, which I hope my record shows I care very deeply about, that one should thus speak frankly when the occasion arises.

I should like to ask what exactly was going on in Greece. We read that the archbishop has resigned. That is deplorable if it is true, because he had given very valued service to Greece at a very critical time, but perhaps resignations in Greece are not quite so serious as they are in this country. Maybe he will come back again.

Even more serious is the news of the postponement for two or three years of the plebiscite in respect of the constitutional future of Greece.

I am not going into the merits of my desire, if I have any, as to the outcome of the plebiscite, but what I want to say about this delay is that it does run counter to the undertakings which were given to the King by the Prime Minister and myself when he himself offered not to go back to his country until the country had voted.

Not an "Early Date"

We then said and we told the House that the idea was that the plebiscite would be held at an early date. No one in the world can think that two or three years from now can be regarded as an early date.

Regarding the report of financial assistance being conditioned in some way, perhaps he can give some information about that also.

I know the Foreign Secretary was disappointed by the breakdown of the London Conference. Despite that, it is hoped that he would persevere in his efforts to bring another meeting at which we could do better.

It is, I am sure, only through direct contacts with the Russians and other allies that suspicions can be ventilated and allayed, as they must be if the world is to have a chance to enjoy the enduring peace it deserves. Earlier, I spoke of the destructive possibilities of atomic energy, but there is another side to this stupendous discovery—the possibilities for good, though not so immediate. The world sees perhaps not so far away the chance of security, or even plenty, for all. The world must seize that chance if we are to prove worthy of those who fought and died that we might have it.

Physicist Says Science Curbs Would Hurt U.S.

Dr. Arthur Compton Urges Changes in Society to Fit Modern Conditions

HT America would weaken herself through restrictions on science. Dr. Arthur H. Compton, Nobel Prize winner in physics, said yesterday at the Hotel Pennsylvania at the annual convention of the Middle States Association of Colleges and Secondary Schools.

"One cannot control science in all sections of the world," he said. "In some sections it will move ahead . . . science is the central force in the social evolution of man. Through it we may shape society."

"People will not forego the right to think," he warned, citing historic failures to check the growth of science. The free exchange of scientific knowledge in times of peace is an advantage to all nations, Dr. Compton added.

Asks Changes in Society

Rather than attempt to restrict science, Dr. Compton suggested that men make the changes in society it demands, including increased co-operation, education and service—"the strength of society comes from drawing out all the possibilities of each individual," he said.

Dr. Compton pointed out that this is an age of specialists, whose interdependence makes co-operation essential. In education, he said, the pressure is on for more trained persons, for which the need was demonstrated by the war.

Dr. Compton called for control of weapons by the United Nations Organization, but added that some interim control of atomic energy must be provided by Congress to avoid its use by "malevolent groups."

George Vernon Denny jr., president of The Town Hall, Inc., said: "Every institution that calls itself educational must open its doors to men and women from eighteen to eighty. . . . It is up to education to go out in the market and bring knowledge to people."

Education Editor Speaks

William G. Avirett, education editor of The New York Herald Tribune, pointed out that only one student in every four goes on to college from high school. "The main job of high schools must be to supply a terminal, not a preparatory education," he said.

Officers elected for 1945-'46 were: president, George A. Walton, headmaster of George School, Pa.; vice-president, Margaret T. Corwin, dean of New Jersey College for Women; secretary, Karl G. Miller, dean of the University of Pennsylvania, and, treasurer, Burton P. Fowler, headmaster of Germantown Friends School, Philadelphia. Groups affiliated with the association will meet today at the hotel.

TODAY and TOMORROW

By WALTER LIPPMANN

HT Sovereignty and the Atomic Bomb 11/24

SPEAKING in the House of Commons on Thursday, Mr. Eden said that he was "unable to see any final solution that will make the world safe from atomic power other than that we all abate our present ideas of sovereignty." All will agree that any plan to outlaw, regulate, control, inspect, must involve some modification of the idea that within its territory each national state is the supreme authority. The question is how this abatement of sovereignty should be worked out.

Students of government, and particularly of our own constitutional history, will recognize that this is a question about which a great deal is already known. We must use what we know if we are to find out what we do not yet know but need to know. The scientists who developed the atomic bomb did not start from scratch; they drew upon the vast store of scientific knowledge accumulated over generations. In developing the political control of the atomic bomb, we too can go forward into the unknown only by starting from what is known.

There are now two main schools of thought as to how to modify national sovereignty in order to control atomic energy. The one, to which Mr. Eden belongs, holds that the national states should renounce their veto under the San Francisco charter, agreeing to be bound by the decisions and judgments of a majority of other national states. The other school, which seems to me the wiser, is seeking ways to make the rules regulating the production and use of atomic energy binding upon individuals.

I believe it can be demonstrated that this is the true principle by which sovereignty can be, as Mr. Eden puts it, abated.

A writer who conducts a column in a New York newspaper seems to be under the impression that while this second line, which I argued for in a recent article, "sounds persuasive," it is really a half-baked notion which would not stand examination by "authorities on international law." The matter is much too important to be brushed off in this fashion, and so I am venturing to remind him and the authorities on international law whom he has consulted of certain political truths which they ought to remember but appear to have forgotten.

These truths are stated most clearly in the "Federalist" paper, No. 15, which is attributed to Alexander Hamilton, though there can be no doubt that Madison and Jay, and indeed all the founding fathers held the same view. Nothing that has been said in our contemporary discussion of the atomic bomb, of the San Francisco charter, and of the Truman-Attlee-King proposals, poses the real issue so clearly.

It is this: "If we still adhere to the design . . . of a superintending power, under the direction of a common council, we must solve to incorporate into our plan those ingredients which may be considered as forming the characteristic difference between a league and a government; we must extend the authority of the union to the persons of the citizens—the only proper objects of government." Without a firm grasp of this proposition, without a clear understanding of the difference between a league and a government, the discussion of national sovereignty and atomic energy, is bound to be confused and abortive.

Mr. Eden's own proposal is an illustration. He is trying to make a league of sovereign states behave as if it were a world government. All history proves that this is impossible. Mr. Eden's plan is to give a majority of states the right to coerce a minority of states. On this proposal George Mason, of Virginia, had this to say in the Philadelphia convention a hundred and fifty years ago: "punish-

ment could not in the nature of things be executed on the states collectively, and therefore that such a government was necessary as could directly operate on individuals, and would punish those only whose guilt required it." James Madison, speaking on the same question, said that "the use of force against a state would look more like a declaration of war than an infliction of punishment, and would probably be considered by the party attacked as a dissolution of all previous compacts by which it might be bound."

This is, I submit, very high authority, and the truth that government begins when it operates on individuals, is as well tested and as fundamental a principle as any which exists in the whole field of law and statecraft.

If we are serious about controlling atomic energy, and about instituting an authority which shall for that purpose be superior to the national sovereignties, then we cannot ignore this principle, or brush it aside as novel, interesting perhaps, but amateurish. There is no other way to abate national sovereignty except to bring individual persons within the jurisdiction of a supra-national authority. Anything else than that leaves national sovereignty intact, and all international law, so-called, subordinate to, not superior to, the national state.

I hold, therefore, that in setting up rules about atomic energy, the first step to take is to declare them binding upon individuals. If that is done, then no government will have any longer the legal right to order a citizen to violate the rules, or to protect him if he violates them. There will be no defense, as there is not in the Nuernberg trial, that the crimes were done by order of the national state, which is sovereign, and that the violator, if apprehended, is therefore immune.

Obviously, there will still remain the grave difficulty of catching and arresting the violators of the laws about atomic energy. If the violators were protected by a great power, it would require a great war in order to arrest them. But that is equally the case under Mr. Eden's plan, or any other system of "collective security."

The great advantage of making a violation an individual crime is that the violation of the law by a state planning aggression will then be much more difficult. Every scientist, engineer, staff officer and official who participates in the violation will be on notice that, if caught, he will have no immunity. That is an impressive risk, which would exist for each one of them not only in the event that his country was defeated but also during the period when his government was preparing for aggression.

Furthermore, the fact that the crime had been made personal would mean that the opposition in any country, the individual scientists or public men who wished to prevent atomic war, could count upon a high degree of protection from the law-abiding states. It would be difficult to punish them for refusing to break the law: if their own government sought to coerce them, their case could at once be brought before the United Nations Organization.

How would the aggressor state defend itself if it were punishing one of its citizens for refusing to violate the international law? Would not such coercion of its own citizens be prima facie evidence that it was conspiring against the peace of the world?

Much more can be said about the efficiency of this great principle than can be said in a few articles. But perhaps enough has been said to indicate its relevance and its importance to the momentous inquiry in which the whole civilized world is now engaged.

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'Keep Bomb Until War Is Outlawed'

NY Post 11-30-45

America must keep the secret of the atomic bomb to provide time in which to work to abolish the causes of war, according to Dr. I. Rabi, 1944 Nobel Prize winner in physics and atomic bomb consultant.

Dr. Rabi, who witnessed the trial atomic bomb explosion in New Mexico, told a Waldorf-Astoria dinner of the New York Psychoanalytic Society, last night that we have "two or three years at least" before other nations discover the secret.

We must utilize that time to take effective steps to outlaw war, he said, adding:

"A chill of foreboding struck all of us who saw and felt the first bomb go off in New Mexico. If we could arrange to have the statesmen have that experience, we would be a long way toward solving the problem."

Sees 25-Year Respite

The world "may be able to purchase 25 or 50 years of precarious respite from doom by adequately arming an international police," Maj. Gen. G. Block Chisholm, Canada's Deputy Minister of Health, said in a message to the meeting. "But then comes the ultimate test. Can we by that time have become mature enough to survive?"

The dinner launched a drive for \$200,000 to expand clinical service and psychiatric and psychoanalytic training by the Society.

Partial Text of Attlee Speech

LONDON, Nov. 22 (AP).—An abridged text of Prime Minister Attlee's speech in the House of Commons today on foreign affairs:

Toward the end of September last, I made known to the President of the United States my views on the vital importance to the world of the discovery of atomic energy and that its application to warfare made it essential that those in a responsible position should consider the problems to which it had given rise, and the implications which the emergence of this weapon has on the endeavors we are all making to banish war from the world.

In conveying to him the tentative conclusion to which the government had arrived, I suggested a personal discussion might follow, and in October I received an invitation from President Truman to visit Washington to discuss the whole matter with him and the Prime Minister of Canada.

The Prime Minister of Canada had been over here on a visit and I had the advantage of exchanging views with him. . . .

Met With U. S. Officials

During my stay in Washington I was most kindly entertained and had numerous opportunities of meeting members of the Cabinet, with Senators, Congressmen and other leading figures in the political world. From the day of my arrival, we had constant meetings and talks, most of them taking place at the White House, and we had one long fruitful and pleasant talk on a yacht in the River Potomac.

While the principal subject of our talk concerned the problem we had met to consider, I naturally discussed with the President, Mr. Byrnes and others, matters of common interest and found, as always, a friendly co-operative attitude.

I had the honor of addressing a joint session of Congress and I paid tribute, as I felt sure the House would have wished me to do, to the unsurpassed war effort of the United States of America.

I also told them that I had come with the united good wishes of Britain for the tasks which lay ahead. I am quite sure in the United States of America it is fully realized that there is no difference of opinion in this House about their desire for the utmost co-operation in world affairs with the great republic across the Atlantic. . . .

I should like to say something, first of all, with regard to the approach I made to this ques-

tion of atomic energy as applied to war. In my view it is impossible to isolate the problem of the atomic bomb from that of the use of other destructive weapons.

There was a time when wars were locally fought out with weapons which to us seem extraordinarily primitive, and in those days the losses and destruction caused by war could often be made up in a few years and, great as was the misery caused, the thing was measurable. Sometimes, even, the losses were slight. Men in authority might count the cost of war as worth while for the advantages, though those advantages seem to us today sometimes almost trifling.

Such an attitude to war is to us impossible. We have seen two world conflagrations and we know the cost, or some of the cost, in human suffering and the destruction of the work of generations of men.

The obliteration of great cities which took place in the last war as a result of shelling and bombing was bad enough. We know too well what the effect of bombing was in London, Coventry, Plymouth and other cities, but any one who has seen Aachen or Stalingrad or Warsaw knows how infinitely greater are the ruins of the continent of Europe.

It was with that object in their minds that the representatives of the nations met at San Francisco, but since then we have had the atomic bomb. Two only were dropped on Japan, but in each instance a large part of a great city and its inhabitants were wiped out. The atom bomb is the latest word in destructiveness, but it may not be the last.

Dangers of a New War

It brought home, as nothing else has done, that if civilization is to survive there must be no repetition of the first and second world wars.

Therefore, when I spoke in the Mansion House [at London on Nov. 9] and in all my discussions, I have considered not just the elimination of the atom bomb from the armory of the nations, but what kind of a world order was necessary in an epoch in which science had placed in man's hands such horrible weapons.

I emphasize this because there have been attempts in the past to eliminate certain weapons and certain methods of warfare, and there have been some successes in the past.

There have been wars in which the Geneva convention has been

pretty fairly observed on both sides but, broadly speaking, the attempt to abandon certain weapons has failed.

Gas was banned before the war of 1914-'18, but it was used and I have no doubt that, had the Nazis thought it worth while, they would have used it again. The bombing of open cities once filled the world with horror but it had become an everyday experience of the citizens of London during this war.

No Queensberry Rules

I do not believe that in a warring world except to a very limited extent, there can be a set of Queensberry rules.

I think an attempt on those lines is as futile as the attempt of the knightly conclave at the close of the middle ages to ban that unsporting weapon—gunpowder. We can make up our minds if the world again lapses into war on a scale comparable with that from which we have just emerged, every weapon will be used and we can confidently expect that full-scale atomic warfare will result in the destruction of great cities, the deaths of millions and the setting back of civilization to an unimaginable extent.

That was expressed in a section of the joint declaration which stated the only complete protection for the civilized world from the destructive use of scientific knowledge lies in the prevention of war.

No system of safeguards which can be devised will, of itself, (I emphasize those words), provide an effective guaranty against the production of atomic weapons by a nation bent on aggression.

Role of the U. N. O.

The declaration further says "every nation will realize the overwhelming need to maintain the rule of law among the nations and to banish the scourge of war from the earth."

We have in prospect the meeting of the United Nations Organization.

There is the instrument which, if all the nations resolve to use it, can establish the rule of law and prevent war.

I say "resolve to use it" because, to me, here is the essence of the problem.

Just as no system of inspection or control of weapons will work without good will, so no international organization, however carefully framed, will be of any value unless the nations resolve to lay aside war or the threat of war as instruments of policy, unless they are determined to establish between themselves such mutual confidence that war is unthinkable.

While this is the only real solution, no safeguard having any chance of success should be

overlooked or ignored. I say mutual confidence is needed, but it is well to remember that over great areas of the earth's surface this confidence is already established. War between Britain and any one of the dominions is unthinkable. War between Britain or Canada or any one of the states of the United States of America is unthinkable. It is the task of statesmen to spread that confidence throughout the whole world. The declaration made at Washington was made with this object of increasing confidence in order that we may press on with the great task of ridding the world of the fear of war.

Accomplishments So Far

What have we actually done? We the three countries concerned in the discovery and development of atomic energy—the countries which possess the knowledge—have already made available to the world the basic scientific information essential for its development for peaceful purposes.

We declare our willingness to extend the fundamental knowledge and arrange the interchange of essential knowledge with any nation that will fully reciprocate.

We cannot tell what other scientific discoveries may be made and may be used for the purposes of warfare.

Therefore, we ask of nations that they should be prepared to do what we have done and what we are prepared to do.

I now turn to the disclosure of the detailed information concerning the industrial application of atomic energy.

Atomic energy has already been used for destruction. Its development for peaceful purposes for helping instead of destroying the human race is not likely to be attained for many years.

In the first place, this knowledge cannot be given in a formula or in a blueprint. It can only be done by scientists and technicians being taken to the plant and explaining everything in detail involving these processes and specialized knowledge, which is only in possession of a number of men. That is a matter which would take a long time and to do this for all nations would clearly be a matter of very great difficulty and I can see no reason for singling out particular nations.

Safeguards Desirable

Secondly, this discovery can be used either for peace or war. Can it be wise when the United Nations Organization is only just born and not out of its cradle to broadcast to the world methods of making such a destructive weapon? In our view this

must await the growth of confidence and the development of safeguards.

It may be said, what safeguard are of any use? I would ask the House to note the words "by itself" and the words "nations bent on aggression" in section three of the joint declaration.

Where there is not mutual confidence no system will be effective, but where it exists there will be no difficulty. For instance, there is no difficulty between Britain, Canada and the United States. We trust each other and are able to have full, free and frank discussions.

We are working on plans for future co-operation between us in this field and we wish to establish in all nations just such confidence.

It is to be remembered that, although the processes for producing atomic energy are complicated, the product itself is a small thing and the weight of the bomb on Hiroshima was not great. Clearly there must be the most sedulous care taken to control this most dangerous substance.

[Attlee then said that the House would have seen the duties which it was proposed to intrust to the commission.]

It will be remembered that the United Nations organization was set up for the prevention of war and the establishment of the rule of law.

Wants Commission to Act

It is therefore natural to intrust this weapon to the commission which would make recommendations to the organization.

[Here he stressed the importance of the provision that the work of the commission should proceed by stages, which he said emphasized the need for specific action to be based on confidence.]

There is not only atomic energy to be dealt with, but all weapons adaptable for mass destruction. Not one of these weapons had any legitimate place in the armaments necessary for a country's internal security or the protecting of a government against lawlessness.

They are weapons of total warfare designed for mass destruction and we must banish total war from the world if civilization is to continue.

Here is our declaration, and I hope there will be world-wide response to its principles.

The next step will lie with the United Nations organization when the matter is brought before it. It is a matter which cannot be solved by Britain, Canada and the United States of America; it would have been a disservice to the cause we had at heart if we had tried to do so. We have set out our views and pointed out the immediate steps necessary.

This is a world question and for its solution we need not merely co-operation of governments but the will and faith of the people. They have been through so many horrors that perhaps it is difficult for most people to grasp the vista of still greater devastation that is stretched before them unless men could so order their affairs to alter it.

The atomic bomb is here present in the world itself, not something to be noted or a newspaper sensation to be read about; it is a danger that is hung over every one of them—all the people of the world.

The United Nations Organization is here present in the world. It was born almost at the same time as the atomic bomb but it is not something vaguely here, something outside the range of national life; it is the hope of the world and full of immense possibilities. I want men and women in this country and in the world to feel the most vivid personal concern in the success of the United Nations Organization. Unless they applied to a solution of these problems a moral enthusiasm as great as scientists brought to their research work, then our civilization built up over so many centuries would surely perish.

FIVE CYCLOTRONS WRECKED IN JAPAN

U. S. Army Forces in Surprise Raids on Laboratories That Have Atom Equipment

By LINDESAY PARROTT

By Wireless to THE NEW YORK TIMES.

TOKYO, Nov. 23—United States Marines today seized and began to destroy three large cyclotrons in various parts of Japan with which Japanese scientists, before and during the war, had experimented with atomic energy and may have been on the trail of the atomic bomb. The atomic plants, which were at Tokyo, Osaka and Kyoto, had been known to the United States occupation forces for some time and had been under guard pending a decision from higher Headquarters as to what disposition should be made of them.

Today, under orders to destroy them, engineers and ordnance men from Lieut. Gen. Robert L. Eichelberger's Eighth Army here and General Walter Krueger's Sixth Army in Southern Japan, moved into the plants armed with welding torches, explosives and other equipment and began to take the machines apart. Parts of them will then be loaded on barges, taken out to sea and sunk.

The action taken is in line with the Allied directive that Japan's war potential must be destroyed, even though the cyclotrons under peaceful control might have contributed to the progress of Japanese science. They might, for example, produce radioactive substances for the treatment of disease.

Bulky and Obsolete

Besides the three major machines destroyed, the American troops began the dismantling of two other much smaller experimental units belonging to Dr. Yoshio Nishina, principal Japanese exponent of atomic energy. It was announced that the machines, at least one of which came from the United States, were too bulky and too obsolete to be worth removing from Japan and the Headquarters announcement said:

"With the destruction of these machines Japan's potential for atomic research will have been substantially destroyed."

The largest of the machines involved was found in the Laboratory of Physical and Chemical Research in Tokyo. It was sold to Japan by the United States before the war and is virtually the twin of the cyclotron designed by Dr. Ernest O. Lawrence, which is in the radiation laboratory of the University of California at Berkeley.

Weighing 220 tons, it can develop bombardment particles traveling with the energy of 16,000,000 volts. This machine went to Japan about 1938—a year before Dr. Lawrence won the Nobel Prize for physics for his achievements in the atomic field—and its presence here has been known to American scientists ever since.

American investigation teams learned, however, that it had been little used since the outbreak of the war. Apparently the army general staff had little faith in the power of atomic energy to assist the empire's war effort. Dr. Nishina was quoted as having said that during the war he had difficulty in getting materials for experiment from Japanese Army sources.

Some Parts Being Saved

While American Army experts examined the Japanese equipment and marked some of it for destruction, other sections were set aside for eventual peaceful uses. Thus, though the atomic chambers of the five machines were being broken up, such parts as large electromagnets and electric motors will be saved, it was announced. Possibly later they will be given to scientific institutes in the Far East in line with the announced policy of supplying such organizations with equipment to replace what the Japanese invading armies destroyed.

According to Maj. Joseph A. O'Hearn of Cambridge, Mass., General MacArthur's personal representative in overseeing the destruction, these cyclotrons had a definite war potential. The uses

to which they had been put during the war, however, are still obscure.

According to the headquarters announcement, the machines that are being destroyed range from a small home-made unit once used for demonstration purposes in Japanese higher schools to the 200-ton monster imported from the United States. Two of the five are at Osaka Imperial University, one is in Kyoto University and two are in the Nishina Laboratory in Tokyo—including the large one.

Raid Plan Kept Secret

American occupation troops some time ago seized all records relating to the use of the atomic mechanisms, but the Japanese Government was kept in ignorance until just before the raids of the fact that the machines would be destroyed. So late was the information withheld from the Japanese that it is questionable if anyone knew what was about to happen to the cyclotrons until the troops, with cutting torches and demolition charges, arrived on the scene.

According to the headquarters account, the Japanese first began to experiment with atomic energy in 1935, when Dr. Nishina began the construction of a small cyclotron using a twenty-three-ton magnet brought from the United States. A financial grant from the Japan Society for the Promotion of Scientific Research enabled the Japanese in 1937 to place an order for Dr. Lawrence's machine, which was knocked down and shipped to Japan in parts and established in Tokyo in 1938.

No Important Progress

An examination of Japanese records made by Dr. Monroe E. Spaght, a member of the strategic bombing survey, showed that the Japanese had been working along the lines of the atomic bomb, but had made no important progress. Dr. Nishina, when interviewed by Allied questioners, said that he was unable to interest the Japanese Army in atomic experiments. None of the machines was in working shape when first discovered by the Allies. The two at Osaka Imperial University were partially dismantled. The further single cyclotron found at Kyoto under the charge of Professor Bunsaku Arakatsu, head of the physics department of Kyoto University, likewise was partly dismantled.

Japanese scientists told the American investigators that Japanese work in atomic research went well until the war cut them off from foreign sources of information.

Major O'Hearn told correspondents that any of the Japanese machines might have been used to extract uranium 235—the raw material of the atomic bomb—from uranium and therefore constituted a war potential. However, Professor Seishi Kikuchi, head of the physics department at Osaka University, reported differently. He said that intensive work on the mass separation of unstable elements had been considered by the Japanese up to 1941 and then it was decided to be useless, "because other nations were far ahead and Japan had no substantial deposits of uranium."

U. S. Crews Wreck 5 Cyclotrons In Japan, Ending Atom Menace

By Frank Kelley

By Wireless to the Herald Tribune
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TOKYO, Nov. 23.—American engineers, armed with rifles, acetylene torches, sledges and crowbars, smashed today five cyclotrons and related equipment used for atomic-energy research in three Japanese cities. This action destroyed everything in Japan, except the minds of the scientists, which might some day go to make an atomic bomb.

Under direct orders from General Douglas MacArthur, who had previously banned all atomic research in Japan, American scientists and troops began at 10 a. m. the work of destruction in laboratories in Tokyo, Osaka and Kyoto, of the limited Japanese progress on the most terrible of all weapons.

By nightfall, according to Major Joseph A. O'Hearn, of Cambridge, Mass., Japan's potential for atomic research will have been substan-

tially reduced. Major O'Hearn is head of the industrial division of the economy and scientific section of Allied headquarters and is MacArthur's personal representative for the seizure and destruction of atomic machines.

O'Hearn supervised at Nishina Laboratory in Tokyo's Institute of Physical and Chemical Research the cutting up of a 200-ton American-built cyclotron, which will be loaded in pieces on to a barge, towed out to sea and dumped to the ocean floor, which may also receive the hulls of Japanese warships marked for destruction through atomic-bomb experiments.

A smaller cyclotron at Nishina Laboratory was wrecked by experts from Lieutenant General Robert L. Eichelberger's 8th Army, while troops from General Walter Krueger's 6th Army destroyed two machines—one of them a small home-

made unit once used in a high school—and a larger cyclotron in the Imperial University laboratory, Osaka, and a fifth cyclotron in Kyoto Imperial University.

The small machines at Osaka and Kyoto are being dismantled and removed to a clearing, where they will be blown up, after which the remaining scrap will be sunk at sea. At Nishina Laboratory, Tokyo, the larger machines were too bulky for demolition by explosives and were to be cut apart first with torches before removal for casting into the sea.

The three laboratories have been occupied since Tuesday by scientists and troops who had impounded all records of Japanese research into atomic energy—research that virtually had been abandoned at the outset of the war by a short-sighted government which concluded that an atomic bomb could be developed but that it was not worth the expense. At the time of Pearl Harbor, the Japanese were at least four to five years behind American scientists in progress toward the manufacture of the atomic bomb.

Not until 8:30 a. m. today were the Japanese government and Japanese scientists at the laboratories informed that the machines, which have been used for the last three years for limited experiments in nuclear physics, were to be destroyed at the stroke of 10 a. m. in three cities.

American engineering teams arrived at the laboratories and went to work. Bulldozers hacked a path to the Nishina Laboratory to facilitate removal of massive electromagnets which are the parts of the machines that were considered by American scientists as the most important in any hope which Japan might have possessed for an atomic future.

Started Work in 1935

These machines were used in experiments carried on by Japan's leading nuclear physicist, Dr. Yoshio Nishina, and his staff, who watched with dismay as their playthings were destroyed.

Nishina and his associates began construction of a small cyclotron

in 1935. Using a twenty-three-ton electromagnet which once was part of a generator for Japanese wireless communication with the United States, Nishina and his aids completed this cyclotron in 1937. It proved inadequate and they cast about for a larger machine.

Later in the same year they received a financial grant from a Japanese society for the promotion of scientific research. Those were the days when Americans were selling scrap steel, oil and other war materials to Japan while preaching against war and exhorting the Japanese to respect treaty rights in China.

Through the assistance of Professor Ernest O. Lawrence, of the University of California, originator of the cyclotron and one of the pioneers in the development of the atomic bombs that burned Hiroshima and Nagasaki to a crisp, the Japanese purchased in the United States a duplicate of a 210-ton magnet which composed the main part of a cyclotron in the radiation laboratory at the University of California.

Shipped From U. S.

The unit was shipped, knocked down, from the United States and erected in Tokyo in June, 1938. Some other parts were manufactured by the Japanese from Lawrence's design.

The big machine in Nishina Laboratory was always under the direction of Nishina, who was graduated from the University of Tokyo in 1918 and immediately entered the Institute of Physical and Chemical Research. He went abroad in 1921, studying nuclear physics at Cambridge in 1921 and 1922 and later going to Germany. He remained in Germany only a few months, however, because he was unable to live through the wild inflation of the mark, and proceeded to Copenhagen. Later he studied in Hamburg.

In all his travels he met Americans interested in theoretical and

nuclear physics. Returning to Japan in 1928, via the United States, he met and conferred with many leading American scientists.

When 8th Army troops moved into Tokyo, the first examination of Japanese cyclotrons and records was made by Dr. Monroe E. Spaght, member of the United States Strategic Bombing Survey, who said the Japanese had made no important progress toward working out the principles of the atomic bomb.

Seizure of the Nishina plant and equipment was made by 1st Cavalry Division guards under Lieutenant Colonel Henry C. Cooper, supply chief of the 8th Army. The work of removing and destroying equipment is being done by engineer and ordnance troops under Major F. P. Kolsch, of the 8th Army Engineers.

At Kyoto, the records and equipment were seized by guards from the 136th Infantry Regiment of the 33d Division, led by Lieutenant Colonel A. T. Sauser, of St. Paul, executive officer of the regiment.

Records and machinery examined by Lieutenant Colonel John Drake, of the Australian scientific mission to general headquarters, showed that the building of a small cyclotron at Kyoto was undertaken in 1934. Drake estimated that it would have taken another year to get it into operation.

In charge of it was Professor Bunsaku Arakatsu, head of the physics department of Kyoto Imperial University, who studied at Cambridge and Zurich and who said he had not been able to obtain a chain reaction in splitting the atom.



DR. LEO SZILARD

Let's Share Atomic Energy

By OLIVER PILAT

Like a coral reef, which is built up gradually from the bodies of millions of tiny organisms, science depends on the contributions of many scientists, each working in his own sphere.

No greater compliment could be paid to Dr. Leo Szilard than to say of him, as chairman of a Congressional committee gathering on atomic energy did say recently, that without his contributions there would be no atomic bomb.

In February, 1939, when the Hahn fission of uranium was discovered, Szilard immediately borrowed \$2,000, rented a gram of radium and brought over to the U. S. apparatus he had previously constructed in England.

Together with Dr. Walter Zinn, then attached to City College in New York, Szilard went to work on the 7th floor of the Physics Laboratory at Columbia University. Three days later the pair discovered that neutrons were emitted from fission.

Experiments Pointed to the Atomic Bomb

In the basement of the same building, Dr. Enrico Fermi and Dr. Herbert Anderson were sweating over a different experiment with a similar purpose. In Paris, their work was being paralleled by Dr. Joliot.

All three experiments pointed to an atomic bomb. "What a terrible thing for the world," exclaimed Szilard. He still thinks that way.

As a violent anti-Nazi, Szilard's first concern was to keep the secret from the Germans. U. S. scientists made a voluntary agreement to publish no facts about the discovery. British scientists went along. But Joliot, through a misunderstanding, published his conclusions in France. The atomic race had begun.

How They Reached President Roosevelt

Szilard traveled to Princeton to confer with Dr. E. P. Wigner, a close friend, and Dr. Albert Einstein, the discoverer of relativity.

Closeup

November 24, 1945

Three decades before, Einstein had worked out the mathematical formula between matter and energy which Hahn utilized finally to achieve nuclear fission.

Somebody had to approach President Roosevelt, the three men agreed. Szilard and Wigner suggested Einstein. Einstein declined, but was willing to write a letter.

The upshot of the conference was that another friend of Szilard, Dr. Alexander Sachs, then economic adviser for the Lehman Corp., took the Einstein letter to President Roosevelt, who agreed to start an atomic bomb project.

Properly enough, the first contribution of the government went to Columbia University, with Szilard and Fermi in charge. Later work shifted to Chicago University. Szilard shifted, too. It was at Chicago that the first chain reaction essential for the production of plutonium was achieved, in December 1942, a year after the U. S. got into the war.

When the war ended to the cosmic echo of pulverized Hiroshima and Nagasaki, Szilard and his fellow atomic-bomb scientists had strong views on the way the discovery should be handled.

Became U. S. Citizen Two Years Ago

They were not consulted. Finally they took their case to the public and to Congress.

At each of several gatherings of legislators Szilard was lead-off spokesman for the hitherto silent workmen of the laboratories.

The Smyth report, blueprint of an onrushing atomic age, mentions that the five scientists most responsible for U. S. development

of the bomb were all foreign-born. Szilard is one; a native of Budapest, Hungary, he did not become an American citizen until 1943.

Born 47 years ago, Leo Szilard wanted to be an engineer like his father. He switched to physics after studying in Berlin, where Einstein and other had built up a world-famous research center.

When Germany began to go totalitarian Szilard moved to England. When Chamberlain and his umbrella went to Munich he left England for the U. S.

Leo Szilard is a somewhat rotund man of five feet six, weighing 170 pounds. "I am satisfied I could reduce if I wanted to eat less," he says, "but I have never put it to a test."

He is not the sort of man to travel to the other end of town to try a good restaurant. When working he can skip lunch and dinner, can even go without sleep.

Known for his violent opposition to any sort of military control of atomic energy, Szilard says he has no hobbies—"except possibly baiting brass hats." He is a veteran, having served in the Austrian army during the first world war.

Leo Szilard is emphatic in his belief that the so-called secret of atomic energy must be shared with the world to permit any chance of survival.

"When I was a boy of 10" he says, "I read a novel called 'The Tragedy of Man' by Madach, which influenced my whole life.

"In that book the devil shows Adam the history of mankind, with the sun dying down. Only Eskimos are left and they worry chiefly because there are too many eskimos and too few seals.

"The thought is that there remains a rather narrow margin of hope after you have made your prophecy and it is pessimistic. That is exactly the situation in regard to the atomic bomb. We must concentrate on that narrow margin of hope."

NYP 11/24

Limited Use of Nuclear Power Is Seen Within Ten Years by Leading Atomic Scientists

NYT

By WALDEMAR KAEMPFERT

11/25

In his official report on the atomic bomb Prof. Harry D. Smyth states that in the fall of 1944 the possible uses of nuclear energy in industry were considered by a technical committee. "While there was general agreement that a great industry might eventually arise, comparable, perhaps, with the electronic industry," says Professor Smyth, "there was disagreement as to how rapidly such an industry would grow." At any rate, the committee concluded, in Professor Smyth's words, that "there is no immediate prospect of running cars with nuclear power or lighting houses with radioactive lamps, although there is a good probability that nuclear power for special purposes could be developed within ten years."

Scientists and engineers are already considering these short-term possibilities. Recently Prof. Arthur H. Compton, who had much to do with the development of the bomb, and Prof. Clark Goodman of the Massachusetts Institute of Technology (he spoke on the subject to the recent convention of the American Petroleum Institute), indicated what we may expect within Professor Smyth's ten years.

Compton says we have not yet built an atomic power plant that is generating electrical power because we were engaged in winning a war. Besides, there was no serious shortage of electrical power. But Compton points out that before our present electrical plants will have atomic competitors much engineering research is necessary.

To obtain explosive material for a bomb a pile of graphite and uranium metal must be built up. In this pile neutrons bombard uranium-235 (about 0.7 per cent of the total uranium mass). More neutrons fly out of U-235 and are captured by U-238, of which the pile is chiefly composed. In this way U-238 is changed to a totally new element, unknown on the earth and called neptunium. By radiating bits of itself away this neptunium, highly radioactive and short-lived (2.3 days), converts itself into plutonium. Either U-235 or plutonium is a suitable material for use in a bomb.

Water Is Radioactive

While the neutrons are doing their work the pile of uranium is a fireless furnace. It must be shielded and hermetically sealed. No one dares to approach it because of powerful radiations. Heat is a by-product. At Oakridge, Tenn., it is carried away by air and at Hanford, Wash., by vast quantities of water. Both the air and water become radioactive, and the water remains so for weeks.

The obvious method of generating power by splitting atoms is to use this wasted heat. It could raise steam to drive a turbine. What engineers call a "heat exchanger" would be required—a familiar apparatus. After the steam leaves the heat exchanger all machinery would be the same, but the introduction of waste heat into the exchanger would have to be safeguarded, Compton points out.

In fact, the radiations are the most penetrating known. A plant designed to deliver no more than 100 horsepower would emit rays far more intense than those from a large supply of radium or a giant X-ray tube. Hence they must be stopped by a shield of steel two or three feet thick. Compton concludes that atomic power units will have to weigh at least fifty tons. "Driving motor cars and airplanes of ordinary size by atomic power must thus be counted out," he decides.

Fuel Consumption Low

Among the advantages of an atomic power plant Compton mentions extraordinarily low fuel consumption and consequently low cost of fuel, wide flexibility, easy control of the rate at which power is developed and the complete absence of smoke. If the uranium "fuel" could be completely consumed (something that has not yet been achieved even in the bomb), a pound of uranium would be the equivalent of over a thousand tons of coal.

Before the war uranium oxide cost roughly \$3 a pound and coal \$3 a ton. Compton concludes that "if only one part in a thousand of uranium's available energy were used power should not cost much." But uranium must be

purified and fabricated in metallic form into the desired bricks or rods. For certain types of power plants, says Compton, a considerable amount of U-235 would be required. Even if the cost is thus increased, a power plant should still be efficient and economical, despite the heavy outlay for engineering research. "Within ten years it is not unlikely that the power companies designing new plants for city service will be considering favorably the use of uranium instead of coal for purely economic reasons," Compton predicts.

Professor Goodman was just as optimistic. Can atomic power compete with oil and coal? "Too many unknowns are involved to allow other than speculation," he answers, "but in all likelihood the answer will not be clear-cut." Like Compton, he thinks that natural uranium can compete with coal and oil in generating electric power. Refueling would be infrequent. Moreover, atomic "fuel" would be non-inflammable.

If atomic power should come, thinks Goodman, "petroleum and coal probably will continue for at least another generation as the primary energy sources for transportation and heating." But more attention will be paid to extracting the chemical values in coal and oil, which means that neither will be burned recklessly as at present.

Radio Roundup

Call Atom Scientists

"Strange New Pressure Group"

"You Make the News" (WOR, Thurs., 10), dramatized news of the week organized around a central theme, last night reported some of the men and ideas "On Trial" throughout the world; the Nuremberg trials, the General Motors strike, the Ezra Pound case, the Pearl Harbor investigation. The program is presented by Newsweek. It spoke respectfully last night of the "strange new pressure group" in Washington, the Federation of Atomic Scientists: "Without playing any of the usual political games they have made their weight felt in Washington. With all its powerful Army backing, the May-Johnson bill which provides for almost dictatorial control over atomic research has been stymied..."

"It took Newsweek about five hours to persuade one group in town last week to pose for pictures," the magazine's air voice continued. "But they finally agreed and the spokesman introduced his friends: 'This is Dr. Schwartz of Columbia. You probably know his thesis on *Angular Distribution of Alphas for Lithium* and John Trischka of Los Alamos, who wrote *Fin Structure in X-Ray K-Absorption Edges of Potassium Chloride*..."

"This was the strangest pressure group ever to hit Washington, a pressure group determined to steer clear of other pressure groups, unafraid of adverse com-

NYT 11-30

GROVES SEES PERILS IN ATOM INSPECTION

General Tells Senate Group Opening of Borders Might Invade Sanctity of Homes

NYT

11/29

By ANTHONY LEVIERO

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 28—The man who controlled the development of the atomic bomb, Maj. Gen. Leslie R. Groves, testified today that he thought the Truman-Attlee approach to world supervision of atomic energy was correct, but he believed an international inspection system of atomic plants would not be foolproof, would erase national boundaries, end the sanctity of the home and destroy private commercial enterprise.

Appearing at the second session of the Senate's special committee on atomic energy, General Groves recommended urgent action to end his own one-man control of the project and replace it with a nine-man commission.

The hearings in the Senate Office Building are attracting a crowd of fascinated citizens. Kleig and flash lights flare for the camera man. The sessions are marked by touches of humor, with Senators and the public joining in the laughter, although the most calamitous past events and the terrors of the imagined future are discussed.

The easy atmosphere, however, belies the serious intent of the Senate's select committee, as indicated by the trend of their questions. They are charged with working out a national policy for domestic and international control of atomic energy, both in its peaceful and military aspects. No member has yet betrayed a sign of partisanship in questioning witnesses.

Wants More Bombs Made

General Groves told the committee that this country should continue manufacturing atomic bombs and keep "a sufficient supply on hand until somebody tells us what the future of this thing should be." He was alluding to international control policy.

Even when he said 40,000,000 Americans might be wiped out in a future atomic war, General Groves talked in a smooth monotone. He added that the surviving Americans would retaliate and could win the war. He did not volunteer this as a real probability but offered it as an example in answer to a question of what might lie ahead.

General Groves and a number of other officers in the room were wearing the American heraldry of the atomic age. This was a shoulder patch with the star of the Army Service Forces embraced in the loop of a question mark. The tail of the question mark is fashioned into a streak of lightning plunging into an atom.

While stressing the terrible power in this atom, however, General Groves insisted in replying to a question by Senator Tom Connally that this weapon would not do away with conventional armies and navies but must be integrated with our present Army and Navy and the whole defense structure.

Senator Arthur Vandenberg, evidently seeking an answer to the question of how long it would take other nations to match American atomic progress, asked the general how long it would take him to produce a bomb, assuming he had to start at "zero," but with his present knowledge and experience.

"Knowing what I know now," came the answer, "and if I had complete authority and freedom from interference in the form of suggestions from a lot of people, I could do it in two years instead of three."

Explaining his views on the difficulty of national control, General Groves said inspectors would need the right to go into any factory, and in time they would be detecting for their own countries non-atomic and profitable industrial secrets. He said he was sure this country would not go to war merely because one of our inspectors was told he could not enter some plant abroad.

Then, since much of theoretical nuclear physics consists of mere figures and formulae on paper, an inspector would have to enter scientists' homes to inspect their notes. Inspectors would have to cross frontiers without hindrance, and with the barriers down workmen would migrate to countries with the best working and living conditions.

In presenting this view, the General said the inspectors naturally would place their national loyalty above their feeling for an international organization. Consequently, they would work primarily for their own countries. Neither the world nor loyalties are changed easily, he said, recalling the fierce loyalties of the Civil War, and he would not favor an inspection system until other nations can become as "honest" as the United States.

Puts Cost at \$500,000,000 a Year

Presenting the latest estimate of the cost of the atomic bomb project at \$2,100,000,000, or \$100,000,000 more than the last previous figure, he made a guess at future costs. The figure would be around \$500,000,000 a year, and 35,000 employes would be required. The highest total of operating personnel has been 70,000 people. Wartime funds are still financing the project and he reminded that new budget estimates and funds must be made available by next July 1.

General Groves warned against any serious cut in the project now, saying that there would be some irretrievable losses and rebuilding the plants might cost up to \$10,000,000 and years of time. In urging haste in formulating a policy, he said many critically needed scientists were quitting the project because of uncertainties. Incidentally, he disclosed that the Army had 2,500 enlisted-men scientists, "who border on genius" and who were drawn from all parts of the Army to the highly secret Los Alamos, N. M., plant. Without them, he remarked, the project could not have succeeded.

Atom Bill Held Faulty

May-Johnson Measure Regarded

NYT As Weak in Spots 11/25

The writer of the following letter is legal adviser to the Association of Manhattan Project Scientists, New York City area. He has been associated with the project in the Columbia area as patent attorney since May, 1943.

TO THE EDITOR OF THE NEW YORK TIMES:

In the Nov. 11 issue of THE TIMES there appeared a letter written by William Marbury, co-draftsman of the May-Johnson bill, commenting on and explaining the bill. Mr. Marbury's very able analysis and exposition of the purposes which animated the sponsors of the bill constitute a helpful contribution to the solution of an exceedingly complex problem. However, there are a number of places in which Mr. Marbury's argument is something less than persuasive and in which the provisions of the bill fail to support his conclusions. In order that all aspects of the matter may be fully explored it would seem desirable that these weak spots in Mr. Marbury's letter be pointed up and discussed.

Mr. Marbury apparently concedes that it is a primary purpose of the May-Johnson bill to insure that the security of the United States remain "in our own hands." Such an objective would seem to be clearly inconsistent with the fundamental objectives of the United Nations Organization. Many people believe that it is a matter of great importance that the United Nations Organization be made to work and that it can only work satisfactorily if we look to it, in the first instance, in matters relating to our national security. People who hold such views will necessarily find themselves in disagreement with what Mr. Marbury appears to consider a primary purpose of the May-Johnson bill.

Civilian Control Desired

Mr. Marbury further states that it was the view of the interim committee that the exercise of powers of the type granted by this bill should not be committed to military control.

The professed desire for civilian control is scarcely compatible with the provisions of the bill that Mr. Marbury drafted. It would manifestly have been a simple matter to include in the bill a provision that the administrator and a majority of the commissioners be civilians. However, both the original bill and the bill as amended by the House Military Affairs Committee not only fail to include any express provision for civilian control but also provide in detail for the payment of military officers. The lack of an express provision for civilian control, coupled with the detailed specifications for payment of military officers, conveys at least a hint that the War Department may be at least somewhat reluctant to relinquish the broad powers conferred upon it during the wartime years.

Despite Mr. Marbury's protestations concerning the innocuous character of Sections 13 and 16 of the amended bill—the control and secrecy sections—the bill still grants powers considerably greater than those necessary to achieve its purposes.

One difficulty with these sections of the bill arises out of the use of such terms as "military value" and "military security" as terms of limitation. Just as new advances in aeronautics may be said to have at least some military significance, so each new advance in the field of atomic energy is potentially capable of military application, and therefore of some military significance. Terms such as "military value" and "military security" when used to limit the powers of the commission are objectionably vague and indefinite, because of the ease with which they may be construed to extend the powers of the commission and administrator far beyond proper limits. If no more definite and satisfactory terms of limitation can be found, then the areas not intended to fall within the powers of the commission should be expressly excluded.

Research Section Confused

Section 13 (d) of the amended bill, the research control section, is so confused and ambiguous that its intended scope is difficult to determine. Further, this section illustrates in striking fashion the need for adequate scientific counsel in preparing a bill on such a technical subject. It appears that the draftsman of this section failed to recognize that substantially every nuclear disintegration involves a release of atomic energy, and consequently the phraseology employed is so broad as to cover research on many applications of radioactive materials that are remote from military problems. It is clear that unless this section is completely rewritten it will cause endless interpretative difficulties.

The excessive scope of Section 16 of the amended bill, the secrecy section, is illustrated by the fact that it empowers the commission to issue regulations which would prohibit employes or former employes of the Manhattan Project from discussing published material, such as the well-known Smyth report. It is perhaps doubtful that the draftsmen of this bill intended the commission to exercise any such power. Nevertheless, the exemption of published material from the commission's power to control free discussion should be made abundantly clear by an express provision in the bill.

Numerous other examples might be given of instances where the powers granted by the bill exceed those necessary to effectuate the purposes of the bill, but the foregoing examples are deemed sufficient for present purposes to demonstrate the unsatisfactory character of the bill as it has been reported out by the House Military Affairs Committee. GORDON K. LISTER.

New York, Nov. 21, 1945.

Amateur Knows Best

This justified, plaint of the professional, as we may call him, will apply in other trades than the police. The tendency is to find that in any field the mistakes are made by the trained man and the situation is saved by the inspired outsider. Battles and wars are always in danger of being lost by the Brass Hats and are retrieved by gifted civilians. Fatal mistakes in foreign policy are always the work of the Foreign Office or the State Department and are retrieved, where they can be retrieved, by brilliant bystanders who have not become the slaves of custom. The fundamentals of public health are hidden from the doctors and only revealed to laymen with the proper social insight. Professional economists completely fail to understand the modern industrial world.

No doubt it will be discovered some day that the atomic age was really not ushered in by mere full-time physicists like Becquerel, Rutherford, Fermi, Szilard, Urey, Hahn and Meitner.

NYT 11/29

Freedom for Science Urged

May-Johnson Restrictions on Atomic Research Held Too Drastic

NYT 11/27

TO THE EDITOR OF THE NEW YORK TIMES:

Naturally, your recent editorial criticizing the May-Johnson bill could not consider details and was hardly a sufficient response to the letter in THE TIMES of Nov. 11 from William L. Marbury, who, with Brig. Gen. Royall, drafted this bill. Officially, it is called the Atomic Energy Act of 1945, but it deals with nuclear energy, much more potent and coming from a lower structural level, and besides attempts to establish unwise political control over science, scientists, patents, etc.

For example, the "administrator," an appointee of six other appointees, has the power to select still other appointees and is given (Section 15) any desired number of blank checks on the Treasury. He also has power (Section 16) to make it "unlawful for any person to conduct research or experimentation * * * deemed and to be prescribed by the commission as * * * being of military or industrial value," without the consent and control of the commission and the administrator, who are asked to "interfere to the least possible extent with small-scale experimentation in research laboratories of nonprofit (sic) institutions."

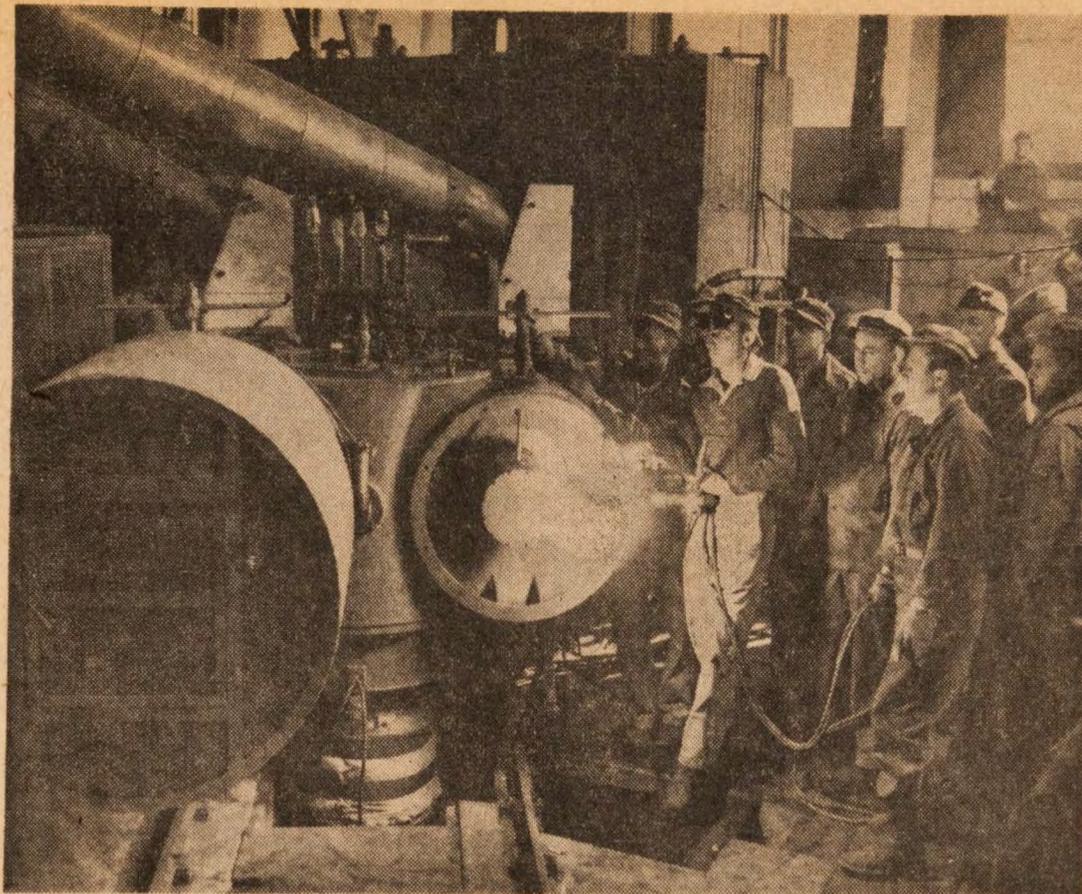
This may be aimed at the research laboratories of large corporations, but it also hits all independent chemists, physicists and engineers who conduct their own laboratories and make their "small-business" livings that way. And why should the Government thus discriminate against the great research laboratories of our big profit-making institutions, which not only earn huge taxes for Congress to spend but which supply all citizens as well as the armed forces with vital commodities?

It was to such patriotic corporations that the War Department appealed for the "know-how" of their trained and experienced chemists and engineers and physicists, who, with their university colleagues, did so much to win the war.

While this bill may hamstring the progress of American science, other countries can easily outflank this "Maginot Line" of legal lingo. As your editorial of Nov. 11 points out, the real defense of this country is a problem for international statesmanship, and the cooperation of all nations for the common good of mankind, despite differences in dogmas, beliefs, and social and political theories. In any event, American scientists want legislators as well as all citizens to heed their appeal and warning: "Please don't fence us in."

JEROME ALEXANDER.

New York, Nov. 22, 1945.



Armed with a cutting torch, members of an engineer aviation battalion dismantle the equipment found at the Nishina Laboratory in Tokyo. Twin pipes at upper left are called "atom guns." Associated Press

HT Smashing the Cyclotrons

This action is wanton and stupid to the point of constituting a crime against mankind, and is entirely analogous to the burning of the Louvain library by the Germans in 1914 and 1940.—Executive Committee of the Association of Oak Ridge Scientists.

That castigation of the destruction of the Japanese cyclotrons by the American occupation forces was undoubtedly intended to rock us back on our heels, and is well calculated to do so. The Oak Ridge scientists confine themselves to one rather simple point; that a cyclotron is purely an instrument of research, not of manufacture; that it is no more (if no less) useful to the production of atomic bombs than a book on nuclear physics or a table of logarithms, and that only ignorance or barbarism would destroy a research tool which might be put to good uses as readily as to an evil one. The protest may stand on its own merits.

But it brings up, inevitably, much larger issues, including the whole policy of extreme secrecy in regard to the atomic bomb. If the Army in Japan regarded a cyclotron as *ipso facto* a tool of the devil it is partly, at least, because of the black mystery which has been thrown around the entire subject of nuclear research. How is the Army to tell a cyclotron from a mass-spectograph, or to know exactly where research ends and manufacture begins in this unexplained art? And even if the line is precisely drawn, how are we to avoid suppressing all research if we are resolved to suppress all knowledge other than our own of the secrets of manufacture? Perhaps destroying the cyclotrons was on a par with book burning; if so, then we are embarked on a national policy which will compel us to book burning, wherever we have the power to do so, in the whole vast and pregnant field of nuclear physics. What is wrong is not the putative ignorance of the Army officers concerned; it is the policy which inevitably trends to such results.

We may go about smashing cyclotrons and imposing jail sentences upon voluble scientific workers, but we shall not be able to "keep the secrets" of atomic energy for all our efforts. We have done more than invent a super-horrible weapon of destruction. We have turned the key of one of the great doors to further human knowledge, and men are going to pass that door and explore the treasures beyond it whatever we may say. "Keeping the secret" simply makes us exponents of a futile reaction. Using our present possession of the secrets in order to insure that there should be no more secrets anywhere about man's advance into these new, terrible but creative fields of knowledge would be a far more sensible course.

Oak Ridge Scientists Decry Wrecking of Japan's Cyclotrons

Say Action Was 'Wanton and Stupid' and Akin to Nazi Book Burnings; Assert Machines Couldn't Make Bombs, but Only Aid in World Research

HT 11/26 Special to the Herald Tribune

OAK RIDGE, Tenn., Nov. 25.—The destruction of Japan's cyclotrons, by order of General Douglas MacArthur, was called "wanton and stupid" today by the executive committee of the Association of Oak Ridge Scientists, comprising more than 95 per cent of the scientists who worked on the atomic bomb here.

In a strongly worded statement, the group pointed out that cyclotrons cannot be used to make atomic bombs, but can only be operated to add to the world's stock of knowledge. The action of MacArthur's troops, the statement said, constitutes "a crime against mankind, and is entirely analogous to the burning of the Louvain Library by the Germans in 1911 and 1940."

The cyclotrons, the statement continued, were under American control. The Japanese were not being permitted to work with atomic bomb material in amounts greater than one-millionth of a pound, and "it requires pounds to make a bomb. . . . The wrecking of the Japanese cyclotrons is as disreputable and inconsiderate an act as would be the burning of the Japanese libraries or the smashing of printing presses."

News of the wrecking of the cyclotrons was sent from Tokyo Friday, and at that time Major Joseph A. O'Hearn, in charge of the work, was quoted as saying that the largest of five was "a potential apparatus for the construction of an atomic bomb." The Oak Ridge statement contradicts this.

In addition to the statement, members of the association expressed their individual opinions of the act. Professor Warren C. Johnson, chairman of the department of chemistry at the University of Chicago, said, "It is of utmost importance if cyclotrons in any country are destroyed intentionally. They should be rebuilt at the expense of the nation guilty of the act."

Dr. R. S. Stone, of the medical school at the University of California, called the destruction

"barbarism," and Dr. Milton Burton, professor of chemistry at Notre Dame, said: "The conclusion is that such destruction is a well calculated and insidious extension of Army security measures into a post-war world, or that it is based on strength, ignorance, wantonness and almost inconceivable immorality." Dr. L. W. Nordheim, professor of physics at Duke University, said such destruction stems from either ignorance or vengeance.

The full statement follows:

"It has been announced by MacArthur's headquarters in Tokyo that the wrecking of all Japanese cyclotrons has been started. This action is wanton and stupid to the point of constituting a crime against mankind and is entirely analogous to the burning of the Louvain Library by the Germans in 1911 and 1940. The cyclotron is a scientific instrument which is used to discover the fundamental facts of nature, the same facts that President Truman, Prime Minister Attlee and Prime Minister King have just disclosed shall remain the property of the world. A cyclotron is in no way related to a bomb production machine. Months of continual operation of a cyclotron will at most produce barely enough bomb material to see. It takes pounds of such material to make one bomb.

"An American scientific team which investigated Japanese science in September found that four cyclotrons had been built with two more in construction. The total stock of uranium available for

Japanese war research amounted to twenty-five pounds.

"The Americans required tons. There were no facilities for processing the material and long before V-J Day the Japanese had abandoned their atomic energy efforts. On occupation an Army representative was stationed at each cyclotron to observe all experimentation and to prevent any work with atomic bomb material on a 'weighable scale.' Amounts of one-millionth of a pound are weighable, and it requires pounds to make a bomb. Apparently no one saw any reason why nucleus research contributing to the world's store of knowledge should not go on, when it was so clearly

demonstrated that there was no the slightest danger of the Japanese making an atomic bomb.

"In view of these facts, the wrecking of the Japanese cyclotrons is as disreputable and inconsiderate an act as would be the burning of the Japanese libraries or smashing of printing presses. This action would be condemned by all intelligent people throughout the world. The officials responsible for it must be called to account for this act of pillage.

"Men who cannot distinguish between the usefulness of a research machine and the military importance of a sixteen-inch gun have no place in positions of authority."

By United Press

LOS ALAMOS, N. M., Nov. 27.—Los Alamos atomic bomb scientists last night joined other American research men in protesting the destruction of a Japanese cyclotron by occupation forces.

A statement issued by the Assn. of Los Alamos Scientists resembled that made by Oak Ridge scientists, explaining that the cyclotron was merely a research machine and not an instrument for manufacture of atomic bombs.

Scientists Protest Cyclotron Wrecking; Liken It to Louvain Library Sacking

OAK RIDGE, Tenn., Nov. 25 (U.P.)—Scientists who worked here on the production of the atomic bomb condemned tonight the destruction of Japanese cyclotrons last week by American authorities as "wanton and stupid."

The Association of Oak Ridge Scientists, including some of the nation's pioneers in nuclear research, likened the act to "the sacking of the Louvain library by the Germans in 1914 and 1940," and said that it constituted a "crime against humanity." The wrecking of the Japanese cyclotrons was announced on Friday by Gen. Douglas MacArthur.

The scientists, in a statement

distributed to President Truman and other high Washington officials, said that the cyclotron was a research instrument and not a bomb-production machine, and could produce at most barely visible quantities of bomb material in months of operation, whereas one atomic bomb required pounds of the material.

They demanded that officials responsible for "the act of pillage" be disciplined. "Men who cannot distinguish between the usefulness of the research machine and the military importance of a 16-inch gun have no place in positions of authority," the statement concluded.

To Use Cyclotron in Cancer Work Now War Job Is Done, Says Expert

Dr. Lawrence of California Declares 'We
Are About to Point Way Toward the
Cure of Certain Kinds'

BERKELEY, Calif., Dec. 2 (P)—The cyclotron in which the first plutonium for atomic bomb research was produced is being reconverted to peacetime uses and will be put to work on cancer and other medical problems with much greater prospects of success than before Pearl Harbor, Prof. Ernest O. Lawrence of the University of California stated today.

"We are about to point the way toward the cure of certain kinds of cancer," Dr. Lawrence told reporters, who were permitted to see the famous atom smasher for the first time since 1941. "That does not mean we will be able to cure all kinds of malignancy, but we hope that in a few years we can show significant percentages of success in the treatment of some varieties."

An important aspect of the new peacetime research is that the University of California cyclotron now is more powerful than before, having been rebuilt in the last year, and that its efforts will be reinforced by other cyclotrons constructed in the United States for the war effort.

This means that American medical researchers will have much larger quantities of radioactive substances for their work on cancer and other diseases. In pre-war days these substances were produced only in fractions of grams, and the Berkeley cyclotron was about the only one turning them out in appreciable amounts.

It also means that the number of researchers will be greatly increased. Eventually they will be able to exert a mass effort which may speed the ultimate results in medicine as did the combined efforts of the scientists in the quick achievement of atomic explosives.

Will Use Radioactive Carbon

Almost immediately they will have at their disposal a comparatively new substance, the medical potentialities of which are as yet unknown but which is certain to play an important part in medical research.

This, says Dr. Joseph G. Hamilton, assistant professor of medicine and radiology, is long-life radioactive carbon, which was first produced by two young researchers, Dr. Martin Kamen and the

late Dr. Samuel Ruben a few months before the cyclotron was pre-empted for war duty.

Since carbon is the key element of all living matter researchers now will be able to apply its radioactivity form to all parts of the body by including it in the diet or through injections. Whether it has any disease-fighting powers remains to be seen.

Dr. Robert S. Stone, radiologist at the University of California, who is in charge of the medical aspects of atomic bomb research at Oak Ridge, Tenn., will return to his regular post soon, Professor Lawrence said, and will broaden the program of medical research here.

Before Pearl Harbor, Dr. Lawrence added, 228 cases of advanced cancer were treated with radioactive products and the malignancy was arrested in 2 or 3 per cent of the cases.

Dr. Hamilton and Dr. John Lawrence, brother of the cyclotron inventor, have used radioactive iodine and radioactive phosphorus successfully in treating hyperthyroidism and against polycythemia, a disease characterized by the overproduction of red blood corpuscles.

Atomic Industry Minimized

SCHENECTADY, N. Y., Dec. 2 (P)—Atomic energy means "cheap warfare," but its value as a source of industrial power is "a relatively trivial matter," Dr. Irving Langmuir, Nobel Prize winner, said tonight in an interview copyrighted by The Albany Times-Union.

Dr. Langmuir, who is associate director of research of the General Electric Company, said that "much of the discussion of the human value of atomic energy has been based on the thought that such energy may displace coal and oil as sources of industrial power."

"I think that is a relatively trivial matter," he asserted. "Even if coal or oil cost us nothing as fuels, this would not have a very great effect on our civilization. We would not use our automobiles much more and our electric power bills would not be cut as much as they already have been within the last fifteen years by the improvements that have occurred in power production."

Compton Calls Cyclotron Smashing In Japan 'Act of Utter Stupidity'

CAMBRIDGE, Mass., Dec. 5—Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, declared today in a letter to Secretary of War Robert P. Patterson that the Army's destruction of Japanese cyclotrons was "an act of utter stupidity which has seriously set back public confidence in the military."

The text of his letter, dated yesterday, follows:

Dear Mr. Secretary:

Only my absence from the country during the past ten days, to which I have just this morning returned, has prevented my earlier participation in condemning the wanton destruction by the Army of the Japanese cyclotrons. It was an act of utter stupidity which has seriously set back public confidence in the military, which asset was built up with such great effort and considerable success during the past five years.

It will have the unfortunate effect of uselessly antagonizing those leaders of Japanese thought who were probably our best friends in that country. It has brought both censure and ridicule on us from intelligent people of other countries, if my observations in England are any criterion.

Three months ago I inspected two of these Japanese cyclotrons and participated in the drafting of the regulations, under which Japanese nuclear scientists might carry on scientific work, which were adopted by General MacArthur's control officer. They were simple and wholly adequate to safeguard against any Japanese

work in this field which could possibly be dangerous.

As a matter of fact, the cyclotron is not an instrument capable of producing atomic bombs. It is a scientific laboratory tool inadequate, by a very large factor, to produce explosive quantities of anything. Furthermore, the largest cyclotron, Nishina's, was limited to scientific research in biology and medicine.

To science cyclotrons are more precious than are battleships to the Navy, more difficult to procure, and of far greater value to society. We do not like to see them wasted.

I read in the London papers that the order to destroy these cyclotrons was in General MacArthur's name. I believe that I know him well enough to be confident that he was not responsible for that order.

I feel similarly about you, Mr. Secretary. But somewhere up or down the line there is some officer or official or group whose judgment or competence is inadequate for the authority exercised, and I believe that some housecleaning in the spot is called for.

Very rarely, indeed, have I been willing to make a public protest, and I greatly dislike so doing. But in this instance I feel such action to be justified, and I am therefore releasing this letter to the press.

Please understand that this letter implies no personal reflection but is addressed to you only in your official capacity and in the hope that some way may be found to improve the situation which now permits such things to happen.

MacArthur Cites 'Orders' To Destroy Cyclotrons

TOKYO, Thursday, Nov. 29—A headquarters statement today reported that Gen. Douglas MacArthur merely was obeying orders from "a higher authority" in destroying Japan's cyclotrons. (MacArthur's orders can come only from Washington.)

The headquarters statement, issued by General MacArthur's press relations officer and attributed to unnamed officials at his headquarters, said:

"The decision was not made by SCAP (Supreme Commander, Allied Powers), but was specifically ordered by a higher authority. Occupation forces merely were carrying out instructions which they received. The reason for the order would seem to be that the Japanese were not to be permitted to engage in research in any field of instrumentalities dealing with war."

It was reported here that Gen. Dwight D. Eisenhower, shortly after becoming Chief of Staff, ordered shipment intact of one of the cyclotrons to the United States, but the destruction already was too advanced.

Allies to Deprive Japan Of Atomic Bomb Metals

TOKYO, Friday, Dec. 7—Gen. Douglas MacArthur today took steps to make certain that Japan—the country that shuddered under two atomic bombs—never could develop an atomic bomb of her own.

General MacArthur's headquarters announced in its newest order that every mineral resource that might permit the creation of an atomic bomb would be taken from Japan, even if it meant shipping such minerals out of the country. Wherever possible, mining of such minerals will be banned absolutely.

Under the direction of Lieut. Col. H. G. Schenck, director of General MacArthur's natural resources section, every potential war mineral is being studied for a place on the ban list. All mining will be limited to peacetime needs and research for war will be outlawed. A staff of civilian scientists already is undertaking an exhaustive study.

ECONOMIST GUIDED EARLY ATOM STEPS

Dr. Alexander Sachs, Before
Senate Group, Reveals His
First Talk With Roosevelt

GERMANS' STUDIES CITED

They Were Stimulating Factor
in Efforts of Our Scientists
to Get the Bomb First

NYT 11/28
By ANTHONY LEVIERO
Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 27 — The late President Roosevelt listened to a persuasive man in the White House on Oct. 11, 1939, two weeks after Poland was crushed, and got interested in atomic energy. Then with characteristic vigor he brushed aside the hesitations of American scientists and officials, set the atomic project on its irrevocable course and pressed it toward the historic climax that came at Hiroshima after his death.

As the early history of the world-shaking discovery unfolded today before the special Senate committee on atomic energy it was disclosed that an economist, not a scientist, was stage manager of the atomic drama. This economist, the man who drew back the curtain on nuclear fission for Mr. Roosevelt, was the Russian-born Alexander Sachs, who served the President as an informal adviser.

In the near background when the President began to act stood Prof. Albert Einstein. This distinguished physicist read a report of recent experiments a month and a day before the outbreak of World War II and wrote out a prediction of an atomic bomb. He told Mr. Roosevelt that such a bomb, carried by ship, could destroy a port and the surrounding region.

Wants Blessing, Not Scourge

In opening the first session of the Senate "Blue Ribbon" Committee, the chairman, Senator Brien McMahon of Connecticut, said atomic energy might well hold tremendous benefits to mankind, but that the best judgment was necessary to keep it "a blessing to mankind and not a scourge." He added that specific legislation would not be considered until all the facts were known. This was interpreted to mean the Senate committee would disregard the controversial atomic energy control bill, now before the House.

It was Dr. Sachs who told the story about Mr. Roosevelt to the committee, and he handed it his written record of those early events—a record interspersed with scientific papers and letters from and to the White House. Among them was the paper that Dr. Einstein had studied. It was a report by the American physicist, Dr. Leo Szilard, recounting his own experiments and also those of Professor Enrico Fermi, a fugitive from Fascism.

Dr. Einstein and Dr. Szilard were revealed by Dr. Sachs' testimony as the first to worry about the implications for the United States of atomic energy in the hands of a hostile power. Dr. Einstein urged Dr. Sachs to do something, knowing that the economist could get the ear of the President.

So Dr. Sachs went to the Pres-

ident Oct. 11, 1939, with a letter from Dr. Einstein, Dr. Szilard's scientific paper and a memorandum by Dr. Szilard written in every-day language. Dr. Sachs had been dubbed as the "economic Jeremiah" for his gloomy views and predictions on Nazi power and world destiny in the years between wars.

Dr. Sachs also told the President that the Fermi and Szilard experiments were only one step ahead of those of Nazi physicists. Germany had already overrun Czechoslovakia, which had good uranium ore, and Hitler had forbidden its export. The Einstein letter pointed out that the most important source of uranium was in the Belgian Congo and Dr. Sachs added that he predicted the invasion of Belgium and the possibility of losing this source for the United States. That would leave only Canadian uranium for America, he added.

Nazi awareness on atomic energy was attributed by Dr. Sachs to the fact that the son of German Under-Secretary of State von Weizaecker, was a physicist, who eventually became head of the Kaiser Wilhelm Institute, and later of the Institute of Physics. The Kaiser Wilhelm Institute, said the Einstein letter, was "where some of the American work on uranium is now being repeated."

Einstein Letter Quoted

In the Einstein letter President Roosevelt read suggestions for government development of atomic energy and this prevision of the use of atomic force:

"In the course of the last four months it has been made probable through the work of Joliot in France as well as Fermi and Szilard in America—that it may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears this could be achieved in the immediate future.

"This new phenomenon would also lead to the construction of bombs, and it is conceivable—though much less certain—that extremely powerful bombs of a new type may thus be constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port, together with some of the surrounding territory. However, such bombs might very well prove to be too heavy for transportation by air."

The memorandum of Dr. Szilard was in similar vein. Dr. Sachs suggested possibilities for industrial and medical use as well as military use.

As a result of the White House meeting, President Roosevelt told General Watson to bring together Dr. Sachs and Dr. Lyman J. Briggs, the then Director of the Bureau of Standards, and have them form a working committee. This was done, the group being organized as follows:

For the Government, Dr. Briggs, Lieut. Col. Keith F. Adamson of the Army, and Comdr., later Admiral, Gilbert C. Hoover of the Navy; Presidential representative, Dr. Sachs; cooperating scientists, E. P. Wigner, Professor of Theoretical Physics, Princeton University; Professor E. Teller, George Washington University; Dr. Fermi of Columbia University; and Dr. Szilard, then a visiting experimental physicist at Columbia.

The committee met on Oct. 21,

1939, and the discussion, according to Dr. Sachs, developed strong objections that those interested in the political-military implications were much too previous in converting a mere potential into an actual result of research. Hence they urged that the government should leave this project to the universities, which anyhow had evinced active interest.

Early in 1940 Dr. Sachs and Dr. Einstein were dissatisfied with the progress and scope of the atomic project and Dr. Sachs wrote to General Watson, pleading for larger aid that could be based on a favorable evaluation by Dr. Einstein of work then being completed at Columbia University.

In April, Dr. Sachs testified, he was back in the White House with new forebodings of Nazi aggressions and predicting invasions that would deprive the United States of contact with Western Europe. He reported that Dr. Einstein had information of the intensification of uranium research under the leadership of Weizaecker's son, and that Dr. Szilard's work was proving more promising than Dr. Frederic Joliot-Curie's in France.

Dr. Sachs Is an American

WASHINGTON, Nov. 27 (AP)—In response to inquiries Chairman McMahon issued the following statement concerning Dr. Sachs' background.

"Dr. Alexander Sachs, presently economic advisor and industrial consultant, maintains his own offices at 72 Wall Street. Dr. Sachs was vice president and chief economist of the Lehman Corporation, an important investment corporation, during the entire Thirties.

"He predicted the great depression of 1929 and predicted further that the depression would end in the collapse of currency and the gold standard through a succession of bank crises; also that the economic collapse would come with such a rhythmic movement that every country on the face of the earth would become involved. He also predicted the collapse of Germany and the rise of Hitler in 1931.

"Through those predictions he became widely known in international economic circles. It was in this way that Dr. Sachs first became acquainted with the late President Franklin D. Roosevelt.

"In 1933 Dr. Sachs was appointed as first chief economist and organizer of the NRA, and was, thereafter, frequently called upon by the late President in connection with economic problems.

"Dr. Sachs was born in Russia and came to America at an early age. He was educated at Columbia University and Harvard University as well as Cambridge University in England. Dr. Sachs is an American citizen."

Senate Atomic Committee Seeks Ways to Control Making of Bombs

McMahon Tells of Quest, Chiding Attlee and
Bevin for 'Premature Statements'—Smyth
Stresses Main Facts Are Known

NYT 11/29
American domestic policy on the development and use of atomic energy must be adaptable to the purposes of the proposed United Nations Organization atomic energy commission, but it must not stifle research, Senator Brien McMahon, chairman of the Senate special committee on atomic energy, declared last night. One of the far-reaching problems before the committee is to determine whether there are scientifically and politically feasible methods of controlling the manufacture of atomic bombs, he told 2,000 persons at a dinner of Americans United for World Organization.

Senator McMahon made no specific reference to the recent joint statement by President Truman, Prime Minister Clement Attlee of Britain and Prime Minister W. L. Mackenzie King of Canada, proposing a reciprocal sharing with other United Nations of information on atomic energy and the formation of a UNO atomic commission, but he commented on remarks by Mr. Attlee and Foreign Secretary Ernest Bevin as follows:

"I question the validity of the premature statements made by Prime Minister Attlee and Mr. Bevin about what they consider to be the overall feasibility of international controls. They should either back up their statements with the facts or withhold their opinions until a reasoned estimate of this control is obtained."

Difficulty of Control Stressed

The difficulty of any effective control over the making of atomic bombs also was noted by Dr. Henry DeW. Smyth, author of the official report on the atomic bomb, who said plants making atomic bombs would not have to be as great as those at Oak Ridge, but could be small and dispersed and "difficult to detect in the total economy of a country." He added that plants devoted to the peaceful uses of atomic energy also could be converted into bomb plants in a short time.

Warning that any nation could make atomic bombs "within a few years," and that "in all probability no adequate military defense can be developed against atomic weapons," Dr. Smyth emphasized that nationalism in the atomic era would be suicide and that we should surrender our national sovereignty "to the larger sovereignty of world law."

Col. Paul W. Tibbets Jr., commander of the plane that dropped the atomic bomb on Hiroshima, described the flight and the "boiling debris" left by the bomb. He expressed the hope that atomic energy would never again be used as a destructive force.

Mrs. J. Borden Harriman, president of the organization, said in opening the meeting that Americans United favored working toward a world organization through and within the UNO.

Raymond Swing, toastmaster, said there was no way to end the sovereign power to make war except to set over nations a world sovereignty, which is world government.

Other speakers included Gen. Carl A. Spaatz of the Army Air Forces and William L. Laurence, NEW YORK TIMES science reporter who prepared the Army press stories on the atomic bomb.

General Spaatz said the atomic bomb was a terrifically deadly thing, but not more so than the threat that was over Britain in 1940.

"I think America has all the force necessary to enforce peace in this world," he said. "We developed the strongest Army and Navy in the war—for what, if not to serve the peace?"

Stressing the need to find a feasible system of international inspection and control to determine whether atomic bombs are being made, Senator McMahon said that

"if, after careful study, it becomes evident that no system of international inspection can be made scientifically feasible, we immediately have the answer to the political feasibility—namely, a terrible situation will exist of which we must make the most until factors now unknown to us can enter our life and offer us some hope for the future."

Time Factor Important

Another pressing problem before the committee in determining its legislative proposals, the Senator said, was the time allowed for study, which would be determined by the time it would take some other nation to learn to manufacture atomic bombs. Discussing the matter of international controls and the establishment of a body of international law through the UNO, the Senator said there must be a new definition of aggression, and consideration must be given to granting to the UNO power to take sanctions against any individual or group within a nation for violations of a nature that might lead to world insecurity.

Dr. Smyth said the atomic bomb was only a military application of nuclear energy and that the release of nuclear energy "is the culminating discovery of one of the great periods of science, a discovery which will inevitably mark a turning point in human affairs." Today, he said, "we can command atomic energy so great that it may change every aspect of our lives before the end of this century and has already brought us into a new age of man."

ASK BIG FIVE ATOM PLAN

British, French, Belgian and Norwegian Scientists Act

By Cable to THE NEW YORK TIMES.
LONDON, Nov. 28 — Demands that the Soviet Union, France and China be invited to share in framing atomic control proposals to be submitted to the United Nations Assembly in January, and that an international committee of scientists be set up to advise the new world organization were made tonight by a distinguished group of British scientists and members of Parliament in collaboration with colleagues of France, Belgium and Norway.

Their statement, made as a sequel to the Washington conference of Prime Minister Attlee, President Truman and Prime Minister W. L. Mackenzie King, who recommended formation of a commission under the UNO to find a means of eliminating the use of atomic energy for destructive ends, also called for "a true international police force." The opinion was expressed that "some merging or modification of national sovereignties is essential if the peace of the world is to be maintained."

The British signatories included Prof. M. L. Oliphant, perhaps Britain's leading expert on atomic energy; Sir Arthur Salter, M. P.; Lord Vansittart; Lord Brabazon of Tara, former Minister of Aircraft Production, and Capt. Raymond Blackburn, M. P., who has frequently raised atomic bomb problems in the House of Commons.

The Belgian signers were Robert Gillon, president of the Senate, and Roger Motz, president of the Liberal party, and those of France included Prof. Frederic Joliot-Curie, Louis Marin, former Cabinet Minister, and Dr. Robert Borel.

Roosevelt For 'Action' in 1939 On Atom Study

Senators Hear Economist Who Brought Scientists' Views to White House

WASHINGTON, Nov. 27 (AP).—The Senate Atomic Energy Committee heard today that the late President Roosevelt called for "action" in October, 1939, on the research which produced the atomic bomb.

The statement came from Alexander Sachs, first witness in a series of public hearings expected to lead to legislation for control of domestic development of nuclear energy.

Mr. Sachs, a New York economist, testified that he acted as a liaison man between a group of physicists—including Albert Einstein—and the White House. He said the scientists asked him to do so "because they had heard I was in a position to talk to the President." He explained that he had advised Mr. Roosevelt on electric power matters in 1936.

Eventually, he said, he came to advise the President on various other matters, including not only the atomic bomb but "strategy." He said he did his advising "without any label," and claimed no official position at the White House.

A big man with a fringe of hair around a bald head, Mr. Sachs spoke rapidly and with hardly a moment's pause for nearly two hours. He brought two big black notebooks and flipped through them incessantly, citing a letter here, a memorandum there.

He said the President had told him he would have to serve as a kind of historian for the atomic project, as White House aids had too many other duties.

Mr. Sachs told the committee he formerly served as an economic consultant for Lehman Brothers, New York bankers, but withdrew from that position when his work with the scientists began to take most of his time.

His voice began to fade as he approached the end of his testimony, but he never took time out for a drink of water.

The "zig-zag" trail which led to the spending of more than \$2,000,000,000 and the blasting of Hiroshima and Nagasaki passed through the White House Oct. 11, 1939, Mr. Sachs told the Senators. It was then, he said, that he informed Mr. Roosevelt of the work done by Drs. Leo Szilard and Enrico Fermi toward splitting the uranium atom.

Mr. Sachs said he told Mr. Roosevelt of German experimentation and that the Nazis had embargoed the export of uranium

First Witness at Senate's Atomic Energy Hearings



Alexander Sachs, left, New York economist, conferring yesterday with Senator Brien McMahon, Democrat, of Connecticut, chairman of the special Senate committee on atomic energy control. Mr. Sachs was the first witness when the committee started hearings yesterday

from Czechoslovakia after seizing that country. After the conversation, he said the President called in his secretary, General Edwin M. Watson, and told him: "This needs attention."

"Its potentialities were very much in the mind of the President," Mr. Sachs said. "He said, 'don't let Alex go without seeing me again.'"

Mr. Sachs said he left the President a letter from Dr. Einstein describing developments to date and urging that research work be pressed.

In opening the hearing, Chairman Brien McMahon, Democrat, of Connecticut, predicted that atomic energy will affect every phase of life and declared that no time must be lost in dealing with the problem of control.

Major General Leslie Groves, head of the super-secret Manhattan project, is due to testify tomorrow. He will be followed by Dr. Harold Urey and other scientists.

UREY FOR SACRIFICE TO BAN ATOM BOMB

Scientist Urges U. S. to Show
Deepest Sincerity to Rid the
World of Great Menace

By ANTHONY LEVIERO

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 29—Asserting that the United States is guilty of starting an atomic armaments race, Prof. Harold Urey of the University of Chicago told the special Senate committee on atomic energy that this country should stop making and stockpiling the bombs and should yield control of nuclear energy to the United Nations.

In advocating international control along the lines proposed by President Truman and Prime Minister Attlee of Great Britain, the Nobel Prize winner said the United States should be willing to sacrifice some national sovereignty to achieve world amity and peace. Otherwise, he said, mankind will live in dread, forever in fear of disaster, on a planet, "all too small."

Dr. Urey recommended that domestic control of the problem be vested in a director of atomic energy or in a commission of three to five men with Cabinet members as ex officio members. His proposals were similar to some offered as substitutes to the controversial May-Johnson control bill now before the House.

The gray-haired, serious-mannered professor, who had worked on materials used in the atomic bomb before he dreamed there would be such a thing, said he would be willing to go so far as to dump into the Mississippi River all the country's fissionable matter to avoid international strife. His reference was to U-235 (uranium) and U-239 (plutonium).

For Arms Race if Necessary

Yet Dr. Urey urged that, if it is not possible to secure an international agreement, "we must make atomic bombs; we must make them larger; we must make them efficient, we must develop what defensive measures we can. We can and must devise means for delivery of such bombs to possible future enemies," he continued.

The professor testified after Maj. Gen. Leslie R. Groves, who was in control of the atomic bomb project, made his second appearance. General Groves said he felt this country could stay ahead of the whole world in developing atomic energy provided all nations were governed by the same rules.

"We can blow the enemy's cities off the earth and take possession of the earth, occupy it with our armies, and begin the job of running the world according to our own ideas," said Dr. Urey. He added that he did not want this, however, and continued:

"My choice of time to do something about this threatening series of events is now or preferably three months ago [before the bombs were produced in numbers] if it were only still possible. Atomic bombs must not be made by any country, and they must not be stored any place in the world if we are to have any feeling of security in this or any other country on this all-too-small planet. We are making bombs and storing them and are thus a threat to other countries and are guilty of beginning the atomic armament race. If continued, it will lead to dire disaster."

Not Pessimistic on Inspection

Dr. Urey was not so pessimistic as General Groves over the feasibility of an international inspection system to prevent illegal production of atom-splitting bombs. He saw safety in the vastness of the size of the plants required to produce them. The loss of commercial secrets through the prying of inspectors, a point made by the general, was a small price to pay for security, the professor said.

Without control it would be easy, he added, for the nation to suffer a disaster of unparalleled magnitude. He made this point as a response to the most picturesque and vivid holocaust yet conjured up at the hearings. It was done by Senator Millard E. Tydings and was meant as a "far-fetched" example of what a Pearl Harbor of fifteen years hence might be like.

Professor Urey said the international atmosphere was being poisoned by the continuing manufacture of atomic bombs, and in a discussion with Senator Harry F. Byrd he disclosed that the bombs could be dismantled and the fissionable matter restored to its ordinary chemical form, usable in medicine, industry and research.

Senator Byrd developed the point, however, that the fissionable matter could again be reconverted into an atom-splitting destructive within six months. When the Senator indicated that was not a satisfactory means of control, Dr. Urey then said he would be willing to pour it into the Mississippi if that would be the solution.

The Senators indicated a care to avoid possible diplomatic repercussion and rumor-raising speculation in questioning General Groves. Senator Eugene D. Millikin of Colorado asked the general what other nations besides Switzerland, Sweden, Belgium, France and Britain had the industry and precision machine tools that would enable them to help some nation to produce an atom bomb.

General Groves said he thought the list "can almost be limited to the United States, England and Sweden." Senator Millikin said the facts on this ought to be "pretty clear in the record," and the general added Germany as a source for scientists, engineers, supplies and engineering management.

Senator Brian McMahon, committee chairman, then said the public ought to know that there were no compacts. Senator Millikin said he meant no reflection or insinuation on any nation, and Mr. Connally concluded the discussion by explaining that his objection was based on the fact that "because you left out some countries by elimination you can tell what country is being talked about." There was general laughter, and the final word was by Senator Bourke B. Hickenlooper of Iowa, who said he had not heard anything that was not well known to anybody.

Predicts Russian Atom Bombs in 3 Years

By the United Press.

WASHINGTON, Nov. 30. — A prominent scientist, predicting that Russia can start atom bomb production in about three years, told Congress today that overzealous Army security relations tipped the Soviets last June to our secret manufacture of atomic weapons.

Dr. Irving Langmuir, associate

director of research for General Electric Co., said last minute cancellation of passports of a group of American and British physicists headed for a scientific gathering in Moscow resulted in giving to the Russians the very information which the Army most wished to keep from them.

He said the Russian Embassy here, of course, knew that the American physicists had not been permitted to attend, and that cancellation of the British passports was given wide publicity in the British press.

"Any sensible Russian scientist knowing of these facts would have believed that we were developing an atomic bomb and were keeping

it secret from the Russians," he said.

Once Russia starts making atomic bombs, a distinct possibility in about three years, she may very likely be able to turn them out faster than the United States because of her tremendous resources, Dr. Langmuir told the Senate's Special Committee on Atomic Energy.

Dr. Langmuir said he himself made the trip to Moscow, but that just before he departed two Army officers asked him not to go. He disapproved and took the matter to the State Department, he said, and finally was allowed to proceed when the "War Department was made to realize how little

I knew of the atomic energy project."

Dr. Langmuir said the Russians may surpass the United States in the manufacture of atomic bombs because of (1) their larger population; (2) their "remarkable" system of incentives which is increasing industrial efficiency; (3) the absence of unemployment and strike; (4) their deep appreciation of pure and applied science; (5) their planned scientific program, more extensive than any contemplated by the United States."

CRISIS BY '55 SEEN IN ATOM DISUNITY

NYT 12/1
Langmuir Tells Senate Group That Control Can Be Sped by Talks With Russia

WARNS OF A BOMB RACE

Scientist Asserts Soviet Could Gain World Supremacy With Weapon After Three Years

By ANTHONY LEVIERO

Special to THE NEW YORK TIMES.

WASHINGTON, Nov. 30.—Dr. Irving Langmuir, Nobel Prize physical chemist, declared today that a regimented Russia could achieve world supremacy in atom bombs after three years and recommended that international control of nuclear force be hastened by consultation between the United States, Great Britain, the Soviet Union and Canada before the United Nations Organization took up the problem.

The associate director of research of the General Electric Company told the Special Senate Committee that is seeking to formulate an atomic energy policy that there would be a world crisis within ten years if the international community failed to agree. He would do away with the bomb altogether and tear down American fission plants because even the UNO could not use atomic power to enforce peace, he said.

Dr. Langmuir added, however, that the United States must not be a "sucker" and throw away its power unless it has ironclad agreements. He further asserted that if agreements were made and then violated this country should plunge into atomic war without hesitation.

While he spoke plainly about Russia, Dr. Langmuir, far from making an impression of hostility, spoke with warmth and sympathy of his eighteen-day visit to Moscow and Leningrad last June for the 220th anniversary of the Academy of Sciences.

Recalls Army Misgivings

His audience burst into laughter when the scientist told of the "blundering" efforts of Army agents to persuade him not to go to the Soviet Union in the misguided belief that, as a man with scientific secrets in his head, he might be "tortured or drugged."

Although he visualized dread possibilities, such as the entire United States turned into a Hiroshima, where the first atomic bomb was dropped, with only 2 per cent of the population scratching for a living, Dr. Langmuir also outlined the brightest view of the atomic age that has yet been presented to the committee.

SCIENTIST TELLS OF ATOMIC ENERGY



Dr. Irving Langmuir testifying before Senate committee yesterday
Associated Press Wirephoto

He said that our new knowledge of nuclear reactions might shorten by as much as 50 per cent the time in which the cure for cancer might be discovered. That would mean, he remarked, saving more lives than have been lost in the recent war.

Dr. Langmuir, as a practicing and a theoretical scientist, brought back data from Russia that caused the committee members to perk up. Russia, he said, is building a large experimental plant costing about \$100,000,000 to operate a blast furnace with oxygen instead of air. This type of furnace is unknown here, but the Russians gave him many details of it, he said.

Cites Soviet Growth

"They have plans for using oxygen for all their blast furnaces at a cost of about \$2,000,000,000," Dr. Langmuir continued. "Such undertakings prove an ability to carry out large complicated projects like that needed in the development of atomic energy."

Saying that Russia had been more progressive than this country in training scientists during the war, Dr. Langmuir added: "Once she decided the incentives were worth it, the Soviet could devise a successful five-year atomic energy plan like those that characterized her growth since the revolution."

Reasoning that Russia might have doubts that the United States would keep atomic bombs as a "sacred trust" and that Russia might thus lose her sense of security, Dr. Langmuir added:

"If, in this way, an atomic armament race develops, I believe the Russians will produce their first atomic bomb in about three years. Thereafter, however, there is a definite possibility that the Russians might accumulate atomic bombs at a far faster rate than we do."

Peace Set as Goal

The witness said that the Russian scientists he met had more freedom than he and other Americans in discussing scientific advances and that the Russians were looking forward to a long era of peace and rehabilitation, with the American standard of living, or a higher one, as the goal.

Having spoken favorably of the approach made to world control of atomic energy by President Truman and Prime Ministers Attlee and W. L. Mackenzie King, Dr. Langmuir continued:

"I hope that the Governments of the United States, Britain and Canada make immediate contacts with the Russian Government to secure, if possible, their tentative agreement instead of relying solely on the more cumbersome machinery of the United Nations."

Senator Brien McMahon, committee chairman, raised the possibility of inviting an international audience to the proposed test of the atomic bomb on captured naval vessels and Dr. Langmuir thought it would be a good idea.

Dr. Langmuir compared the destruction of Japan's cyclotrons by occupation troops with Adolf Hitler's burning of books and with the Tennessee law forbidding the teaching of evolution. "You can't gain atomic bombs from cyclotrons," he asserted. "You gain knowledge."

TERROR HINDERS RULE OF BOMB, GROUP SAYS

NYT 12/1
NEW HAVEN, Conn., Nov. 30 (AP)—Rejection of "an attitude of abject terror" toward the atomic bomb and consideration, instead, of how it can be controlled was advocated today by the Yale University Institute of International Studies.

The institute recorded its views on the problem in a memorandum designed, said Prof. Frederick S. Dunn, director of the group, "to provide a careful exploration" of questions dealing with the bomb and "point the way toward useful paths of investigation in seeking means of effective control."

The memorandum, written by Bernard Brodie, institute research associate, proposes that one way to reject the attitude of "abject fear" is to invite other nations "to share with us consideration of the control of the atomic bomb."

The institute contended that "instruments for the control of the bomb are useful mostly in so far as they reduce the likelihood of war."

The memorandum added: "The strengthening of international machinery for the preservation of peace can be greatly accelerated by the sense of greater urgency which the atomic bomb produces, and the United States must spare no endeavor to assist such a movement."

The institute asserted that at best the United States had no more than a two to five year advantage over the rest of the world on the bomb. It said it questioned, therefore, whether the benefits of secrecy on the bomb were enough to "offset the undoubted poisoning of relations between ourselves and certain of our recent Allies."

Huxley Asks United Nations Body To Coordinate Scientists' Work

He Says It Should Be Commission Like That Proposed for Bomb, but Research of Individuals Should Be Free

The type of international teamwork that went into the development of the atomic bomb could be applied, with profitable results both for the world and science, to other scientific problems in many fields, it was declared here yesterday by the British biologist Dr. Julian Huxley.

Such a program of cooperation, he said, should be directed through the kind of United Nations commission envisaged by President Truman and Prime Minister Clement R. Attlee for the control of the atomic bomb. But, continued Dr. Huxley, research by individual scientists must continue to be free or "you go against the whole idea of science." He criticized the Truman-Attlee proposal as not being "definite" enough.

Interviewed at the studio of Jo Davidson, the sculptor, at 80 West Fortieth Street, Dr. Huxley, who will address a meeting of the Independent Citizens Committee of the Arts, Sciences and Professions next Tuesday evening at Madison

Square Garden on the atomic bomb, said that too much emphasis had been put on the bomb and not enough on the industrial peacetime uses of atomic energy.

Dr. Huxley foresaw great immediate benefits, including improved living standards, from the use of atomic energy in tropic, desert and arctic areas where power sources are not present.

He said two immediate steps should be taken to do away with international suspicion growing out of the threat of a possible atomic bomb race. The first, he suggested, was to stop the manufacture of the bombs, and the second was to speed into existence the kind of international commission recommended by President Truman and Prime Minister Attlee.

"There is no atom bomb secret," Dr. Huxley asserted. "There is only a small technical 'know-how' secret, and the sooner this is shared the less suspicion there will be and the less chance of having an atomic bomb race."

SCIENCE ISOLATION SCORED BY ATTLEE

Savants Must Share World's Problems, He Says at Royal Society Dinner

By HERBERT L. MATTHEWS

By Wireless to THE NEW YORK TIMES.

LONDON, Nov. 30—Scientists must become part of a world society that banishes war if they want to preserve their particular freedoms, Prime Minister Attlee said tonight at a dinner following the Royal Society's 283d anniversary meeting.

Previously the retiring president, Sir Henry Dale, asked for two new freedoms on behalf of scientists: "Freedom from secrecy and freedom from national barriers."

Mr. Attlee said that the central problem was "how to insure that the development of science shall redound to the glory of God and the advantage of the human race and not to the degradation of the scientist into an agent of mass murder and to the destruction of the human race."

"Scientists rightly lay stress on the point that science should be international," Mr. Attlee went on, "that there should be freedom of experiment and research and a free interchange of knowledge between scientists of all countries. I agree with this, but it means that you have to have the right form of society in which these principles can be carried out."

A Two-Way Responsibility

"If, as I believe, it is right that in all departments of our national life, and particularly in those of government, we should seek the advice of scientists and should understand, as far as we can, the problems with which they deal, it is equally important that scientists should understand the problem of

those engaged in government and the difficulties with which they are confronted.

"I believe that the ideal of scientists for a free interchange of knowledge can only be realized in a world from which war has been banished."

"If we wish to make a world safe for scientific advance we must promote a whole nexus of relationships transcending national boundaries," the Prime Minister declared.

Mr. Attlee concluded by stressing Britain's need for increased scientific manpower. This was the theme of a discussion also in the House of Commons. Capt. A. A. Blackburn, a Laborite, suggested the setting-up of a committee of scientists for peacetime planning. It would be called the Central Research and Development Council.

Sir Henry Dale's particular fear was that Governments would, in the name of "security," continue to force scientists to keep their advances secret. He warned scientists to oppose that trend. What they have to fear, he said, is that pending an international agreement that they must hope and work for, national military secrecy will try to maintain or extend its wartime dominance.

Would Abolish Curbs

"The war has been won," he said, "and we shall not be ready to accept as its result for science a tightening of the chains. We have a right to expect that its freedom will be restored, and the freedoms which we ask for science are freedom from secrecy and freedom from national barriers."

Sir John Anderson, former Chancellor of the Exchequer, who headed the Government's atomic commission, expressed the belief that "some degree of military secrecy would have to be accepted," but added that the Washington declaration of President Truman and Prime Ministers Attlee and W. L. Mackenzie King offered "a charter of liberty for science."

Sir Robert Robinson, noted chemist, was elected president of the Royal Society.

SMYTH URGES END OF BOMB SECRECY

Pioneer in Atomic Research Finds Defense Measures 'Impossibly Difficult'

A black picture of the future was painted yesterday by representatives of science and Government who warned of widespread devastation and international competition for supremacy unless the United States revised its policy in regard to the atomic bomb.

These warnings were sounded before 600 persons gathered at the Hotel Astor for the opening session of a three-day forum on the problem sponsored by The Nation Associates. The issue was discussed by Prof. Henry DeWolf Smyth, author of the official report on the bomb; Prof. Ivan Getting, consultant to the Secretary of War; Representative Helen Gahagan Douglas; M. J. Coldwell of the Canadian Parliament; and Walter Millis of The New York Herald Tribune.

Professor Smyth, who recently was named as a special consultant to the State Department, was unable to attend the meeting, but his paper was read by Dr. André de Bethune, another pioneer in the development of the bomb.

In his paper Professor Smyth said that the problem of developing counterweapons at present "seems to me impossibly difficult." He added that since rocket bombs might be sent in a few moments from any spot on earth, "it could well prove impossible, in the event of an attack by atomic bombs, to know from which country the attack had come."

The answer to the problem, he asserted, was to do away with secrecy and thereby promote international good-will and scientific research. He stressed the fact that he was not advocating the releasing of information on "technical tricks" of manufacture, which he agreed should be given only to an international agency able to control the bombs, but the information on nuclear energy not directly concerned with making the bombs.

Professor Getting, who was one of the leaders in radar research at the radiation laboratory of the Massachusetts Institute of Technology, declared that it would be a simple matter for an enemy nation to set up radio control stations in remote corners of the earth in peace years to guide planes and rocket bearing atomic bombs to the heart of the United States.

Mrs. Douglas, contending that the main reason that the atomic bomb is being kept a secret is to prevent it from falling into the hands of the Russians, declared that the only method for peace is "cooperation, and I mean cooperation with the Russians."

BOMB CONTROL URGED

Group of Physicists Calls for International Conference

ST. LOUIS, Dec. 1 (AP)—A special international conference of the United Nations to regulate future military use of the atomic bomb was proposed in a resolution adopted by 200 of the nation's outstanding physicists, members of the American Physical Society, who ended a two-day conference today.

Dr. Alexander S. Langsdorf Jr. of the University of Chicago, author of the resolution, said it would be presented to Congress as representing the conference's views and not those of the entire society and its 5,000 members.

A second resolution urged that the society enlist the cooperation of social scientists, business executives and statesmen to consider the "broad aspects" of atomic bomb control.

HEATING BY ATOMS SEEN AS IMMINENT

International Authority Urged by Scientists, Who Predict Harnessing for Power

The harnessing of atomic energy to replace present sources of power was predicted for the near future yesterday by leading scientists, engineers and social scientists who combined their description of a new era with a strong plea for the establishment of an international authority to control society in such an advanced world.

The economic and political aspects of world-wide use of atomic energy were discussed at a conference sponsored by the Nation Associates at the Hotel Astor. Six hundred persons attended the session, second of a three-day forum to be closed at a dinner tonight at which Prof. Harold J. Laski, chairman of the British Labor party, will make the principal address.

The most concrete description of things to come was offered by Boris Pregel, president of the Canadian Radium Uranium Corporation, who worked with Canadian scientists and engineers on the development of the atomic bomb. Mr. Pregel, asserting that the atomic "revolution" was now under way, held that the "applications of atomic energy to civilian life are possible, imminent and even unavoidable."

Predicts Heating of Cities

Pointing to a recent statement by Dr. J. Robert Oppenheimer, a leading authority on atomic energy, saying it was feasible for a city the size of Seattle to be completely heated from an atomic energy source within five years, Mr. Pregel declared the first important application of atomic energy would be the production of a cheap power by large plants not dependent on any natural resource.

"These powerful units," he said, "will be able to distribute this cheap power, costing practically nothing, to large areas. We think it easy to understand what such a phenomenon will mean for these areas. Power is the basis of the cost of everything. Cheap power in unlimited quantity means abundance of cheap products and, in connection with it, the reduction of working hours."

Mr. Pregel declared that nearly every phase of life today would be affected, with new products and a new standard of living resulting. He added that as soon as all the scientists in the world cooperate on the peacetime uses of atomic energy "the results will come in at a great speed, surpassing any optimistic predictions."

Agreeing with Mr. Pregel's assertions, Stuart Chase, economist, warned that "technological unemployment could grow to catastrophic proportions" unless plans were made now to cope with future problems of atomic energy.

Warns Against Monopolies

James B. Carey, secretary-treasurer of the Congress of Industrial Organizations, asserted that labor was not afraid of new industrial developments "as long as these developments serve the interest of the people." He warned against nuclear energy becoming the "tool of monopolies."

The attitude of the scientists who worked on the bomb was expressed by Prof. Louis N. Rideour, assistant director of the Massachusetts Institute of Technology Radiation Laboratory, who urged the immediate lifting of wartime restrictions on scientific research. He was joined in this plea by Dr. Victor Weisskopf of the Los Alamos scientists, who pointed out that police control of the bomb would not work without free international exchange of scientific information.

Some form of world government was described as being essential for the continuance of civilization by the other speakers, including Jerome Frank, circuit judge of the United States Court of Appeals; Thomas K. Finletter, lawyer and author; Charles G. Bolte, chairman of the American Veterans Committee; Kingman Brewster, war veteran, and Cord Meyer Jr., aide to Harold Stassen at the United Nations Conference.

World Control Of Atom Bomb Called Useless

Nation Associates Told by Scientists That Only Defense Is to Ban War

Neither international controls over atomic energy nor national defense measures can guard the United States from the possibility of a surprise atomic bomb attack, perhaps without even immediate identification of the nation attacking us, according to scientific opinions expressed yesterday at the opening of a three-day forum at the Astor Hotel conducted by The Nation Associates, 20 Vesey Street.

Dr. Ivan A. Getting, of the Massachusetts Institute of Technology, who is a consultant to the Secretary of War, explained that any

production of atomic energy through the use of a uranium "pile" automatically would create the by-product plutonium, the basic material for an atom bomb. Even if international controls prohibited the extraction of plutonium from the uranium pile so that it could be isolated for use in a weapon, each nation producing atomic energy simultaneously would be stock-piling plutonium for possible future use.

"The only solution to the atomic bomb is to prevent a war from starting at all," Dr. Getting declared. "If this means creating a world government, then we must have a world government."

Dr. Getting did not place much confidence in treaties abolishing the use of atom bombs. He noted that international agreements outlawing poison gas in warfare had not prevented American troops from exterminating Japanese in fox holes and caves with carbon monoxide produced with jellied gasoline.

Professor Henry DeWolf Smyth,

chairman of the department of physics at Princeton University and author of the official report on the atomic bomb, agreed with all speakers, including some scientists among the audience who expressed their views, that even prohibitively expensive national defense measures would not prove infallible.

Dr. Smyth, recently appointed advisor to the State Department on the forthcoming United Nations Organization meeting, was unable to attend the morning session and presented his views in a lengthy statement read by Dr. Andre de Bethune, of Columbia University, who had worked on the Manhattan Project.

Dr. Smyth also expressed doubt that the defense against atomic bombs on an international level with suggested methods of inspection and control would be effective. He remarked:

"History has shown us that police methods, however necessary, are never more than a partial and

imperfect solution for social unrest."

Dr. Smyth agreed that the single trustworthy defense lies in removing the causes of war. He felt only one alternative exists.

"Our best possibility for survival in an atomic war," he said, "would be to have our industries and population dispersed, many of our factories and bomb plants underground, and launching platforms for atomic rockets located throughout the country so that in the event of attack we could retaliate, even though our cities and industries were largely annihilated."

All of these scientists shared the belief that information regarding key technical processes in the manufacture and final assembly of the atom bomb should not yet be made public. With equal unanimity, the vigorously opposed current secrecy on the scientific aspect of nuclear energy gained during the war.

Dr. Getting called for control of materials rather than control of

thought as at present. He added: "Scientists are accustomed to being licensed to handle dangerous material, but they are not used to being prohibited from speaking to each other."

"I cannot see," he stated, "how such a degree of secrecy is contributing to peace."

This idea constituted the nucleus of the afternoon debate, which was given over to consideration of political problems unleashed by atomic energy, particularly with regard to American policy toward the Soviet Union. These speakers—Representative Helen Gahagan Douglas, of California; M. J. Colwell, Canadian Member of Parliament, and Walter Millis, editorial writer for the New York Herald Tribune—were inclined to make no reservations in urging an immediate end of secrecy on the atom bomb.

"When we say that we are keeping the secret of the atomic bomb," Mrs. Douglas said, "we mean that we are keeping it from the Russians. If there can be no

co-operation on this point there can be no world government and peace."

Mr. Millis attributed the steady deterioration of our relations with Russia since the atom bombs fell on Japan directly to this policy of "keeping secrets." He advocated immediate reversal of this policy, adding: "I don't believe we can afford to wait on the United Nations Organization or shuffle off upon it our own primary responsibility in the whole matter."

To keep secrets until the U. N. O. has solved the control problem is to insure that there will be no U. N. O. capable of finding a solution."

Mr. Colwell warned against leaving control of atomic energy in the hands of private industry. He said: "We know from bitter experience that 'big business' in all our countries observes no national loyalties or human ethics where profits are concerned. . . . Yet atomic research today is largely in the hands of du Pont in the United States, Imperial Chemical Indus-

tries in the United Kingdom, and their creature—Canadian Industries Limited in Canada."

Mr. Millis took issue with this viewpoint, expressing concern that government control would really resolve into War Department control, which, he feared, would stifle further scientific development to a greater degree than private industry.

All the day's speakers, however, were equally liberal with their criticisms of the recent Truman-Atlee-King statement on the atomic problem as well as the type of leadership now being exhibited in the field of international affairs.

The May-Johnson atomic power bill, which is being considered by the Senate's special committee, was protested today by the American Civil Liberties Union, 170 Fifth Av., New York, because it assertedly contains "unprecedented limitations" on the right of free speech. NYP 12/3

Parley Urges Atom Control Plan for Peace

'Nation' Conference Ask Stronger UNO and Public Ownership 12/3

Atomic energy has the power to project civilization a number of centuries into the future as well as to blow it into limbo, it was concluded yesterday at sessions of The Nation Associates atomic age conference in Hotel Astor.

Principal premises adopted at yesterday's sessions were:

¶ Consultation with the Soviet Union prior to the United Nations assembly meeting in January to obtain Soviet co-operation for world control of the atomic bomb through the UNO.

¶ Initiative by the U. S. A. for consultation on conflicts in tension areas such as the Balkans and the Far East.

Authority for UNO

¶ Sufficient authority to the UNO to prevent war.

¶ Setting up by UNO of a control commission to outlaw the manufacture of atomic explosives and destruction or conversion to the industrial uses of the bombs already constructed by the U. S. A.

¶ Elimination of the UNO veto rule which gives dictatorial power to a small group of nations.

¶ Action by government to prevent private monopoly of the industrial exploitation of atomic energy which would hinder the development of economic security and abundance. To this end the government should nationalize the production of atomic energy to keep it from making profit for monopoly capital.

¶ Legislative action by Congress which will safeguard the country's security, prevent improper private exploitation of atomic development and at the same time encourage scientific experimentation in the peaceful application of the new giant.

For Peace Only

In discussing the economic aspects of development of nuclear energy for peaceful uses, the economist Stuart Chase warned that "if we try to go on operating some such economic system as we had before 1930 . . . atomic energy will soon break it to pieces. . . . No nation, except the U. S. A., has any apparent intention of continuing its prewar economic system."

James B. Carey, secretary-treasurer of the CIO, said the advance of atomic energy was a challenge to the people not to let "the control of atomic energy" out of their hands for use "in war or in use for peace."

Two scientists associated with atomic advances, Dr. Louis N. Ridenour, University of Pennsylvania, and Dr. Victor Weisskopf, University of Rochester, advocated creation of an international science and the abolishment of wartime restrictions on basic science.

Atom Research Cost Nothing for Canada

OTTAWA, Dec. 3 (CP).—Canada made no expenditures in connection with the discovery and production of the atomic bomb, because she has been working on the development of atomic energy for peace-time purposes, Reconstruction Minister C. D. Howe said today in the Commons.

He was replying to a written question which asked: "What was the total cost to Canada in connection with the discovery and production of the atomic bomb?"

Howe said the answer to the question would be "no expenditures."

Man Behind the Atom

By DEXTER TEED

Dr. Alexander Sachs, who convinced President Roosevelt that the U. S. should back atomic energy research, must be rated as a major prophet. He has been predicting with remarkable success for more than 15 years. That is why the man-behind-the-bomb must be listened to when he speaks.

Today he is ready to tell what the discovery of atomic energy can mean to mankind.

"People should realize this is the challenge of our generation," he says. "We have to ponder more on what the discovery of atomic energy means before we can reach solutions. Diagnosis must precede prescribing for the world."

"But for an understanding of the whole international political order no solution is possible."

Sachs, big-bodied, fiftyish, scant hair like Einstein's floating around his head, paces and speaks with feeling:

"The entire problem transcends the limitations of nationality. But the mere fact that we have atomic energy first has prevented the regimentation of science. What if Germany had discovered it first?"

World Is Richer

With Atom Energy

"A nationalistic solution is inadequate. Unless we are sure it is to be used non-nationalistically, sharing is not advisable. It must be an instrument transcending nationalism that heightens the entire problem of world security. . . . But there are no simple formulas."

Sachs, gifted economist, also a student of philosophy and science, talks in technical language. He is exact, precise. Simple words do not become him, for he is not a simple man. But he doesn't have a fear-complex about atomic energy. Translated into non-technical terms, his view of what atomic energy may do to the world of the future can be summed up:

He believes that the existing world will be enriched. Deserts will bloom. Jungles will be made habitable. Poorly developed regions will flourish. Atomic energy, used as a power source,



DR. ALEXANDER SACHS

Post Photo by Gaston

may well accomplish what once was considered impossible. It will draw from the earth the deep water—all in a time that we can control.

But this near-Utopia will not be possible if we don't solve the immediate problem of what to do with the atomic bomb—the most fearful destructive force ever contrived by man.

He believes the bomb should be turned over to an international police force which would operate under Chiefs of Staff of a World Security Council.

He's as American

As Will Rogers

Further development of the bomb as a weapon should be continued—perhaps on an island in the middle of the ocean. It should be used, then, as a weapon to strengthen the control of the existing United Nations Organization.

These views on atomic energy will eventually be elaborated and explained in a long magazine article. Meanwhile, Dr. Sachs works long hours in libraries and in his offices at 72 Wall St. He

is racing against time, in an attempt to catch up on all possible knowledge that will help to solve the problem of atomic energy. For he is a zealot.

Dr. Sachs looks like any of a thousand business men. He dresses plainly and often wears a light blue shirt, with a dark blue tie. In general, clothes don't mean much to him—except that they are necessary.

He's as American in his outlook as Will Rogers, although he was born in Russia on Aug. 1, 1893. In Rossien he lived as a boy, surrounded by people who encouraged scholarship.

When he was 11 his parents came to America and settled in New York. They soon discovered that young Alexander was a gifted student who picked up the language quickly and shot to the top in his classes. He entered Columbia when he was 15 and was graduated four years later. In 1916 he became Francis Parkman Fellow at Harvard and studied philosophy, jurisprudence and sociology—all subjects which broadened his outlook.

His career began in Wall St. A

member of the Downtown Harvard Lunch Club, he widened his acquaintance and eventually became an economic adviser to private investors. That led to more contacts. Over a period of years he advised government agencies, including the NRA in Washington, and finally he was elected a vice-president of the Lehman Corp., an investment trust managed by Lehman Brothers. He is now an independent economic consultant.

He first met Franklin D. Roose-

velt in the fall of 1932 at the Biltmore Hotel and Sachs was immediately impressed with F. D. R.'s "smiling good humor and personal charm." Roosevelt retained him as an adviser on economic matters—and the relationship that eventually produced atomic energy began.

With uncanny accuracy Dr. Sachs predicted most phases of the depression: A period of liquidation of the international debt structure, its collapse, going off of the gold standard. He accused the statesmen of the world of being "overtaken by a sort of high-tension paralysis," which was a true prophecy, suggesting imminent political collapse.

As early as 1933 he was the first man in the Western world to predict that the breakdown of the political order would mean war. In that year he talked with F. D. R. about it and, for the first time, mentioned that uranium could be used as a source of atomic energy.

Concurrently, he had attended the Institute for Advanced Study as a guest of Lord Lothian, and eventually he met Albert Ein-

stein and other renowned physicists interested in atomic energy. After Munich he told F.D.R., "The Germans have finished their costless victories and they are masters of the continent."

When 1939 came he quoted Thomas Hobbes (1651), who spoke of the atmosphere of "war weather." The war began soon thereafter and, learning that the Germans had made important advances in atomic research, Dr. Sachs began the series of moves that culminated in an "hours-long" conference with the President on Oct. 11, 1939. He convinced F.D.R. that the government should back the atomic project. History records the remainder.

"There are evil and good in the atom," he told the President. "Like a split magnet, it has a north and south pole. But we must beat the Nazis in discovering atomic energy."

He was backed in his opinion by Einstein, Dr. Leo Szilard and Prof. Enrico Fermi, a fugitive from Fascism. These physicists, aided by Prof. Eugene Wigner of Princeton, were behind the man-behind-the-atom. Today Dr. Sachs has his own niche in the history of the world.

FOUR CHILDREN HURT 'MAKING ATOM BOMBS'

Four children were injured yesterday afternoon when chemicals with which they were playing at making atom bombs exploded at 465 Chauncey Street, Brooklyn, in the ground-floor apartment of Miss Laura Hulsert, 80 years old, whose fondness for young people had led her to invite neighborhood children to her apartment to play.

About 5:30 P. M., the police reported later, William Henry, 14, of 354 Chauncey Street, brought two bottles of the chemicals to the apartment and told three friends there he was going to experiment with making atom bombs. The other children are Gregory Gallo, 13, of 90 Hopkinson Avenue; George Sundermeyer, 13, of 475 Chauncey Street, and Grace Guido, 13, of 33 Granite Street, all of Brooklyn.

While the children were pouring the chemicals into gelatine capsules the explosion occurred. Miss Hulsert, who was at the other end of the room, was not injured. A passerby who saw the front windows blown out turned in a fire alarm and the police called ambulances from Bushwick and Kings County Hospitals, to which the children were taken. The condition of the Henry boy was said to be critical.

Atom Decision Not Roosevelt's, Dr. Bush Says

President, However, Gave Orders for Fire Bombs on Cities, Senators Hear

WASHINGTON, Dec. 3 (AP).—Dr. Vannevar Bush tonight said the decision to drop new incendiary bombs on Japan was made by President Roosevelt but that the late President did not make the decision on use of the atomic bomb.

An Associated Press story had quoted Dr. Bush, the scientist who headed the war work of American scientific laboratories, as saying Mr. Roosevelt had made the decision to use both weapons. But Dr. Bush said later, in response to a reporter's question, that he had referred only to the new incendiary bombs.

He told the special Senate committee on atomic energy that the decision to use the fearsome new incendiaries against Japan's cities in order to destroy her industry was made personally by the late President. Dr. Bush said later that the atomic bomb had not been tested prior to Mr. Roosevelt's death.

There was some question whether to use the new incendiaries on Japanese cities because they would kill so many civilians. Dr. Bush told the Senate committee.

"The decision to use them was made by President Roosevelt," he declared. "There was a serious problem in my mind and I was glad I did not have to make the decision."

Dr. Bush expressed the belief that "the atomic bomb means the end of world war." The scientist, who directed the development of this and other weapons as head of the National Defense Research Committee and the Office of Scientific Research and Development, predicted it would take a long time to set up atomic controls.

But he told the special Senate committee on atomic energy that all the nations now want a long peace and this period can be used to develop the control machinery. He added that two nations armed with atomic bombs would not consider going to war against each other because the consequences would be "too terrible."

The scientist said the first task for the United States was to set up effective domestic controls as a pattern for possible world use of atomic energy. This would be a long and trying process, he added, requiring wisdom of the Congress and administrators placed in control under legislation.

Progress will be slow, he conceded, on the international side of control but he noted that the easiest way to solve any difficult problem was to "attack at the point easiest of solution."

"There is no danger of war breaking out until we can work this out," he said. "We can't do it in a moment or by wishful thinking."

"Suicide Squad" Was Prepared

CHICAGO, Dec. 3 (AP).—A scientist disclosed today a "suicide squad" of University of Chicago scientists stood by as the first atomic reaction was started here, ready to sacrifice their lives to save the city had an explosion threatened. They expected to be killed in the process, he said. Dr. Walter H. Zinn, who erected the first atomic pile of blocks of pure uranium and graphite beneath the University of Chicago's football grandstand, described the precautions to a group of state champions in the 4-H Westinghouse Electric contest attending the National 4-H Club Congress.

Dr. Zinn said there was a "one in a million chance" of a threatened explosion, but that if that extreme eventuality occurred there was a squad of men on hand ready to quench the atomic fire with a special liquid, which he declined to identify.

U. S.-Russia Scientists Exchange

BOSTON, Dec. 3 (UP).—Immediate exchange of scientists and scientific information between the United States and Russia was advocated tonight by James B. Conant, president of Harvard University as the first step toward prevention of an atomic armament race. In an address prepared for the Harvard Club of Boston, Conant said that such an interchange would be "the welcome signal of the opening of the road of mutual understanding."

The Harvard president urged that as soon as an inspection system has been established, all nations should dismantle their bombs and store the essential material, thus eliminating the danger of a surprise attack. However, he said a distinction should be drawn between war and peace-time uses of atomic power so that scientific progress would not be stymied.

SCIENTIST DEMANDS BOMB STUDY HALT

Dr. T. S. Hauschka Appeals to Oppenheimer to Refuse to Go on Pending Control

PHILADELPHIA, Dec. 4.—Dr. Theodore S. Hauschka, a biologist at the Institute for Cancer Research at Lankenau Hospital and associate director of the marine experimental station at the Institute of North Truro, Mass., today made public an appeal to Dr. J. Robert Oppenheimer and his associates on the atomic bomb project to refuse further to develop nuclear energy until international machinery for its control has been set up.

Dr. Hauschka's proposal was part of a letter written to Dr. Oppenheimer apologizing for an accusation made in an earlier public letter of "continued brilliant cooperation with death." Since the charge was made, the new letter said, Dr. Hauschka found that he had done Dr. Oppenheimer and his associates an injustice.

Not Intended as Accusation
"My letter," Dr. Hauschka explained in his second message, "was not intended as an accusation but rather as an appeal to you to go one step further than you have already gone: The whole world knows that we have on hand not only the technological equipment for the production of more atomic bombs, but a sizable stockpile of these weapons which is daily being increased."

"It matters little whether or not these weapons exist in a state of complete assembly, as the chain of subminimal charges could probably be inserted into the special casings in short order. The point which does matter is that we cannot expect to engender the profound world-wide trust necessary as a basis of effective international agreements on atomic energy as long as we continue to produce (or hold on to) stockpiles of history's most aggressive and inhuman tool months after it has served its original purpose of terminating a world war."

"My appeal was in part motivated by fears that a world-wide atomic power race would result in the enslavement of all pure science by technology and nationalism. In my own field of biology, the isotopes which atomic physicists have given us are among the most promising modern tools, to say nothing of many other potential peacetime applications of atomic energy."

Solution Suggested
"However, the chances for fatal misuse of the powers released by your splendid research are such that your warnings against danger and recommendations for control should culminate in the only logical solution to this difficult question:

"(1) Suggest to our Government and military leaders that the projects which you helped create but which are now out of your control be discontinued awaiting international regulation.

"(2) Pledge publicly, as a group, that you will desist from carrying your experiments further, for war or peace, until in your honest opinion, safeguards against misuse have been devised.

"(3) Call on the integrity of your fellow scientists abroad to do likewise for the sake of civilization and mankind as a whole.

"In full appreciation of what you and other physicists have already done to impress humanity with its predicament, and with apologies for overlooking the fact that most of you are now no longer engaged in military research, I appeal to you again to emphasize publicly the urgent need for immediate atomic disarmament on the part of the United States, Great Britain, Canada and the rest of the world. This move alone may clear the international atmosphere for honest, open cooperation with Russia and other key powers."

Topics of The Times

12/5
NYT
Atom Facts Needed
In a neighbor's column the plea has been sounded for fewer vast speculations about the atomic bomb, real though the horror is,

and a few more specific facts about the bomb. What actually did happen at Hiroshima and Nagasaki? What is the probable effectiveness of the bomb under various conditions?

If the timeliness of such a modest request for information were not demonstrated long ago it would only be necessary to quote two brief news items in yesterday's paper, the same day on which the plea for more information appeared. At a big public dinner in town the preceding night Professor Harold Urey told his hearers that the future history of the world might not be very long if atomic energy is misused. This is the familiar suggestion of mankind being wiped out by the atomic bomb, if not indeed the world itself being reduced to a gas bubble by an atomic chain reaction which got out of hand.

Earlier by a few hours
Scientists Differ Sharply
Dr. Vannevar Bush was testifying at the atomic hearings in Washington. Our reporter writes:

"Senator Brien McMahon, committee chairman, asked the witness' opinion of the possibility raised by Maj. Gen. Leslie Groves, director of the atomic bomb project, at a previous hearing, that 40,000,000 Americans possibly could be wiped out in a future atomic war. Dr. Bush said he did not think that would ever occur, that the present realities were serious enough without Jules Verne and Buck Rogers complications in the discussions."

Wallace Wants Atom Utilized Constructively

HT 12/5
Tells Garden Rally Its Use for Welfare of Public Will Help to Avert War

Henry A. Wallace, Secretary of Commerce, called on the American public last night to become acquainted with the advantages inherent in atomic energy, used constructively under national and international controls, as it has with its destructive potentials.

Addressing a mass meeting at Madison Square Garden, sponsored by the Independent Citizen's Committee of the Arts, Sciences and Professions, Mr. Wallace summed up the attitude of various speakers by stating:

"Atomic energy constructively applied to raising the standard of living of all peoples will do infinitely more to eliminate war than any type of control over atomic energy. . . . The expectation of a new age of abundance for all will do more to prevent war than the fear of being blown to bits."

All the speakers—including Dr. Julian Huxley, British biologist; Dr. Harold S. Urey, of the University of Chicago; Dr. Harlow Shapley, director of Harvard College Observatory; Colonel Evans F. Carson, of "Carlson's Raiders" fame, and Richard Frankenstein,

vice-president of the United Automobile Workers of America, who read an address by R. J. Thomas, U. A. W. president—agreed that nuclear energy must be placed under international supervision. Many of these attributed growing disunity in the world to the fact that the atom bomb "secret" has already been kept in this country too long.

Dr. Huxley told the rally that England has a greater stake in the bomb than the United States, since, in an atomic war, "Britain will be one of the most vulnerable of all nations."

"The most important political fact about the present situation is not that three nations alone possess atomic secrets," Dr. Huxley said, "but that one nation alone possesses atomic bombs—you, the United States of America. And what is more, you are going on all the time piling up more bombs, and that—you will, I hope, permit a foreigner to say—is in principle a bad thing."

Dr. Huxley shared Mr. Wallace's belief in atomic energy's ability to solve century-old world problems by raising living standards in even remote areas. In fact, he pointed out, "this source of atomic power would be easiest to use just where it is most needed—in the backward and undeveloped regions, of the world—and its use there would be a safeguard against a very real danger—the over-development of the already developed regions, leading to such an unbalanced world-system that the economic Tower of Babel would crash in a super-depression."

Mr. Wallace, in defining his

views on the best methods of controlling atomic energy, felt that a public agency should control the allocation of all fissionable material and know the purpose for which each gram is used. But while production, he believed, should be under the strictest government control, "the application of atomic energy should be an open field for free competitive business enterprise."

Dr. Urey seconded this proposal in general, recommending "the establishment of laws forbidding the manufacture and stockpiling of weapons of any form, a police force which would detect violations and bring offenders to justice and a system of courts which would try offenders and punish them."

He particularly stressed the fact that since science can "almost certainly" produce other equally destructive weapons, "the control of the atomic bomb should extend to the control of all weapons."

Mr. Thomas and Colonel Carlson were both strongly critical of American policy in the Far East. Colonel Carlson, who has passed many years in China as a military observer, asserted:

"The presence of our armed forces in the areas they occupy in China today cannot but be regarded as inimical to the interests of the Chinese people. If we withdraw these forces tomorrow, it will still require years to eradicate from the minds of these people the fact that we once used our military force to aid in preventing the expression of their will to improve their welfare."

Mr. Thomas agreed that "with-

out our intervention, the civil war in China would not be possible." Declaring that we must fight Fascist elements "wherever they seek to stifle democracy and impose reaction on the people," he pointed with concern to the "Fascist-minded, imperialist-minded groups in our nation" who have "embarked on the destruction of the very basis of our economic freedom, the trade-union movement."

"The war-time unity in the United States which we built, under Roosevelt's leadership, is disintegrating under the blows of American reactionaries," he said.

Senator Charles W. Tobey, of New Hampshire, advocated an immediate meeting among the three big powers. He further stated that "if we persist in a policy of shadow-boxing about the bomb, it is clear to me that another armament race is on and a third world war is just below the horizon."

The rally concluded as the audience of 20,000 unanimously adopted a sharply-worded resolution demanding the immediate recall of American troops from China plus the end of all lend-lease aid to China and Indonesia except that earmarked for rehabilitation and relief purpose. This resolution, presented by Orson Welles, condemned President Truman's administration, which, it said, "has shown by a series of acts that it has departed from the tested foreign policy of Franklin Delano Roosevelt."

Jo Davidson, chairman of the committee, presided at the meeting, at which Helen Keller, Danny Kaye and Fredric March also spoke.

WALLACE HOPEFUL ON ATOMIC ENERGY

At Garden Rally He Calls for Its Use to Raise Standard of Living for All Peoples

NYT 12/5
GREAT OPPORTUNITY SEEN

Huxley Urges World Control of Utilization in War—Urey Would Ban Bomb-Making

Atomic energy constructively applied to raising the standard of living of all peoples would do infinitely more to eliminate war than any type of control over atomic bombs, Henry A. Wallace, Secretary of Commerce, said last night at a mass meeting in Madison Square Garden under the auspices of the Independent Citizens Committee of the Arts and Sciences.

Julian Huxley, distinguished British biologist, who flew here for the meeting, told the capacity crowd of 19,000 at the rally that there must be world control of the

use of atomic energy in war. Dr. Harold C. Urey of Columbia University, Nobel Prize winner, said that the manufacture and stockpiling of atomic bombs and other equally destructive scientific weapons should be forbidden, and that a police force and courts should be established to detect and punish violators.

Other speakers were Jo Davidson, chairman of the Independent Citizens Committee of the Arts and Science; Dr. Harlow Shapley, director of the Harvard University Observatory; Senator Charles W. Tobey of New Hampshire; Fredric March, actor; Richard Frankenstein, vice president of the United Automobile Workers; Helen Keller; Col. Evan Carlson of the Marine Corps; Justin Grey, war veteran, and Danny Kaye, actor.

Wallace Predicts Benefits

Secretary Wallace declared that too much had been said about the destructive power of atomic energy and not enough about its advantages.

"Hope is stronger than fear," he said. "The expectation of a new age of abundance for all will do more to prevent war than the fear of being blown to bits. What a blessing it will be when the United States, Britain and Russia are all working together as a unit to increase the peacetime application of atomic power to the production of abundance for all nations."

He said that the day after the second atomic bomb was dropped, on Nagasaki, Maxim Litvinoff said to an American in Moscow: "Those are the first two and the last two atomic bombs that will ever be dropped in war. The United States wants peace."

Mr. Wallace contended that a public agency must control the allocation of all fissionable material and know the purpose for

which each gram is used, because to permit unregulated private manufacture would be equivalent to authorizing private armies or arsenals. But he declared that the application of atomic energy "should be an open field for free competitive business enterprise."

"We have been given, through the fantastic discovery of atomic energy, the unique opportunity to build one, single human community, on the highest spiritual level, accompanied by unlimited material facilities," Secretary Wallace declared.

"Only the United Nations, led by the United States, Great Britain and the Soviet Union can establish the international control that will make possible the great peacetime potentialities of atomic energy," he added.

"Already the bomb has caused suspicion and distrust among the nations which fought so closely together in the war against fascism. Its destructive power has extended from Hiroshima into the United Nations Organization. The bomb which ended one war can raise the curtain on another.

"The war we won was a people's war; the peace we win must be a people's peace."

Huxley Urges Bomb Ban

Mr. Huxley said that a distinguished English scientist had calculated that a shelter to be moderately safe against the biggest atomic bombs being made today would have to be 3,000 feet deep, but that it would be better to go down to 4,000 feet.

"One basic aim must be to insure that atomic weapons are never used again in an atomic war," Mr. Huxley said. "The best thing would be if we could agree not to manufacture any atomic bombs. But if we fail in this, the irreducible mini-

mum for man's future safety is that no bombs should be in the possession of separate nations as such. If bombs are made, they must be by and for UNO—the United Nations Organization."

Dr. Urey declared that science could almost certainly produce other weapons that would be as destructive as atomic bombs. He said that any system of control must therefore be extended to the control of all weapons. He expressed hope that the control of war could be reduced to the same basis as the control of counterfeiting in the United States.

Colonel Carlson said that the presence of armed forces of the United States in the areas they occupy in China "cannot but be regarded as inimical to the interests of the Chinese people." He said that even if we should withdraw these forces tomorrow, it would still require years to eradicate from their minds "the fact that we once used our military force to aid in preventing the expression of their will to improve their welfare."

Senator Tobey warned that "nothing could be more menacing to the peace of the world than for us to attempt to hold the bomb over any other nation as a sword of Damocles." He said that if we should persist in a policy of "shadow-boxing about the bomb," that another armament race would be on and the third World War would be just around the horizon.

At the close of the meeting, Orson Welles proposed a series of resolutions denouncing the Truman Administration for departing from the Roosevelt foreign policy, calling for withdrawal of American troops from China, and deploring the use of American lend-lease material in Java and Indo-China. The resolutions were adopted unanimously.

War on Nation Making Bomb Held Essential

47 ——— 12/6
Dr. Oppenheimer Sees It as Only Alternative if Any World Pact Is Violated

WASHINGTON, Dec. 5 (UP).— War must be declared at once on any nation which makes atomic bombs in violation of any world agreement banning them, Dr. J. R. Oppenheimer, who headed the laboratory where the first atomic bombs were made, said today.

"If a nation violates such an agreement, we'd have no recourse but to declare an emergency-war," he told the Senate atomic energy committee. He added that there were not now "and there will be no specific counter-measures to atomic weapons."

He said a way must be found to have "honest world co-operation" on atomic warfare to maintain peace. A nation that makes atomic bombs "does so only to wage atomic warfare, and in atomic warfare the advantage of the initiative is so enormous that it outweighs any world-wide ganging-up on the power that starts it," he said.

Hans A. Bethe, professor of theoretical physics at Cornell University, called for international collaboration of scientists in the field of pure nuclear research.

"Like any kind of pure research," he said, "the research in this field can only be done successfully if it is free from restrictions on subjects to be investigated and on publication of results."

General H. H. Arnold, Army Air Forces chief, writing in the "Army and Navy Journal," asserted the atomic bomb had made the great air armadas of World War II "as outmoded as the Macedonian phalanx."

Dr. Oppenheimer also told the committee that:

1. He did not believe a major power would have "a 50-50 chance" of building atomic-bomb plants secretly because the vast preparations would "show up." Individual bombs could not be detected, but plants and material stores could.

2. Inspections by an international board would be useless "unless it had freedom of travel" in all lands.

3. A plant making atomic-energy materials for peaceful industrial purposes could "start" making bombs in three months. It would have solved between 60 and 90 per cent of atomic-bomb manufacturing problems.

4. Atomic explosive would be "more effective" as a depth charge at sea than as an aerial bomb against warships.

5. The United States could make new atomic-bomb plants at "a fraction" of the \$2,000,000,000 which the present ones cost.

Meanwhile, a report by a committee of the National Institute of Municipal Law Officers said it may be possible within ten years to utilize atomic energy in plants to provide power requirements for cities.

The committee, headed by Corporation Counsel Andrew P. Roman, of Buffalo, said that, in the future, cities must be laid out with an eye to industrial as well as military implications of atomic energy.

Bomb Expert Testifies



Associated Press wirephoto
Dr. J. Robert Oppenheimer

Groves Recalls 1942 Travail Of Atom Bomb

General Was Named to Job on Assumption Scientific Work Had Been Finished

Major General Leslie R. Groves, chief of the atomic-bomb project, said last night at a dinner at the Biltmore for Dr. Karl T. Compton that high military officials were laboring under the impression that all the scientific work had been completed when they assigned him the job of producing the atomic bomb in 1942.

Revealing some of the details of the creation of the new weapon, General Groves said one of his first acts after taking charge of the project three years ago was to visit the three campuses where the major scientific research on atom-splitting was under way—Columbia University, Chicago University and the University of California, at Berkeley.

At Columbia he found that the scientists had only one cubic centimeter of a material which was needed by "the hundreds of acres" and, he said, "on this we were to base the expenditure of hundreds of millions of dollars." They also had a pump there, he said, which had run two or three days, but which would have had to operate continuously for perhaps a year if the project were to succeed.

At Chicago University, his Greek rudy, he nevertheless discovered an error in the powers of ten in a blackboard covered by calculations written by scientists who hadn't Greek. And at California University, scientists showed him the cyclotron, admitted that it had to run twenty-one days to achieve results, but said the best they had done so far was ten hours.

The general said he returned to Washington and urged all-out work on the project, although his private guess was that there was not more than a 60 per cent chance of getting the atom bomb in this war, and not more than a 75 per cent chance of ever getting it.

BOMB VS. BIG SHIPS POSED TO SENATORS

Dr. Oppenheimer Cites Atomic Costs—Would Get World Accord if Possible
NYT ——— 12/6

CHAIN BLAST IS EXPLAINED

Dr. Bethe Gives Some Lessons in Astrophysics and Says He Doubts Earth Will Take Fire

By ANTHONY LEVIERO
Special to THE NEW YORK TIMES.

WASHINGTON, Dec. 5—The cost of atomic bombs, compared with that of battleships, is so small that they raise a serious problem as to the value of capital ships, Dr. J. R. Oppenheimer, former director of the Los Alamos Laboratory, which produced the atomic bomb, told the Special Senate Committee on Atomic Energy.

Dr. Oppenheimer gave this answer after declining to testify publicly on what specific effects an atomic bomb would have on a fleet at sea. Explaining that under a Presidential order he could give only a "quantitative answer," he added that the bomb would do great damage and that under the sea it was far more effective than overhead.

In a prepared statement the witness took the position that international control of the atomic bomb must be based on the good faith of nations of good-will. He steadfastly tried to adhere to this thesis under persistent questioning by Senator Millard E. Tydings and Harry F. Byrd, who sought to show how difficult control would be, as Mr. Tydings put it, "in a world as it is, not as it ought to be." He reluctantly conceded that there might again be a resort to war—atomic war.

Another witness today was Dr. H. A. Bethe, theoretical physicist of Cornell University and an associate of Dr. Oppenheimer at Los Alamos. He projected the committee into the abstruse realm of astro-physics and the Senators took advantage of his presence to ask some academic questions.

Dr. Bethe, a native of Alsace-Lorraine and a refugee from Hitler's Germany, made three significant statements. He dispelled a publicized notion that the chain reaction (atoms splitting each other serially) that produces the terrible cumulative effect of the atomic bomb might get out of hand, break down the atomic structure of the earth and convert this planet into a flaming mass like the sun. He also saw no likelihood that the atoms of elements more common than uranium could be split for use in atomic bombs.

Finally, Dr. Bethe remarked that since the world now knows that the United States had successfully used three methods to produce the atomic bomb, any nation with adequate resources, such as Russia and France, could produce the atomic bomb at a cost of about \$500,000,000.

The words by Dr. Oppenheimer that touched off the discussion on the difficulties of achieving world control were:

Solution by Compact Asked

"Today all nations, all peoples, have an overriding community of interest in the prevention of atomic warfare. There would thus seem to be good reason for attempting to establish in the international control of atomic armament those patterns of confidence, collaboration and good faith which in a wider application must form the basis of peace. There would seem to be some practical reason for undertaking such control, not only as a necessary step, but as the decisive step, on this road that we as a nation have determined to follow. There may not be a comparable opportunity again."

Dr. Oppenheimer advocated de-

struction of the American stockpile of atomic bombs, if necessary, to get world peace, and he often insisted that a solution by compact could be reached. He said, however, that in the event of a violation this country would be justified to resort to all "military means." He also said peaceful nations should intervene before a warlike nation, such as Hitler's Germany, got well started with an all-out armament program.

Dr. Oppenheimer also told Senators Tydings and Byrd that an atomic-energy plant supplying heat to a city like Chicago could be converted to atomic-bomb manufacture in two or three months; that 1,000 bombs could be made in two years, though the nation would "feel" it economically; that 200 could be made in little more than a year, and fifty in nine months. He also said, in urging international good-faith agreements, that there were and there would be "no specific counter-measures to atomic weapons."

When the witness said that work on the atomic project should continue while a political situation of control was sought, Senator Edwin C. Johnson remarked, as he had at previous hearings, that the scientists had got the world in a mess and were now asking the politicians to straighten it out.

"It might be said we're passing the buck," replied Dr. Oppenheimer. "I'm very much afraid the buck is passed. I believe it is a political program and is the toughest ever handed to statesmen."

Dr. Bethe Is Reassuring

Remarking that there had been much "loose talk" about destroying the earth by setting the ocean and the atmosphere afire by the

atomic bomb's chain reaction, Dr. Bethe said:

"It can be stated with complete assurance that atomic bombs of the present type or of any type that is now in sight will not produce high enough temperatures to cause nuclear chain reactions in either the atmosphere or in water. Theoretical arguments which are probably reliable would even indicate that no temperature, however high, would permit the 'ignition' of the atmosphere.

"Only if one had an enormous amount of water or air, about the size of the sun, and if one then raised this large amount all at the same time to a temperature of many millions of degrees, could there be a self-sustaining nuclear reaction in these substances. It, therefore, seems extremely unlikely that there will be any possibility of igniting the atmosphere or the sea by atomic bombs."

It was after Dr. Bethe had read a paper on nuclear reactions in the sun and stars, which involve light nuclei rather than the heavy nuclei used in the atomic bomb, that some Senators harked back to the chemistry and physics of their school days. They asked about the temperature at the center of the earth. Was the sun gaseous? Could you burn the components of air by separating them? Dr. Bethe knew the answers.

New Zealand to Set Up Curbs

By Wireless to THE NEW YORK TIMES.

WELLINGTON, New Zealand, Thursday, Dec. 6—The Government moved Tuesday night to control all means of producing atomic energy in New Zealand from the mining of necessary materials to scientific processes and research. The plan

Mr. Fraser was assailed by the opposition for the severity of the penalty clauses in the new measure. The Prime Minister, explaining the Government's sudden move, said this severity was due to the fact that agents of unnamed foreign Governments had been quietly operating here without notifying this Government. Some of these agents had actually found uranium, Mr. Fraser said. He added that they had been tracked by officers of the Department of Scientific and Industrial Research and were now being blocked.

The penalties provided in the measure run up to \$5,000 fine and three years in jail.

Mr. O'Brien estimated that, if necessary, the country could produce eight metric tons of uranium yearly. He explained that pros-

pecting apparatus had been devised, the main feature of which was an argon gas tube that reacted to the presence of the metal.

No doubt within a year or two New Zealand will have sufficient uranium for operations and New Zealand scientists will be harnessing atomic energy, Mr. O'Brien said.

submitted to the House of Representatives provides for State control of uranium and thorium, which have already been isolated here, and prohibits the importation of these substances save with governmental consent.

A picture of New Zealand as a uranium-rich country with deposits far exceeding those previously suspected was given to the House last night by Prime Minister Fraser and Acting Mines Minister James J. O'Brien. Their stories represent the dominion as one of the richest sources of uranium in the world.

U. S. Research Foundation Urged By Eaker as a Defense Measure

**General Tells Engineers We
Should Use Best Scientists
in Basic Work to Keep Our
Armed Forces in the Lead**

American air superiority, achieved through a modern, autonomous and thoroughly trained air force maintained in a state of constant readiness, is a primary requisite of national survival, Lieut. Gen. Ira C. Eaker, deputy commander of the Army Air Forces, declared last night.

Addressing the annual dinner of the American Society of Mechanical Engineers at the Hotel Astor, General Eaker emphasized that air power provides "not only the best present means of striking an enemy with atomic bombs but also offers the only available protection against the misuse of atomic explosives."

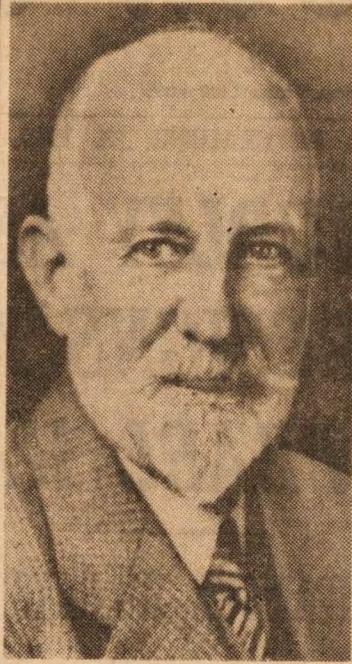
Pointing to "spectacular innovations in technological warfare which appeared with ever-increasing momentum in World War II and culminated with the atomic bomb," the general said it should be clear to all that "scientific research to insure the maintenance of our security is also vital."

"I believe it is in the national interest," he continued, "to establish a national research foundation composed of the most highly qualified scientists in the United States and charged with the responsibility of furthering basic research and development in all fields of science and the scientific training of adequate numbers of highly qualified men. Scientific planning must be years in advance of the actual research and development work. The Air Force must be advised continuously on the progress of scientific research and development in view of the new discoveries and improvements in aerial warfare."

General Eaker attributed Germany's failure to keep pace technically during the war to reliance on "miracle men." This group, he asserted, made quick decisions on highly complicated subjects such as radar and jet aircraft, discarding the carefully organized work of scientific men.

An example of this, the general said, was the failure of the Messerschmitt 262 as a jet fighter and its subsequent use as a bomber, for which service it lacked an adequate bombsight; the failure to create and produce an effective four-engine bomber, particularly needed as an aid to the submarine campaign, and backwardness in development of radar.

The anniversary dinner, which was attended by 1,500 members of the national organization, was also the occasion for the annual



Dr. William F. Durand

presentation of honors and awards for distinguished work in engineering, education, research or literature. Heading this year's list and winner of the A. S. M. E. Medal, the society's highest honor, was Dr. William Frederick Durand, professor emeritus of mechanical engineering at Stanford University. The award was presented in recognition of his work in forwarding the design and application of principles of jet propulsion and for his effective leadership of the division of engineering and industrial research of the National Research Council, of which he was former chairman.

Others honored included Dr. Sanford Alexander Moss, General Electric Company engineer of West Lynn, Mass., winner of the Holly Medal; Joseph M. Juran, chairman of the Department of Administrative Engineering, New York University, the Worcester Reed Warner Medal, and William Julian King of the fuels division, Battelle Memorial Institute, Columbus, Ohio, the Melville Prize Medal.

Dr. Wong Wen-hao of Chungking, China, was honored in absentia for pre-eminence in the field of professional public service as vice president of the Executive Yuan and head of the China National Reconstruction Commission. Also honored were Rear Admiral Harold Gardiner Bowen, Naval Research Laboratory, Anacostia Station, Washington; Dugald Caleb Jackson, professor emeritus, Massachusetts Institute of Technology, and Andrey Abraham Potter, acting president and Dean of Engineering, Purdue University.

"Next War," One of Bombs?

HT
They Can Only Create Deserts, Stuart Cloete Writes

To the New York Herald Tribune:

It appears that we, the Anglo-American allies, are continuing to make atomic experiments and presumably bombs. At the same time, we are considering a British standing army of a million men, conscription in the United States, and both Britain and America are retaining great naval and air forces—all so as to be prepared for some eventuality.

What is this eventuality? Who is going to attack us? It seems unlikely that there will be another war between England and America, and so, since there is no other country left which is a first-class power, other than Russia, it must be assumed that we are afraid of Russia. Russia, however, should be much more afraid of us, since we are continually saying that we shall have war with the U. S. S. R. before long, and indeed, according to "The New Statesman and Nation" (editorial Nov. 22) the struggle between American imperialism (and British) and Soviet Communism provides "the greatest danger of renewed international war."

We all know that the next war will be a war of atomic bombs, carried by planes or fired from rockets, and we have been told that there is no protection against such an attack. The war could, we are told, be over in one day, if, for instance, Boston, New York, Philadelphia, Washington, Chicago, Detroit, New Orleans, San Francisco and Los Angeles were bombed here, and London, Manchester, Liverpool, Birmingham and Glasgow bombed in the British Isles. Therefore, we can assume that the one who attacks first and without notice will be the victor and gain the wilderness he has created.

But air power or bomb projectile power can only destroy, it cannot conquer, because that means occupation, and to occupy, a large army and navy are necessary factors. We have them and are therefore under some suspicion as possible aggressors. Let us now be bold and say what every one whispers: War with Russia. First, why war with Russia? On what grounds? Next, how? Where are the marines to be landed? What towns are to be erased? Do we know the seat of all Russian industry? The Russians know where Detroit is, but do we know where their Detroit is?

We are industrialized and helpless without the goods and services to which we have become accustomed. The Russians, as every one knows, are illiterate peasants, unused to anything but the hardest fare and able to exist under Arctic conditions, all of which would tend to make war with Russia not only unreasonable, but absurd, because Russia could not be permanently defeated. It would, of course, also make us criminals under the new international laws, which are now being put into practice in Germany.

Which brings us back to the real danger of Russia. We are afraid of Russia, not because of Communism, which cannot endanger us as long as we have full employment, or because Russia is said to be irreligious, but because of the atom.

The atom bomb is something of a red herring drawn across the path of logical thought. The danger is atomic power which a totalitarian state could use fully, and which we, who are capitalistic oil and steel and coal nations, could not, under our present system. So that while today the Russian peasant looks with awe and wonder at our Western gadgets, in a hundred years' time we American and English peasants might look with wonder at a country where goods and services had been developed by free power to an extent which is at this time inconceivable.

Which brings us back to the bomb

for defense, and here for defense we have a solution. There is no defense but there is retaliation. So that it seems probable that if we had, say, fifty separate tactical air bases each completely equipped with atomic bombs, and hidden underground in the wildest parts of the country, we should be able, whatever happened to our cities, to repay the damage in kind, which would, unless all men are mad, act as enough of a deterrent.

Such a plan, pending the formation of the United Nations' Commission or other international controls, would not create suspicion, and the armament race, which is about to begin, would be checked. The main difficulty being that our Western civilization appears to be built upon a foundation of oil and steel, which are both the cause and the means of war.

Perhaps we are really caught in the cleft stick of our progress and only able to go on by going backward, in which case the decline of the West is inevitable and no great tragedy except to us as individuals. For unless atomic bombs of such dimensions that they destroy all life are used, the East, with its plagues and its famines and its teeming millions, will remain, and brown men, too wise to fight, will fill the death space that we white Christians will have created.

It would, however, sometimes seem that we would sooner be destroyed than change; sooner have scarcity and privilege than plenty; sooner make, as Tacitus said, a wilderness and call it peace, than a garden and call it Eden, for here, in this new power, is the possibility of Eden, of the near-Utopia where machines become the slaves of men and give them freedom.

Nothing is needed but thought, but, as Bertram Russell has said, "nine men out of ten would sooner die than think," which means that the one who thinks must die, because the nine who refuse prefer death to thought.

In which case—Ave Imperator, Morituri Te Salutant.

STUART CLOETE.

New York, Dec. 2, 1945.

ATOMIC BOMB FILMS LISTED BY 2 STUDIOS

Metro-Goldwyn-Mayer and Hal Willis Productions yesterday announced plans for the immediate production of separate feature-length motion pictures about the atomic bomb. Both companies have conferred with Government officials and have received approval from Governmental sources for the respective pictures.

The Metro film, which will be titled, "The Beginning Or the End," has been in preparation for three months, the last month spent in extensive research at the laboratories and factory at Oak Ridge, Tenn. The script is being written by Bob Considine and the film, termed by a ranking company executive as "our most important venture of 1946," will be produced by Sam Marx. Production is slated to start in a month.

Mr. Wallis, who announced his project yesterday after returning here from Washington, has engaged Jerome Beatty, author and former associate editor of Readers Digest, to write the screen play of the picture, which is still untitled. The director and cast will be chosen "within the next few days." Paramount, which will release the Wallis film, has altered its production plans to fit the schedule of the new film, and has made space and facilities of the Paramount Hollywood studio available for immediate shooting. Location units now are at work preparing backgrounds for the story.

Experts on Atomic Energy See It Competing With Coal

Nine Tell NAM That Power Plants May Be Economically Practicable in 3 to 25 Years, but Bar Its Use in Cars, Planes

NYT

By RUSSELL PORTER

12/7

Agreement on future utilization of atomic energy for peacetime use, and predictions that stationary atomic power plants, technically feasible right now, may be economically practicable in competition with \$15 a ton coal anywhere from three to twenty-five years hence, were voiced yesterday by nine scientific and industrial experts who played key roles in the development of the atomic bomb, speaking at the Golden Anniversary Congress of American Industry held by the National Association of Manufacturers at the Waldorf-Astoria.

Because of the need for heavy metal shields to protect workers and the public from radio-active materials, it was agreed that atomic energy could hardly be used for automobiles or airplanes, at least in the foreseeable future. There was a difference of opinion as to locomotives. Some thought large oceangoing ships were the smallest transportation units that could use atomic power.

Senator Robert A. Taft of Ohio and Price Administrator Chester Bowles engaged in a heated dispute on price controls, Senator Taft charging that they are being handled to the detriment of quick reconversion to full peacetime production and employment and Mr. Bowles defending them as essential to prevent inflation and protect the public from exploitation.

Secretary of Agriculture Clinton P. Anderson declared that American farmers want an expanding post-war economy and that if there is any return to the philosophy of scarcity in this country it will be led by industry or some other group, not by agriculture.

H. E. Humphreys Jr., chairman of the NAM taxation committee and of the United States Rubber Company finance committee, urged Congress to reform the tax laws, cut Federal expenditures, and balance the Federal budget at \$20,000,000,000 to stimulate invest-

ment, production and employment.

Gen. Omar Bradley, Administrator of Veterans' Affairs; William P. Witherow, president of the Blaw-Knox Company and chairman of the NAM Golden Anniversary Committee, and many others spoke at the morning, afternoon and evening sessions. More than 5,000 manufacturers from all over the country have assembled for the three-day meeting to celebrate the NAM's fiftieth year. The conference will end tonight.

Conant Moderator at Symposium

The atomic energy discussion took place at a symposium over which Dr. James B. Conant, president of Harvard University, presided as moderator.

"How long," he asked his colleagues, "will it take to develop an atomic power plant of 100,000-kilowatt capacity which could compete with coal selling at \$15 a ton?"

Maj. Gen. Leslie R. Groves, director of the bomb project, the first to answer, was the most pessimistic. He thought it would be a matter of decades, rather than years, because of the difficult problems in engineering, construction, physics and chemistry.

Dr. Charles A. Thomas, vice president of the Monsanto Chemical Company, disagreed. He said it should be possible within a decade if we got started working on it right away with intensive research and development. James C. White, president of the Tennessee Eastman Corporation, agreed with the ten-year estimate.

William L. Laurence, science reporter for THE NEW YORK TIMES, pointed out that the length of time would depend on what national policy was adopted by Congress on atomic research.

"The thing can be done in three to ten years," added Dr. J. A. Wheeler, Professor of Nuclear Physics at Princeton University, "if we have the set-up to go ahead."

Dr. Crawford H. Greenwalt of E. I. du Pont de Nemours & Co., Inc., agreed with the three-to-ten-year estimate. Dr. George T. Felbeck, vice president of the Carbide and Carbon Chemical Corporation, estimated fifteen to twenty-five years.

It was pointed out by Dr. Conant that if the price of coal was higher than \$15 a ton in some localities the time might be shortened.

Aid to Human Welfare Seen

Several speakers predicted that the by-products of atomic energy would be tremendous in terms of human welfare, through the use of radio-active materials in medicine, including the treatment of cancer; biology, chemistry and physics. They may bring about revolutionary changes in chemical and allied industries, it was said.

Dr. Wheeler pointed out that nuclear energy is already being converted into heat at the Hanford plant in Washington State. The next problem to make atomic power available for industrial use, he added, was to transfer that heat into electricity or other usable forms of power.

"The real problem," he said, "is to extend the kind of machinery, the so-called pile we now have, so that we can take out the heat, feed it through a turbine, and make power of it."

To protect people in the vicinity from atomic radiation, he went on, the shields or iron or other metal have to be so heavy and thick that even a power plant of only 100-kilowatt capacity would have to weigh about fifty tons.

P. C. Keith, president of Hydrocarbon Research, Inc., added that shielding does not seem to lend itself to any easy solution, such as thin barriers of some new metal. Dr. Conant brought out that this appeared to be one of the insoluble problems.

It was emphasized that the cost of building atomic power plants might militate against them in localities where cheap power is already available, but should be less of a deterrent in other sections. Dr. Thomas suggested atomic power would be economically practicable in special industries such as processing ores in isolated mining localities. It was agreed that the first uses of atomic power probably would come under such special conditions rather than as replacement

for present electrical power plants.

Even if atomic energy cost nothing and an atomic plant could compete in capital cost with a steam power plant, Mr. Keith pointed out, the householder could not expect more than an 8 to 10 per cent reduction in his electric bill, and large commercial and industrial users could not expect more than a 25 to 30 per cent reduction.

GERMANS DECLARED FAR BEHIND ON BOMB

NYT 12/7
Dr. S. A. Goudsmit Says They Were Not Even in the Race, Lacking Vision of Allies

NATIONS HELD IN DANGER

Dr. P. Morrison Tells Senate Group of the Totality of the Destruction in Japan

WASHINGTON, Dec. 6 (AP)—A leading Army investigator said today that German scientists despaired of developing the atomic bomb in a century and had shelved the idea of using it in the recent war. Yet the Nazis arrogantly assumed their nuclear research to be far ahead of the Allies, declared Dr. S. A. Goudsmit, head of the military intelligence mission sent to Germany to learn the enemy's work on atomic energy.

The University of Michigan Physics Professor also disclosed to the Senate Atomic Committee that he knew as little of Germany's progress as they about ours until it was definitely determined a year ago that the German atomic project had accomplished nothing.

"Despite preliminary press reports, we can say the Germans did not have anything at all," Dr. Goudsmit told the committee. "They had no pilot plant. It was all in the laboratory stage.

"Their scientists simply lacked the vision of our scientists. They felt it would take from fifty to a hundred years. And they abandoned any idea of using the bomb in the war."

Not until news broke of the American atomic bomb attacks on Japan did Germany realize how far ahead were their foes, said Dr. Goudsmit. He added that Goebbels' secret-weapon shouting and Hitler's threat of "bringing the whole world down with me" were just talk.

Chairman McMahon, Democrat, of Connecticut, suggested that Gen. George C. Marshall, former Chief of Staff, had been wrong in speaking of a race between Germany and the Allies in developing the weapon. Dr. Goudsmit said apparently we knew as little about Germany's progress as they did about ours.

"So if General Marshall talked about a race it was the turtle and the hare?" asked Senator McMahon.

The witness nodded.

Dr. Philip Morrison, who helped assemble the atomic bombs that fell on Hiroshima and Nagasaki, described how rays emitted after the blasts strangely affected the blood and made the victims a prey to fatal infection.

Most Within Mile Died Quickly

In a statement prepared for the special Senate committee he told of the gruesome findings of a party that inspected the devastated cities after the Japanese surrendered. He said most persons within a mile of the bombs died quickly—either from the great heat of the blast or injuries suffered in demolished buildings.

Many who escaped death by blast or burn, Dr. Morrison said, "died from the effects of radium-like rays emitted in great number from the bomb at the instant of the explosion."

"This radiation affects the blood-forming tissues in the bone marrow, and the whole function of the blood is impaired," the former University of Illinois physics instructor related. "The blood does not coagulate but oozes in many spots through the unbroken skin, and internally seeps into the cavities of the body. The white corpuscles which fight infection disappear."

Lack of these corpuscles permits infection to "prosper," Dr. Morrison said, "and the patient dies, usually two or three weeks after the exposure."

TELLS OF ATOMIC BOMB



Dr. S. A. Goudsmit
The New York Times, 1945

"I am not a medical man, but like all nuclear physicists I have studied this disease a little," Dr. Morrison said. "It is a hazard of our profession. With the atomic bomb, it became epidemic. War now can destroy not cities, but nations."

After describing the destruction wrought to Hiroshima, Mr. Morrison said it is probable that an atomic-bombed American city "would be as badly damaged as a Japanese city, though it would look less wrecked from the air."

"In Japan the wreckage burned clean; in a Western city, the rubble would stand in piles in the streets," he said. "But the city would be just as ruined and the people of the city as dead."

The United States is cutting production of atomic bomb materials in at least one of the key plants where the revolutionary weapon was developed. This was disclosed in a routine official report on job conditions made public today by the United States Employment Service.

The report said:

"Declining volume in the production of atomic bomb materials at Oak Ridge, Tenn., caused a drop in employment [during November] in the Knoxville area and reduced its classification from one of stringent labor demand to one of balanced supply."

No figures were given for either the plant or the area.

Doubts Early Peacetime Use

By Wireless to THE NEW YORK TIMES.

LONDON, Dec. 6—Sir John Anderson, chairman of the British Atomic Energy Committee, today added his voice to the opinions of many world scientists that atomic energy could not be used for peace needs in the foreseeable future.

It is "certain," he told the Manchester Research Council, that nothing has been discovered to justify the expectation that energy released by atomic explosion could be used directly as a source of industrial power.

"It would be absurd to suppose," he added, however, "that the difficulties will not be overcome in time, and there is always the possibility of some fundamental new discovery completely changing the character of the problem."

25 MORE SCIENTISTS HERE FROM GERMANY

Twenty-five German scientists, the second group brought to this country by the Government in recent weeks, for special scientific work here, arrived yesterday among 4,654 American soldiers on the transport Le Jeune from Le Havre.

The voyage of the scientists was a secret, and Army officers guarding the men as they disembarked at Pier 51, North River, kept the party herded closely together. On orders from Washington they kept reporters and photographers away and declined to say where the group would go when they left the pier. A similar group arrived on the transport Argentina on Nov. 16.

Germans Never Close to Secret Of Atom Bomb

Head of U. S. Army Mission Tells Senators Nazis' Aim Was 'Uranium Machine'

WASHINGTON, Dec. 6 (UP).—The Germans were not even in an atomic bomb race with the United States and believed such fantastic weapons were "fifty to one hundred years away," S. A. Goudsmit, head of an American intelligence mission to Germany, revealed today.

He astounded members of the Senate atomic energy committee by exploding the belief that Germany was on the threshold of producing atomic weapons when the war ended. This was one of the chief reasons for this country's haste in developing the destructive device.

"I speak with complete confidence that Germany had nothing," Mr. Goudsmit declared. He added that German scientists, instead of working toward a bomb, were trying to build a "uranium machine" for power purposes.

Asked by Senator Edwin C. Johnson, Democrat, of Colorado, if he had seen what was in Russian-occupied Germany, he said that this was "classified information (secret)." The theme was not developed further.

Phillip Morrison, a nuclear physicist who saw what atomic bombs did to Hiroshima and Nagasaki, told the committee the bomb "can now destroy not cities but nations." The world, he said, faces nightmarish destruction under death-dealing rays unless it finds immediate ways to control atomic energy.

Describing his visit to Hiroshima and Nagasaki, he told how human beings died under lethal "radium-like rays." Only 5 or 10 per cent of the people within 1,000 yards of the explosion escaped death, and many who crawled away uninjured died later from the deadly radiation.

The radiation, he said, affects the blood-forming tissues in the bone marrow; blood oozes in many spots through the unbroken skin and seeps into cavities of the body, while the white corpuscles which fight infection disappear. Infection prospers and the patient dies, usually two or three days after the exposure.

Mr. Goudsmit rejected the possibility that Hitler's boast that he would "take the world down" with him if he fell was based on expected possession of the atomic bomb.

"It was pure bluff," he asserted. He blamed lack of co-ordination of Nazi scientific efforts for Germany's failure to find or look for the atomic bomb.

"It wasn't until near the end of the war—particularly after the failure of the U-boat warfare—that the Nazis made any effort to co-ordinate their scientific work—and then it was too late," he said.

He said that German scientists, while aiming at a uranium machine to employ atomic power, hadn't built one and "didn't even have a pilot plant."

Briton Doubts Industrial Use Of Atom Soon

Sir John Anderson Says Conversion Into Heat Appears the First Step

By Richards Vidmer

From the Herald Tribune Bureau Copyright, 1945, New York Tribune Inc.

LONDON, Dec. 6.—Nothing has been discovered to justify the expectation that energy realized by atomic explosion can be used directly as a source of industrial power, Sir John Anderson, chairman of Britain's Advisory Committee on Atomic Energy, said today in an address at Manchester.

He said it is not only his own opinion but the opinion of those on whose judgment he relies most confidently "that it will be many, many years before nuclear energy comes on the market, for any but the most limited and specialized purposes, in competition with existing sources of power" such as the explosion of gases in internal combustion engines.

Conversion into heat of the energy realized by a controlled process of nuclear fission is the only method which existing knowledge suggests as practical, he said, and the first problem that rises is to get the heat into a convertible form. This means a high temperature and involves the necessity for efficient controls and for special measures to prevent corrosion of the metallic components and rapid disintegration of the whole system.

These and other difficulties will be overcome in time, Sir John predicted, and he pointed out that there is always the possibility of some fundamental new discovery, completely changing the character of the problem. He advocated that the nation turn all the resources it can spare to further researches in the field, especially along the lines of radio-active forms of common elements to be used in medicine.

Sir John said, in the course of his address, that Great Britain led the world in the development of television before the war and probably is still ahead in that field. He pointed out also that between the two wars Great Britain gained all the speed records on land, water and in the air, with British pilots and British machines made in British workshops. Great Britain now holds all these records again.

Julian Huxley Pictures the More Spectacular Possibilities That Lie in Atomic Power

By WALDEMAR KAEMPFERT

If international control of atomic energy is not established and war abolished, the physicists predict disaster. After the Army tried to brush them aside when the hearings on the May-Johnson bill virtually closed, they protested so effectively that they succeeded in testifying. Not only this, but they formed a federation to drive home the meaning of atomic energy to the public and took an active part in supporting the Independent Citizens Committee of the Arts, Sciences and Professions which last week held a stirring "crisis meeting" in Madison Square Garden, New York. Dr. Harlow Shapley of Harvard presided, and Secretary of Commerce Henry A. Wallace, Dr. Harold C. Urey, Dr. Julian Huxley and others pictured what would happen if a race in atomic bomb production is not checked now. Other meetings are to be held throughout the country.

Much of the ground covered by the Madison Square meeting was familiar. The address that interested this department especially was that of Dr. Julian Huxley, who flew here for the express purpose of delivering it. He revealed to his audience of 20,000 what atomic energy could mean in regions which are still no better off than they were a century and more ago.

"The most spectacular possibilities of the new power lie in its use as what we may call atomic dynamite," said Dr. Huxley. So he was all for what an English physicist describes as "landscaping the earth." Dams could be built in a fraction of the time now required because atomic explosions would do the work of cumbersome excavating machinery; a counterpart of the Panama Canal could be dug in far less time than would have been necessary even a few years ago.

Dissolving the Polar Cap

We thought Dr. Huxley saw too much in dissolving the Arctic pack of ice and snow. In the opinion of most geophysicists, a region that now covers millions of square miles would probably not be buried again under snow and ice if it were subjected to the intense heat of Huxley's "atomic dynamite." The polar cap is a relic of an ice age which is slowly drawing to a close. It reflects most of the sun's heat, and if it were vaporized the open sea would be able to absorb that heat.

It happens that the consequences of ridding the North Pole of its crust of ice and snow were studied years ago. The complete melting of the Greenland and Antarctic ice caps would raise the level of the sea from 100 to 160 feet. If only the Arctic cap were melted, New York City and other towns along the Atlantic seaboard would be completely submerged.

There is no doubt, as Dr. Huxley said, that if the polar caps were blasted and melted away the climate of the Northern and Southern Hemispheres would be changed. Dismal, foggy Great Britain would become as pleasant a country as Spain if it were not inundated. But would the Sahara stay where it is or move even more closely to the Mediterranean? Dr. Huxley admitted that neither he nor the climatologist whom he quoted could answer. He would not blow the Arctic cap away all at once with bombs like those that virtually wiped out Hiroshima and Nagasaki. A beginning would be made with "only a little bit of ice, north of Labrador, say."

A Source of Power

More important and more possible is the bringing of power to regions that have no coal, oil or even waterfalls. In Dr. Huxley's opinion a pile of uranium "about the size of a double bed might generate as much power as the Grand Coulee Dam for several centuries."

If anything like this happens, there would be no need to transport coal or oil and transmit electric power hundreds of miles at high tension. "To mention only the Sahara," said Dr. Huxley, "atomic power could be used to distill seawater, leaving the salts behind as sources of magnesium and other valuable elements, and to pump fresh water into numerous depressions in its vast area until they again blossom into the fertility they had in the ice age."

If atomic power were thus applied in opening regions which are now uninhabitable or economically un-

interesting for lack of fuel and other resources, we would have a safeguard against the social danger of overdeveloping densely populated industrial regions, according to Huxley.

Atomic power could make an old dream come true. Over and over again it has been asserted that if science and technology were rationally utilized, there would be a reasonable standard of life for every human being on earth. Huxley admitted the difficulty of realizing the economic millennium, but held that at least technical problems are now much easier to solve than ever before. "The proviso is that we set about the job with the right aim in view and by the right methods." And what is the right aim and what are the right methods? To Dr. Huxley both are wrapped up in international control of atomic energy and hence in social planning on a world-wide scale.

BRITISH GROUP BACKS ATOM BOMB ACCORD

By Wirelens to THE NEW YORK TIMES. LONDON, Dec 8—A resolution

approving the statement issued by President Truman and the British and Canadian Prime Ministers on the control of the atomic energy was adopted unanimously today by the Conference of Scientific Research and Industrial Planning, organized by the British Association for Advancement of Science.

The resolution, which was proposed by Sir Richard Gregory, the association's president, declared that the scientific world should give the statement its full support because it indicated the true approach to the problems of developing the beneficial applications of atomic energy on the one hand and on the other of preventing their destructive use.

Discussion of atomic energy came up at two other meetings during the day. Sir John Anderson, chairman of Britain's atomic bomb committee, told students of Lewes country school that he did not believe they would ever see the atomic bomb used.

"I take a hopeful view of the future of the world," he said.

Sir George Paget Thomson, another of Britain's atom experts, addressing the Junior Institution of Engineers here predicted that the first peacetime use of atomic energy would probably be for a big power station or for the boilers of an ocean liner.

"Gradually the new power will spread to other purposes," he continued, "but the internal combustion engine will long remain the most suitable prime mover for small powers. Ultimately it might be possible to attempt more grandiose schemes. Large-scale irrigation of deserts suggests itself but these are matters of the distant future."

Atom's Potentials

12/9

In Washington last week a Special Senate Committee on Atomic Energy heard directly from men who knew more perhaps than any others in the world about the subject—some of the sixty American scientists who helped produce the bomb. Dr. J. Robert Oppenheimer, former director of the Los Alamos Laboratory, declared that there were not now "and there will be no specific counter-measures to atomic weapons." The bombs, he said, were more effective under sea than as aerial bombs; new atomic-bomb plants could be built by the United States at "a fraction" of the original \$2 billion cost; the nations building such plants would have only a "50-50 chance" of keeping "such vast preparations" secret. To keep world peace, Dr. Oppenheimer advocated international control by nations of good-will; if necessary, in order to get world peace, the destruction of America's stockpile of atomic bombs.

Closely similar views were expressed by Dr. H. A. Bethe, German refugee

DEBATING THE ATOMIC BOMB

Many meetings are being held in all parts of the country to discuss the atomic bomb and the best way to avert a war in which it would be used. In the history of science and technology there has been no such spectacle as this of organized public participation in a discussion which ordinarily would be left largely to legislators. Few were concerned about the social effect of the steam engine, when James Watt introduced his condenser, or of electromagnetic induction, when Faraday hinted at potentialities of which he was fully aware. The early nineteenth century was not greatly disturbed by the growth of slums in manufacturing centers, the labor troubles that might follow the introduction of steam-driven or electric machinery, or the part that mass production was bound to play in war. Scientists, engineers and economists saw only railways, steamships, cheap goods, machinery started and stopped by pulling levers. Though the use of energy as we knew it is hardly comparable with what we may expect, now that the atom is under some control, this indifference to the social effect of science seems strange in these days. To be sure, the pronouncements of Copernicus and Galileo shocked all Europe, and the reverberations that followed the publication of Darwin's "Origin of Species" have not yet completely subsided. But ways of life were not changed by dethroning the earth as the center of the solar system or relating man to lower animals.

The two bombs that virtually wiped out Hiroshima and Nagasaki awakened the scientists to a sense of social responsibility which they had as good as repudiated. There was an aristocratic attitude which expressed itself in complete indifference to the social fate of scientific discovery. Now we behold the recluses of the laboratory entering the field of international and domestic politics, appalled as they are by what may happen if there is a third war. It must be said that they have faced the issue raised by atomic energy more realistically than have many politicians. Nationalism, international comity, the function of UNO acquire a new significance now that atomic energy is unleashed at will. Probably this is but the beginning of a more active participation of science in public affairs. Many of our social and economic problems spring directly from the advance of science and technology. For this reason it is well that the scientists should have awakened to their obligations as citizens. NYT 12/9

Research Body Urged

Magnuson Bill Held to Lack An Important Detail

The writer of the following letter is a member emeritus of the Rockefeller Institute for Medical Research.

TO THE EDITOR OF THE NEW YORK TIMES:

Recently a number of competent and responsible scientists attempted, in a letter, to prevail upon the President to support Senator Magnuson's bill, based on Dr. Vannevar Bush's "report." I write this letter because, on important points, a different view is possible and maybe desirable.

Senator Magnuson's bill provides for initiative and supervision by a board appointed by the President. An executive director is appointed by the board. This form of organization leaves out of account important American experience in which initiative is in the hands of investigators themselves.

The plan which I wish to propose begins, not at the top, but at the bottom, among the "scientific people." At the top, contact with these important unknown persons can cease to exist and would soon be lost.

Ours, in science, has always been a system in which individual institutions, colleges, universities, research and industrial institutes have been in active competition. They have always been on the lookout for able, inconspicuous men and women. They know how to test and how to select them, having known them through their developing years. They have known how to match men, older as well as young, with problems. Finding men and recognizing problems is their traditional work. Even this system may not be ideal, but it has worked. The hurried organization necessitated during the war was built on this existent system. Without it, the improvised plan may well have failed. The incentive to make the atomic bomb was brought to Washington. It could not have originated there.

The situation which legislation by the Congress is intended to correct is that the institutions need money and that the Government, in order to safeguard the interests of the nation, urgently needs to stimulate further research, both fundamental and applied.

Operating Body Suggested

My suggestion is that the institutions select delegates to a conference, or operating body, chosen democratically. The institutions would be those existing all over the country. The delegates would correspond to a committee of members, like stockholders, of a membership corporation. Such organizations provide for an executive and other necessary committees, officers and a manager, instructed by the executive committee, and, in this case, a method for handling the moneys voted by Congress.

The importance of this body would make it desirable that an officer, possibly the presiding officer, be appointed by the President of the United States. This officer might be the manager, already referred to, of the organization, receiving his instructions from the executive committee. His important function might be the preparation of the budget and its defense, with the cooperation of the executive committee, before appropriate committees of Congress.

It is unnecessary to enter into details of this representative plan except to emphasize that the voting power would be in the hands of the working personnel. Such plans are thoroughly familiar. The most intricate industrial organizations are managed in this fashion.

In order to carry on research, and this is especially important in the case of fundamental research, the plan has the basic advantage that the committee of members would know what is going on at home, in the field, where the work is being done, its resources and the many and great problems on which advance depends.

Coordination Provided For

To the committee of members, all qualified persons—drawn from Government services, whether specialists from the civil bureaus or the armed forces, industrial laboratories, academic institutions—would be eligible. The composition of the executive committee would reflect these various interests. Complete coordination between Government, industry and the colleges and universities would accordingly be provided.

Many persons deplore the situation which has brought about the need for support by the Federal Government. I am not in position to explore an alternative plan, where this function is delegated to the States. I regret, also, that no provision has been made so far for the social sciences, so clearly in very great need.

For these several reasons I hope that more thought still will be given to this serious problem and that without delay.

ALFRED E. COHN.

New York, Dec. 6, 1945.

physicist of Cornell University, and Dr. Oppenheimer's associate at Los Alamos. The world now knows, he said, that American scientists used three methods to develop the formula and any major nation could manufacture the bomb for \$500,000,000. He dismissed as "loose talk" public alarms about the atom's ability to turn the planet into a flaming mass like the sun. Dr. Vannevar Bush, director of the Office of Scientific Research and Development, declared that atomic power should immediately be put to industrial use, but recommended that as a first task, all the Big Powers be invited to form a preliminary agreement on control before jurisdiction passes to the UNO. "Maybe General Eisenhower was right," he concluded, "when he said [the bomb] might blackmail the world into peace."

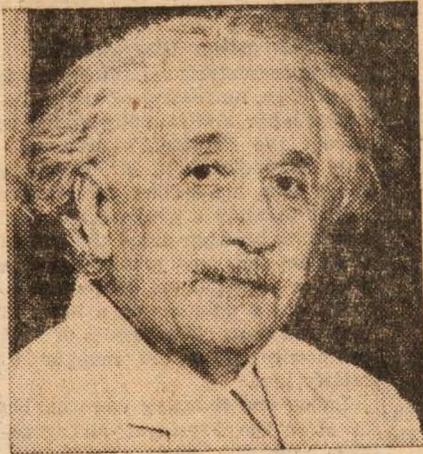
Another phase of the debate—atomic energy's long-range effect on the world—came up in New York forums last week. The National Association of Manufacturers was told by a symposium of nine scientific and industrial experts who had key roles in the bomb's production that industrial use of atomic energy is feasible, that atomic power plants may, in the future, compete favorably with \$15-a-ton coal, that ocean liners are the smallest transportation units which could be powered by the atom. Dr. J. A. Wheeler of Princeton said that "the thing can be done in three to ten years if we have the set-up to go ahead."

Long-Range Effects

Quite another view of atom energy's long-range effect—political and social—was expressed before a meeting of statesmen, scientists and writers by Harold J. Laski, chairman of the Executive Council of the British Labor Party, in New York for a three-day forum on atomic bomb policy. He declared that "there is no nation-state fit to be trusted with the development of atomic energy." He charged American and British "vested interests" with trying to keep the secret of the atomic formula from Russia. Future peace, he said, depends on getting rid of society "dominated by business men; * * * free enterprise and the market economy mean war." Mr. Laski had praise for Russia's concept of government, but what the new world needs, he said, is "a new social philosophy."

NYT
12/9

Here is one Einstein Theory you can understand



DR. ALBERT EINSTEIN, whose $E=mc^2$ formula was the basis for all atomic research, and whose suggestion to President Roosevelt started the atomic bomb project, has just made a suggestion to all of us.

Considering that without him, we and our sons might still be fighting the war... that he is now an American citizen and one of us... and yet a European by birth who understands how other nations feel toward us... shouldn't we give a few minutes' thought and a serious, open mind to what he has to say?

Read this—from what Dr. Einstein said to Raymond Swing, as told in November Atlantic Monthly and December Reader's Digest:

THE RELEASE of atomic energy has not created a new problem. It has merely made more urgent the necessity of solving an existing one... As long as there are sovereign nations possessing great power, war is inevitable... What has been changed is the destructiveness of war...

In a war fought with the atomic bomb, perhaps two thirds of the people of the earth might be killed...

I do not believe that the secret of the bomb should be given to the United Nations organization.

I do not believe that it should be given to the Soviet Union. Either course would be like the action of a man with capital, who, wishing another man to work with him on some enterprise, should start by giving his prospective partner half of his money.

The second man might choose to start a rival enterprise, when what was wanted was his cooperation.

The secret of the bomb should be committed to a World Government, and the United States should immediately announce its readiness to give it to a World Government...

Since the United States and Great

Britain have the secret of the atomic bomb and the Soviet Union does not, they should invite the Soviet Union to prepare and present the first draft of a Constitution for the proposed World Government. That action should help to dispel the distrust which the Russians already feel because the bomb is being kept a secret, chiefly to prevent their having it.

Obviously the first draft would not be the final one, but the Russians should be made to feel that the World Government would assure them their security...

After the three great powers have drafted a Constitution and adopted it, the smaller nations should be invited to join the World Government...

Naturally they should be entitled to propose changes in the Constitution as drafted by the Big Three.

But the Big Three should go ahead and organize the World Government whether the smaller nations join or not.

The World Government would have power over all military matters and need have only one further power: the power to intervene in countries where a minority is oppressing a majority and creating the kind of instability that leads to war...

The establishment of the World Government must not have to wait until

the same conditions of freedom are to be found in all three of the great powers.

While it is true that in the Soviet Union the minority rules, I do not consider that internal conditions there are of themselves a threat to world peace...

Do I fear the tyranny of a World Government?

Of course I do. But I fear still more the coming of another war or wars...

If a World Government is not established by agreement, I believe it will come in another way and in a much more dangerous form...

I appreciate that there are persons who favor a gradual approach to World Government... We have no time to spend in this way. If war is to be averted, it must be done quickly.

We shall not have the secret very long...

I myself do not have the gift of explanation by which to persuade large numbers of people of the urgencies of the problems the human race now faces.

Hence I should like to commend someone who has this gift of explanation—Emery Reves, whose book, *The Anatomy of Peace*, is intelligent, brief, clear, and if I may use the abused term dynamic on the topic of war and the need for World Government.

Who will second Einstein's motion?

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----- CUT HERE — MAIL TODAY! -----
(Message to the State Department)

I second Dr. Einstein's motion for world government and urge our government to promote it, either
 by the method he suggests, or,
 by proposing drastic amendments to the United Nations Charter, or
 by calling a new world constitutional convention.
 (If you have a preference—check)

World Federalists, U.S.A.
29 East 28th Street, New York 16, N. Y.

Enclosed find check for \$_____ to help get action on world government in time to avert an atomic war.
 Send me more information about the program of World Federalists, U.S.A.

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Mail to World Federalists, U.S.A., 29 East 28th Street, New York 16, New York, which will forward your seconding motion to the State Department with those of others.

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for

VETERANS and CIVILIANS

on

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R. S. V. P.

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Let's Face the Facts!

THE HUMAN FACTOR IN THE CONTROL OF ATOMIC POWER

LYMAN BRYSON, LL. D., MODERATOR

Director of Post War Studies, Columbia Broadcasting System

Professor of Education, Columbia University

P A N E L

MAJOR GENERAL G. BLOCK CHISHOLM

Deputy Minister of Health for Canada

*Formerly Director General of Medical Services, Royal Canadian Army
in World War II*

SAMUEL GRAFTON

Political scientist, news columnist and radio commentator

PROFESSOR I. RABI

Nobel Prize Winner

The Pupin Laboratories, Columbia University

PROFESSOR TALCOTT PARSONS

Professor of Sociology, Harvard University, Cambridge, Mass.

DR. BERTRAM D. LEWIN

President, American Psychoanalytic Association

Formerly President, New York Psychoanalytic Society and Institute.

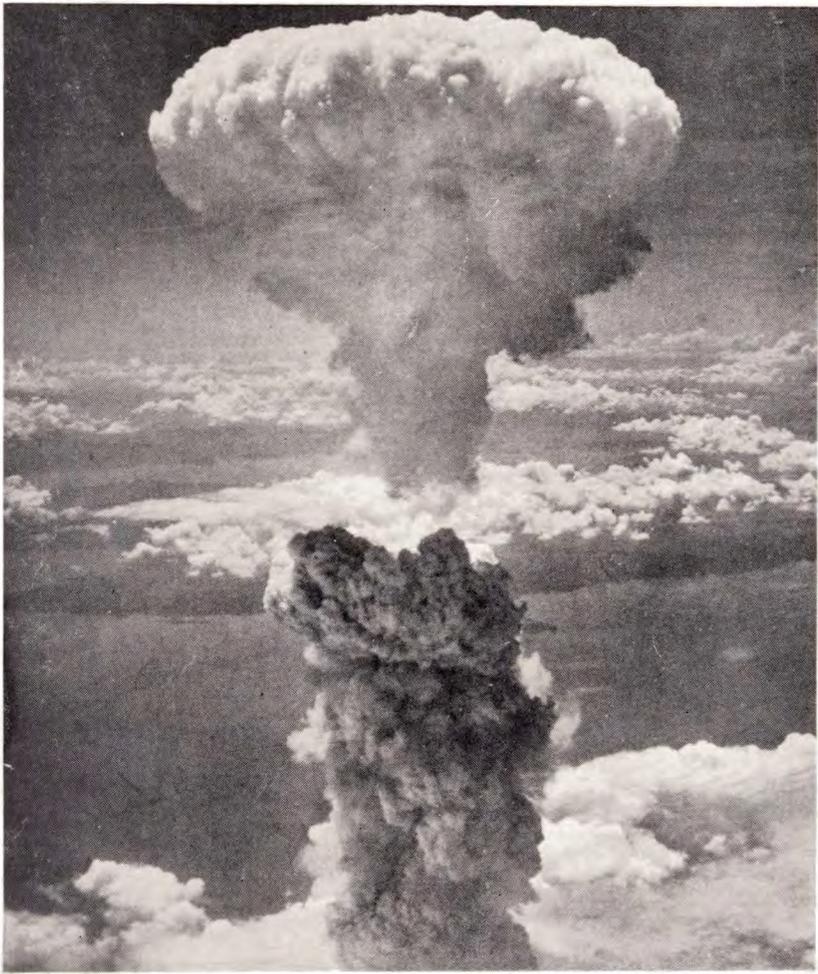
QUESTION-ANSWER PERIOD

FLORENCE ELDRIDGE

HELEN MENCKEN

FREDERIC MARCH

ILKA CHASE



Atomic Age Dinner
of
Americans United for World Organization
Inc.

WALDORF-ASTORIA HOTEL
NOVEMBER 28TH, 1945

Purpose and Program
of
Americans United for World Organization, Inc.

AMERICANS United for World Organization is the only national non-partisan group, devoted to world cooperation for peace, which is political in the sense of striving to bring public opinion to bear upon public representatives. Its record and program rest upon alertness and action. With the advent of atomic energy, it reflects widespread conviction that political leadership must catch up with science if further frightful warfare is to be precluded.

The major purpose of Americans United is to work through the United Nations Charter to develop a representative world government capable of controlling atomic energy and other weapons of war under an accepted code of law. This supports the premise of the President and many other leaders that the United Nations Organization is an important beginning.

Americans United holds that security *and* freedom are inseparable aspirations of all peoples. Therefore, it stands for action making good the specific pledges of the United Nations Charter for diminishing intolerance, repression, injustice and want, so that world organization will have the support and faith of peoples everywhere without distinction as to race, sex, language or religion.

It opposes those elements, alien or domestic, which seek to implant fascist, narrowly nationalistic or imperialistic doctrine.

It opposes governmental secrecy.

It proposes militant, non-partisan action respecting candidates for public office in the light of these principles.

Americans United is made up of earnest, anxious individuals in 31 States, mostly volunteers, who feel the urgency of the times. It is as strong as their convictions are strong.

AMONG OUR GUESTS OF HONOR WE HAVE THE
FOLLOWING SCIENTISTS:

DR. H. A. BOORSE, Associate Professor of Physics, Columbia University
and Barnard College

DR. HARRISON BROWN, Clinton Laboratories, Oak Ridge, Tenn.

DR. EDWARD CONDON, Director, Bureau of Standards, Washington, D. C.

DR. JOHN R. DUNNING, Physicist and Director of War Research,
Columbia University

DR. ALBERT EINSTEIN, The Institute for Advanced Study*

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DR. J. ROBERT OPPENHEIMER, Director Los Alamos Laboratory

DR. I. I. RABI, Professor of Physics, Columbia University

PROF. WINFIELD W. RIEFLER, Institute for Advanced Study,
Princeton, N. J.

DR. WILLIAM SHOCKLEY, Research Physicist, Bell Telephone Laboratories

DR. HENRY D. SMYTH, Author of "Atomic Energy for Military Purposes"

DR. LEO SZILARD, Physicist, University of Chicago

DR. HAROLD C. UREY, Physicist and Chemist, Awarded Nobel Prize for
Heavy Hydrogen, University of Chicago

DR. JOHN ARCHIBALD WHEELER, Associate Professor of Physics,
Princeton University

AND

HIS EXCELLENCY, DR. WEI TAO-MING, Ambassador of Republic of China

* Dr. Albert Einstein absent because of illness.

Program

Invocation

THE RT. REV. G. ASHTON OLDHAM

RAYMOND SWING

Toastmaster

Introduced by Mrs. J. Borden Harriman, Acting President for
Americans United for World Organization, Inc.

DR. HENRY D. SMYTH

Author of "Atomic Energy for Military Purposes"

SENATOR BRIEN McMAHON

Chairman of the Senate Select Committee on Atomic Energy

WILLIAM L. LAURENCE

Science Editor for the New York Times

SAMUEL L. M. BARLOW

Commentator, Lecturer and Author

GENERAL CARL A. SPAATZ

U. S. Army Air Forces

COL. PAUL W. TIBBETS, JR.

U. S. Army Air Forces, who dropped the bomb on Hiroshima

During the evening the following features will be shown:

"HOW TO BE EXTINCT"

A dramatic presentation by the Writers' Board starring
Fredric March

"WORLD CONTROL OR ATOMIC CHAOS"

A film showing the atom bomb as a destroyer
Arranged by *Spyros Skouras*

A Film

"HYMN OF THE NATIONS"

Conducted by *Arturo Toscanini*

Menu

HALIBUT FLAKES GABRIEL
RUSSIAN DRESSING

- - -

PETITE MARMITE HENRY IV .

- - -

HEARTS OF CELERY RIPE AND GREEN OLIVES
SALTED NUTS

- - -

BREAST OF CHICKEN ASTORIA
WITH TOMATOES AND MUSHROOMS
SMALL ROASTED POTATOES
SMOTHERED NEW PEAS

- - -

MANHATTAN ROCHER
BLUEBERRY SAUCE
PETIT FOURS

- - -

DEMI TASSE

Statement of Dr. Albert Einstein

In a letter to a member of Americans United, Dr. Einstein wrote:

"In reply to your inquiry I can only repeat the statement I have made at various times that in my opinion the only way in which mankind can save itself from destruction is by the organization of a world government. The weapons of modern warfare have developed to such a degree that it seems probable that in another world war the victor would suffer only less than the vanquished. As long as there are sovereign states with their separate armaments, the prevention of war is well nigh impossible. It is my belief that most of the people of most of the countries of the world would prefer peace and security to the preservation of the unrestricted national sovereignty of their respective countries. The only way of realizing that world-wide aspiration is by the creation of a world government which would inaugurate a reign of law around the earth.

Yours sincerely,

(signed) A. EINSTEIN"

AMERICANS UNITED FOR WORLD ORGANIZATION, INC.
465 Fifth Avenue, New York 17, N. Y.

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Laski Declares Free Enterprise Is Road to War

HT 12/4

Asserts Socialism Is Only Alternative to World's Ruin in the Atomic Age

Professor Harold J. Laski, chairman of the British Labor party, asserted last night that free enterprise economies must be scrapped because they lead to war, which, in the atomic age, would destroy civilization.

"There is no middle way," he contended. "Free enterprise and the market economy mean war; socialism and planned economy mean peace. All attempts to find a compromise are a Satanic illusion. We must plan our civilization or we must perish."

Speaking in the Astor ballroom at a dinner closing the three-day atom-bomb forum held by The Nation Associates, Professor Laski charged bluntly that even though atomic energy is no secret, American and British "great vested interests" are trying to keep the "secret" from Russia.

"You know the result—a halt to confidence and the rise of ugly suspicions about the imminent chances of a third world war," he said.

The fifty-two-year-old British Labor chairman, a prolific and leftish writer and speaker, summarized in this way his answer to the challenge of the atom bomb:

"Every implication of this discovery means planned internationalism, economic, social, political. It is an international discovery. The planning of its application has been international. The organization of its future use must be international also. There is no nation-state fit to be trusted with the development of atomic energy."

Another speaker advocating truly international solution of the atomic problem, so beset with

either great horror or great good, was Dr. Leo Szilard, of the University of Chicago, a scientist who stands probably among the first half-dozen men responsible for the atom bomb.

Asserting, in effect, that American, British and Canadian statesmen are not enough afraid of atomic energy in their approach to the problem of its control, Dr. Szilard said the reason was probably that they do not understand or appreciate its revolutionary and non-earthly nature.

Dr. Szilard said that before America hit Hiroshima with the first atom bomb he and some sixty other atomic scientists felt that America should not set the precedent of using the bomb. After Hiroshima, he said, the scientists were asked by the government to be extremely cautious in their public utterances about atomic energy.

"Most of us," he said, "responded to this request because we took it to mean that Hiroshima was being followed by discussions between the United States, Great Britain and Russia, as indeed it should have been."

Instead, he went on, he and many scientists were dismayed to find that the next development was introduction of the May-Johnson bill in Congress, calling for strictly domestic control of atomic energy.

Evatt Urges Co-operation

Other speakers listed for the dinner of The Nation Associates, an organization formed by the magazine "The Nation," were Dr. Herbert V. Evatt, Australian Foreign Minister; Mrs. Franklin D. Roosevelt; Freda Kirchwey, editor of "The Nation," and Leon Henderson, who presided.

Dr. Evatt, who spoke by radio from Los Angeles, asserted repeatedly that the atom-bomb threat automatically demands from all nations the fullest possible co-operation toward building international good will, toward making the United Nations Organization a workable reality that will end war.

Professor Laski, a former lecturer at Harvard and Yale, making his first visit to the United States in six years, was emphatic in linking the atom bomb and future war problems to the project of getting rid of society "dominated by business men."

"It is clear to any honest observer," he said, "that a society dominated by business men could not be trusted to create the mental climate in which the development of atomic energy would be confined within the framework of peace. They would not give the common people the education because they fear its outcome."

"It is the business man who has split our society into two—the political society and the economic society. They have made the policeman the sanction of the first, and the threat of starvation the sanction of the second."

"There is only one country in the world today where this dichotomy has been transcended. There is only one country, also, where science and technology can be developed without sacrificing the ed-

ucation of man and fearing the break-down of social well-being, or community consciousness.

"It is significant that only in the new world of Russia has the business man ceased to count. It is also significant that one of the major preoccupations of the great vested interests is how to keep the 'secret'—which is no secret—from the knowledge of Russia."

Professor Laski said that "our" schools, colleges, universities, foundations, churches and press are instruments or branches of "big business." He said that the requirement of today is a new "democratic culture in a free country."

"That prospect," he went on, "rouses fear and distrust in that middle class whose triumph was slowly achieved in the 300 years after 1600. . . . Their day is over. Their thought is bankrupt, their ethical values are obsolete, their dogmas an angry anachronism. A new social philosophy is necessary for a new world. Let us admit that it can be born only of a new social order."

Mrs. Roosevelt, who talked briefly about the need for international co-operation, was introduced by Mr. Henderson as the person whom he would like to see appointed as American representative in the United Nations Organization.

Dr. Harold Urey, a leading atom bomb scientist, was an unscheduled speaker. He drew uneasy laughter with the remark that the future history of the world might not be so long if atomic energy is misused. And he said that he wished the statesmen busy on atomic control would use as much imagination in breaking with past formulae as did the scientists who developed the atomic bomb.

Pickets Assail Laski

About 2,000 persons attended the dinner meeting, and they regarded Professor Laski's speech as the high point of the evening, applauding him again and again.

Professor Laski's presence at the hotel was protested before the meeting by about twenty pickets covering the Broadway, Forty-fifth and Forty-fourth Street entrances of the Astor. They said that they represented various Roman Catholic Holy Name Societies in New York.

They carried signs with such legends as: "Oust Laski, the anti-Catholic hate-monger," and "American condemn all hatreds, even anti-Catholicism," and "Franco saved Spain from the Reds, Mr. Laski."

Their reference was to recent speeches of Professor Laski assail-

ing Franco Spain. In one of these, in a radioed speech to a Spanish Republican rally in Madison Square Garden, he called the Roman Catholic Church in Spain "a rich monopoly."

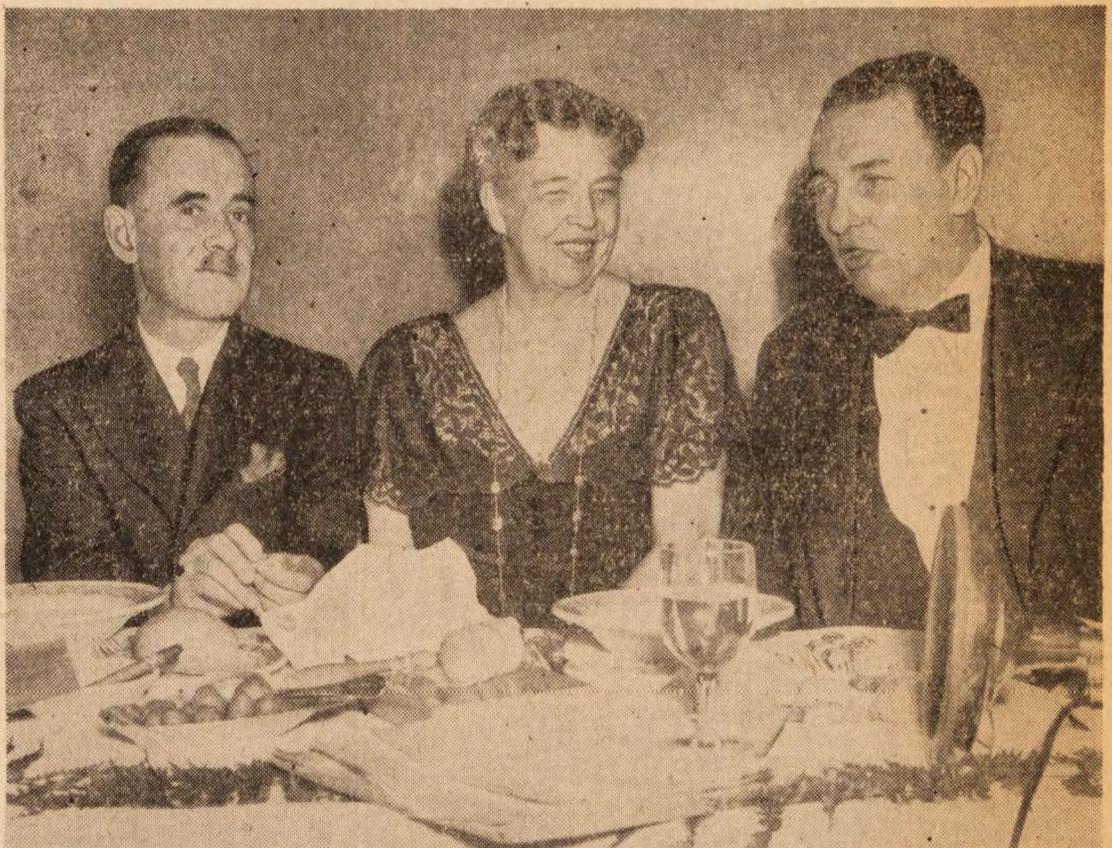
Professor Laski acknowledged the pickets' protest to the extent of prefacing his address with the remark that he had been attacking Franco Spain's use of the Catholic Church for anti-democratic purposes, but that he had not been attacking the Church itself.

Declaring it had been reported that he "assailed the Roman Catholic religion all over the world," Mr. Laski said: "Nothing could be more fantastic or untrue. My life has been devoted to advocacy of tolerance wherever tolerance may be found."

He referred to the Vatican as "a state widespread and powerful in influence, though small in territory." He insisted that he had the same right to criticize the Vatican as he has to criticize Britain.

Charging that the Vatican had "assisted in the massacre of a great democracy," Mr. Laski said he distinguished "between the right of men and women to hold a full faith in the religious beliefs they hold and the right of a political state arising out of those beliefs to turn to principles not built on a democratic foundation."

British Labor Leader Talks Here as Pickets March



Professor Harold J. Laski (left), chairman of the British Labor party; Mrs. Franklin D. Roosevelt and Leon Henderson at the atomic-bomb conference at the Hotel Astor last night

20 Vesey Street

Barclay 7-1066

New York 7, N. Y.

For Release:

ADDRESS BY DR. LEO SZILARD, ATOM BOMB
SCIENTISTS, METALLURGICAL LABORATORY,
UNIVERSITY OF CHICAGO, AT THE DINNER
FORUM OF THE NATION ASSOCIATES,
DECEMBER 3, 1945, HOTEL ASTOR.

On the 3rd day of March 1939 Dr. Walter Zinn and I performed a simple experiment on the seventh floor of the Pupin Building at Columbia.

After two days of preparations, everything was ready and all we had to do was to turn a switch, lean back and watch the screen of a television tube.

If flashes of light appeared on the screen that would mean that neutrons were emitted in the fission process of uranium and this in turn would mean that the large scale liberation of atomic energy was just around the corner.

We turned the switch and we saw the flashes.

We watched them for a little while and then we switched everything off and went home.

That night there was very little doubt in my mind the world was headed for grief.

This crucial phenomenon was independently discovered just about the same time by Anderson and Fermi, and by Halban, Joliot and Kowarski.

They used different methods but arrived at the same conclusions and I have, therefore, good hopes that my own plea of not guilty will receive merciful consideration in the heavenly court of justice.

From March until October in 1939 work in this field was carried on by a handful of men who lacked many of the things they needed but most of all lacked official recognition.

From October 39 until the end of 41 we still lacked many things which we needed but in addition to this we suffered from having official recognition.

I wonder whether the real story of this period will ever be told.

It is a story of heartbreak and frustration.

During this period we became more and more concerned, as time went on, about what the Germans might be doing and this made our slow speed all the more intolerable.

As Dr. Urey once said, it was like a nightmare.

At the end of 41 there was an important change for the better.

This change came in the wake of a visit from overseas by Dr. Oliphant of Birmingham, England.

If Congress knew the true history of the atomic energy project, I have no doubt but that it would create a special medal to be given to meddling foreigners for distinguished services, and Dr. Oliphant would be the first to receive one.

During 43 and early in 44 we were seriously worried about the possibility that Germany might spring a surprise on us.

Today we know that the German scientists did not know that atomic bombs were within the realm of practical possibility and their work was not directed toward such a goal.

In 45 we began to worry about how we ourselves might make use of our bombs.

In July about sixty of us at Chicago expressed the view that Japan was essentially defeated and that it would be wrong to attack her cities with atomic bombs as if such bombs were merely another military weapon.

Many of us felt that the United States ought not to set the precedent of using atomic energy for purposes of destruction.

As you know these views did not prevail.

After Hiroshima we were requested to exercise the utmost discretion in our public expressions of opinion.

Most of us responded to this request because we took it to mean that Hiroshima was being followed up by discussions between the United States, Great Britain and Russia as indeed we think it should have been.

Naturally we did not want to make public statements at the risk of embarrassing the President or the Secretary of State if they were engaged in such discussions.

On the 9th of October however, it transpired that the earlier request for exercising discretion arose from a desire of having the May-Johnson Bill passed -- I quote -- "without unnecessary discussions in Congress."

Thereupon the Atomic Scientists of Chicago issued a manifesto calling for adequate hearings in Congress and thus began the fight of the scientists against the May-Johnson Bill.

Turning our attention to the international problem which is involved, we may take encouragement from the fact that this has so far not become a political problem.

The essential difference which you may observe in Washington is not between Democrats and Republicans or between Progressives and Conservatives

but rather between those who have understood what atomic bombs mean and those who have not.

It would seem therefore necessary somehow to give everyone a conception of the essentially non-terrestrial nature of the atomic bomb.

I used to think that this could be achieved by explaining what atomic bombs are and just what they will mean in the future.

It may not be possible however to get across this message to the majority of people within Congress or without.

It may be necessary to impress the senses as well as to impress the mind.

To most men it makes all the difference in the world whether they read about the bombardment of a city or whether they actually live through such a bombardment.

And perhaps it is true of all of us that we would have no conception of a thunderstorm if we read an accurate description of the flash of light, representing the lightning, which is followed, after a period of silence, by the noise, representing the thunder.

It is probably true of all of us that we have to live through a thunderstorm before we know what a thunderstorm is.

The most important contribution towards putting our foreign policy on a sound basis might therefore consist in a demonstration of atomic bombs staged for Members of Congress, the President, and such others as may benefit from it.

Those of my friends who saw the test in New Mexico tell me how shaken they were by the phenomenon which they witnessed.

Most of them were at ten miles distance or farther and the effect would be even greater if the demonstration were watched from somewhat nearer.

Let me try then to reduce to a simple formula what I believe to be the difficulty that we have to overcome.

Politics has been defined as the art of the possible.

Science might be defined as the art of the impossible.

The crisis which is upon us may not find its ultimate solution until the statesmen catch up with the scientists and politics, too, becomes the art of the impossible.

This, I believe, might be achieved when statesmen will be more afraid of the atomic bomb than they are afraid of using their imagination, because imagination is the tool which has to be used if the impossible is to be accomplished.

It is no more difficult to make inventions in the field of human relation-

ships than it is to make inventions involving neutrons and protons.

It is quite true that you cannot change human nature but neither can you change the nature of neutrons.

This is an undeniable fact yet no physicist would keep reminding us of it just because he personally feels unable to design machinery in which neutrons would perform as we wanted them to perform.

There is nothing wrong with human nature, but either the statesmen display too little imagination or maybe the scientists display too much of it.

It might be better for the world if it were the other way around.

Naturally, I am not really worried about the future, except perhaps the next fifteen years.

If we manage to get through the next fifteen years and be still alive, we will probably emerge immune to atomic bombs.

Having thus completed my speech, I ought to sit down now but I hesitate to do so without having at least made an attempt towards a positive contribution.

It seems to me that the greatest danger which faces us at present is the possibility of a war which would arise more or less automatically out of an arms' race in which the U. S. and Russia built up stockpiles of atomic bombs.

Is it possible to avert this danger?

Let us assume that the U. S. and Russia agreed to have no stockpiles of atomic bombs and to permit no manufacture of atomic bombs on their territory.

Let us, moreover, assume for the sake of argument that they both reserve the right to abrogate this arrangement at any time.

Could Russia and the U. S., under present-day conditions, make arrangements through which they could convince each other, as well as other nations that secret violations of the agreement would be detected and would become known to the world?

My answer to this question is emphatically "Yes"!

Clearly the arrangements would have to include the right of inspection on the part of some international agency which might be set up under the UNO.

I do not propose however to discuss tonight this more or less mechanical aspect of the question, but rather emphasize another aspect of it.

If Russia and the U. S. wanted to reassure each other concerning Secret Violations they might go about it in the following way:

After the agreement is ratified and became the law of the land, the

President of the United States could call on all-American engineers and scientists and ask them to pledge themselves to report to an international agency all Violations committed on the territory of the United States.

The Espionage Act would have to be modified so that it should no longer cover information of a scientific or technical nature, whether or not it may relate to the national defense.

All men classed as scientists or engineers would be invited to spend each year four weeks' vacation, or six weeks if you wish, abroad with their families as guests of the United Nations Organization.

The Russian government would be expected to take similar action with respect to its own scientists and engineers.

These vacations abroad would give an opportunity to all those who wish to report secret violations to secure immunity by staying abroad rather than returning home after having delivered their report.

Clearly, the vast majority of American scientists and engineers would respond to such a request by the President of the United States, and would not hesitate to report any illicit activity.

My knowledge of the Russians is far less complete -- but even if only a small percentage, say 10 per cent, of them responded, as the Americans would respond, they would represent a far more reliable source of information than the body of foreign inspectors whose activities they would supplement.

Secret violations of the agreement would in these circumstances be risky undertakings indeed.

If time permitted we could examine to what extent we could remove any incentive which Russia or the United States might have towards invoking their legal right and abrogate such an agreement after it had been in operation for a number of years.

We cannot go into these questions tonight.

An arrangement of this sort can, of course, not rule out the possibility of war, and in case of war, sooner or later, atomic bombs would drop from the skies.

Yet under such an arrangement war would break out only if one of the parties actually decided to start an arms' race and risk a war.

It would give us a respite which would be worthwhile to have provided we know how to make use of it for building a permanent peace.

Speakers



Freda Kirchwey
Editor, The Nation



Leon Henderson
Chairman



Mrs. Franklin Delano Roosevelt



Dr. Leo Szilard
Metallurgical Laboratory
University of Chicago



Dr. Herbert Vere Evatt
Foreign Minister of Australia



Professor Harold Laski
Chairman, British Labor Party



The Star Spangled Banner
Mme. Marcelle Denya

Menu



Grapefruit Fruitiere



Petite Marmite Croute au Pot
Celery Olives



Baked Filet of Sole Creole
Rice Pilaff



Braised Smoked Beef Tongue
Homemade Noodles
Maderia Sauce



Roast Milkfed Chicken Americaine
Celery Dressing
Potatoes Rissolees
New Peas Etuvee



Bombe Patriot
Petits Fours



Demi Tasse

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The Soviet Union and the Bomb

Helen Gahagan Douglas - M. J. Coldwell - Walter Millis

Atoms and Industry

Stuart Chase - Boris Pregel - James B. Carey

The Problem of Control

Edgar A. Mowrer - Thomas K. Finletter - L. N. Ridenour

The Dinner Forum

Leo Szilard - Harold C. Urey - Herbert Vere Evatt

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*Special Supplement Containing the Addresses Delivered at the Annual
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December 22, 1945

In two parts: Part Two

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THE *Nation*

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NUMBER 25, PART 2

I. IS SECURITY POSSIBLE?

Introductory Note

The addresses in this supplement were delivered at the four regular sessions and the dinner which comprised the three-day forum on "The Challenge of the Atomic Bomb" conducted by the Nation Associates at the Hotel Astor in New York on December 1, 2, and 3. The editors have tried to give as complete a resume as possible of the material presented at the forum. Space limitations have, however, necessitated condensation and deletion which we regret. The discussion from the floor could not be reproduced even in part, although it was of high quality and contributed greatly to the interest and value of the proceedings. We want to take this opportunity to thank all the participants, active and passive, for their help in making the forum a success; and to inform our readers that mimeographed copies of the complete texts of addresses are available in limited numbers.—EDITORS THE NATION.

The Pattern of Destruction

BY HENRY DEWOLF SMYTH
*Chairman, Department of Physics,
Princeton University*

ANYONE who has been associated with the Manhattan Project for five years must believe that anything is possible. I am not willing to say that there cannot be any military defense against the atomic bomb, but I do not at present see any likelihood of an *adequate* military defense.

Atomic weapons put a high premium on surprise attack. Defense against such an attack therefore becomes the problem of maintaining in peace time for twenty-four hours of every day, year in and year out, a system of radar networks covering this entire country, together with constantly alert anti-aircraft and fighter-plane defense. The cost of such a system of defense both in terms of taxes and of implications for our attitude as a nation makes it an expensive program in every sense of the word. Even if it were attempted, I doubt that it could possibly be completely effective. It has been said recently that we could develop a system for exploding atomic bombs at a distance before they reach this country, even if they come as rockets or jet-propelled planes. To evalu-

ate such a statement, it is necessary to consider what has already been published about the nature of the atomic bomb.

The atomic bomb depends for its power on a neutron chain reaction in U-235 or in plutonium. The nature of this reaction is such that it cannot take place in less than a certain amount of the material, known as the critical size. In other words, if we have less than the critical size of U-235 or of plutonium, an atomic explosion cannot occur. If, on the other hand, we have more than the critical size, there will always be some neutrons present from cosmic rays and these neutrons will suffice to start a chain reaction. Thus, for less than the critical amounts of atomic explosive it is impossible to start an explosion; for more than the critical amounts it is impossible to prevent an explosion. No official statement has been made of what the critical amount of plutonium or U-235 is, but an early estimate has been published which indicates that for U-235 the critical amount is between 5 and 250 pounds. No official statements have been published as to just how the atomic bombs that we have used operate, but evidently they are detonated by the sudden bringing together of subcritical amounts of the explosive material.

These facts have a bearing on the statement that atomic bombs could be exploded at a distance. Such an explosion is obviously impossible by any direct action on the explosive material in the bomb itself. To set off the explosion when desired, any action must be indirect and would have to be on fuses or other auxiliary equipment in the bomb. Thus, the problem becomes exactly similar to the problem of exploding any other kind of bomb at a distance. We are forced back, therefore, on the methods used for ordinary bombs or for the German V-1 or V-2 bombs. It was possible to destroy many V-1 bombs by firing at them shells aimed by radar control and containing proximity fuses, because the V-1 bombs flew at low altitudes and at relatively low velocities. So far as I know, no defense was successful against V-2 bombs. The nature of the atomic bomb and the speed of its approach make it highly questionable that any anti-aircraft or other defense can be developed against it which will be one hundred per cent effective. Some atomic bombs would inevitably get through, and it would need only a few atomic bombs penetrating the defense to cause destruction. It is perhaps conceivable that we might develop some sort of counter-weapon against atomic bombs carried in V-2 projectiles. I confess that at present the problem of developing effectively

such counter-weapons seems to me impossibly difficult.

There is an incidental point here which may be of interest, although it is not directly concerned with defense. Since rocket bombs might be sent in a few moments from any spot on earth to any other spot, it could well prove impossible, in the event of an attack by atomic bombs, to know from which country the attack had come.

The atomic age has made possible still another method of surprise attack. There is no scientific reason why atomic bombs cannot be shipped in trunks or boxes in peace time to key industrial and population centers, and detonated at the moment desired by remote control wireless or other means. Atomic bombs last for a long time after they are made, and can be stored or hidden with slight possibility of detection. As we know from the facts about them which have already been published, they do not explode until properly detonated. Against such secretly planted atomic bombs the only conceivable defense would be an elaborate peace-time system of coast and frontier guards, and continuous X-ray inspection of every item of freight or baggage coming into this country. I do not believe such a permanent defense system could be maintained with anything near complete effectiveness. But even if it could be maintained, its implications would certainly make much more difficult our peace-time relations with other countries.

There have been various methods suggested for defense against atomic bombs on the international level. These are chiefly police methods of inspection and control. It seems to me too early to pass judgment upon such methods, which have not yet been clearly outlined. I would only comment in passing that history has shown us that police methods, however necessary, are never more than a partial and imperfect solution for social unrest.

The atomic age is here. War in this age would almost surely mean surprise attack. Defense against such attack along the lines I have indicated might be possible with vast expenditure, great and sustained effort, and in the open atmosphere of international suspicion. Such defense measures could never, in my opinion, be completely effective. Our best possibility for survival in an atomic war would be to have our industries and population dispersed, many of our factories and bomb plants underground, and launching platforms for atomic rockets located throughout the country so that in the event of attack we would retaliate, even though our cities and industries were largely annihilated.

There is still one other alternative for defense against the atomic bomb. It is to build with our fellow-nations a world in which there is no need to resort to war.

On the question of the value of secrecy, I would like to point out only one or two aspects.

The fundamental principles on which the atomic bomb is based were well known to scientists everywhere by 1939. There are at present two categories of secrecy about atomic energy maintained by this government. One category consists of technical tricks of manufacture and final assembly of the bomb itself. The second category consists of a mass of information, acquired in the last five years, about artificial radioactivity, the biological effects of radiation, and other scientific topics bearing only indirectly on the production of atomic bombs. I do not believe we should release at pres-

ent the first category of secret information, that is, the technical tricks of making the bomb. To be sure, any industrial nation can learn these tricks for itself within a few years and probably improve on them. But I do not see why hurriedly showing other nations how to make bombs is going to further world peace. I believe the information we now have on how to make atomic bombs should be released only to an international agency able to maintain control of them. But I do believe we should release a great part of the second category of secret information, that is, the information on nuclear energy acquired in the last five years and not directly concerned with making atomic bombs. This information would be of the greatest value to such sciences as medicine and biology and to engineering and industry generally. It is absolutely essential for further developments in physics and chemistry. To keep this information secret any longer is to retard seriously our development in many fields. If we release it nationally and internationally, we would evidence our intention to cooperate fully with our fellow nations and to return to that free interchange of ideas which is the tradition and strength of science and of the whole field of thought.

The most important technical resource of a nation is neither raw materials nor equipment, but educated men. Obviously we will need an increasing supply of such men in the post-war period. Under war-time policy the training of such men practically stopped. The policy of the Selective Service has made students in the sciences almost non-existent. The resumption of training must be encouraged in every possible way. The scientific men from the universities on the war-time projects should be returned as soon as possible to their normal activities of teaching and research. The welfare and safety of this country can be assured only by leaving them free to pass on what they have learned to a new generation of educated and trained men. If we lock our scientists up in secret laboratories, neither they nor the country will develop. The free interchange of ideas, nationally and internationally, is the strength of science, as indeed it is of every other department of men's lives.

Ideas are a common inheritance from thoughtful men in all countries and all civilizations. To speak of continued secrecy in the field of thought and discovery is to deny our moral birthright and the very tradition which has brought us this far from savagery. Secrecy in any field in peace time is fatal to man's growth and to any hope for a world society.

FORUM PROGRAM

I. IS SECURITY POSSIBLE?

December 1, 9:30 A. M. Presiding: Freda Kirchwey

II. THE SOVIET UNION AND THE BOMB

December 1, 2 P. M. Presiding: Freda Kirchwey

III. ATOMS AND INDUSTRY

December 2, 9 A. M. Presiding: J. King Gordon

IV. THE PROBLEM OF CONTROL

December 2, 2 P. M. Presiding: Edgar A. Mowrer

V. DINNER FORUM

December 3, 6:30 P. M. Presiding: Leon Henderson

Facts About Defense

BY IVAN A. GETTING
*Massachusetts Institute of Technology;
 consultant for War Department*

MY ROLE in this war was in developing those parts of radar applications which had to do with anti-aircraft control, with the guidance of strategic and tactical bomber missions, with the use of radar in directing buzz-bombs and other types of guided missiles. I appeal to this experience in presenting my arguments because obviously I cannot go into all the technical details, all the figures and theories and scientific knowledge which are required to arrive at some of the statements I shall make.

The problem of a defense against any weapon can be divided into two main parts. Let us consider explosives, regardless of whether they are atomic explosives or something mild like the usual high explosive. The first part of the problem is to prevent the enemy from putting the explosive where he wishes to put it. The other is what you do at the place where you expect the explosive to be put.

In the first case, you do everything possible to keep the enemy from finding out where to put the explosive and from arriving at the spot—you mislead him, jam his radar, ruin his communication, and so forth. In the second case, you try to protect yourself bodily from the explosive itself. This you do by scattering, going underground, building huge concrete structures, and by many other methods.

Considering this problem in terms of atomic explosives, we must ask, first: What is the probability that from a technical standpoint we can effectively prevent the enemy from getting the explosives to our front door? The use of the parcel-post or of trunks as conveyors of atomic explosives is not a matter on which scientific opinion is of any particular value. Your opinion is as good as mine. But on the question of delivering explosives by means of long-range rockets, V-2's, airplanes, guided ships, and such things, I believe I have something to contribute.

We developed during the war several navigation systems which depend on radio and radar. Some of these systems will be adopted after the war for commercial use. The whole world will soon be covered by a radio network which will make it possible to navigate an airplane or navigate a ship from any point on the earth to any other point well within the accuracy of about one mile. This means that any potential enemy is provided with an automatic way of delivering atomic bombs by conventional aircraft using conventional auto-pilots with a conventional "Loran" receiver—that is the code name of this system. We need not wait for those rockets which fly from one side of the earth to the other. Today, with existing equipment, existing bombs, existing aircraft, existing navigational aids, we can already fly from any one part of the world to any other without a single human operator in the aircraft.

You may say that when the war breaks out we can just turn off these "Loran" stations. You may, but the enemy may not. It is a simple thing for him to set up his own system, which he turns on after the first night, because on the first night he certainly can use our system, the international

"Loran" system. It is perfectly possible for the enemy to set up at remote places of the earth or in the middle of the ocean, by means of submarine or other types of ships, radio light-houses which will guide the normal aircraft on its mission. I will admit, as an expert on anti-aircraft and on radar and on gunnery, that we could shoot these planes down. However, we must consider the frailty of human beings. In the defense of London against the buzz-bomb, the British Army deployed three hundred batteries of heavy anti-aircraft guns. These batteries were equipped with the most modern radar developed in the radiation laboratory, with computers developed by a well-known laboratory here in New York, and with American and British guns. It is true that after six weeks we were shooting down over 90 per cent of the buzz-bombs. Only eight per day arrived in London. However, in the first few weeks over 40 per cent got through. It took constant drill, exercise, education, practice with real live bait before the efficiency of the troops had risen to 90 per cent from the original 60 per cent.

It was very lucky for us that the buzz-bomb was a well behaved airplane. It flew in straight lines, at a constant speed, and that is just what we like in anti-aircraft. If the Germans had had any sense they would have forced these missiles to fly in curved, jerky courses, and this could be done. They also would have added what we were adding at the radiation laboratory, radar remote control by which a man sitting back in Paris could have guided these things by a little joy-stick in front of automatic plotting equipment and brought the buzz-bomb to the correct site on any type of course he desired.

So it is true London was saved from TNT by modern anti-aircraft—but let us look at the obvious. If any of those eight buzz-bombs that arrived in London each day had had a ton load of the type of bomb we used in Hiroshima or Nagasaki, London would not have been saved.

Now it was fortunate that we had three hundred batteries in England. It was fortunate that the buzz-bomb was so close to the conventional aircraft. Suppose that the buzz-bomb had been a new device? How long would it have taken us to get ready for it? It takes from a year to five years to develop a military weapon; even after you know just how to go about it. It takes six months to a year to train troops and then another space of time to get the equipment into the field with spare-part depots in the right places.

So, we must accept the fact that if the enemy develops a new way of bringing atomic bombs to our doorstep, and if it happens that no one was smart enough to have thought up, one to five years ahead of time, a defense weapon with which to stop that particular missile, then we can do nothing about it except take the punishment, if we can. Take as a small example the V-2 bomb. The same radar



Ivan A. Getting

that was used against the buzz-bomb was also used to track the V-2. It was my group at the laboratory which had developed the SCR-584. They were my boys who in Belgium and England were putting this equipment to proper use. Now we could pick up the V-2's by radar. We could track them, provided we were located in a reasonable position. We could tell within two or three city blocks where the V-2's were going to land. *We could not stop them.* The V-2 lent itself to almost no method of successful counter-defense. Any missile which is designed for speeds above the velocity of sound is tapered with such a sharp nose that, hit head-on by radar, it is the best camouflage target you could design. The radar energy is scattered in all directions and none of it comes back to you. You cannot see the V-2 with radar except from the flank. It is true, of course, that enough radar stations placed up and down the coast could provide data as to where the V-2's were heading. And if these data were sufficiently accurate, it would be presumably possible to send your own missiles into the air and meet these V-2's; but here again there are many problems.

A V-2 is a steel structure. It can be armored. It is moving very rapidly—six times as fast as sound—so that anything that strikes it will in truth be itself struck head-on at a glancing angle; under these circumstances the effective strength of the steel will be much greater than that of any ordinary missile which can be sent against it. There is no way to stop V-2's except by disintegrating them or by actually colliding with them with a mass approximately their own size. In making a study of this problem for the United States Army, I could not find any hopeful way—nor could my colleagues find any way; nor could the British find any way—to stop them; and this is a matter of military record. The V-2 is simply one device. Given a little time, I am sure every scientist and engineer in this country can dream up other methods of delivering atomic explosives. And while I believe that, if you gave me enough money and enough men, I might be able eventually to shoot down a V-2, I will never guarantee to shoot down any new thing that you may think up. Since the aggressor, in the next war, will have the advantage of surprise, I will still have to beg for from one to five years to develop a defense (assuming that I know how) against new ways of delivering atomic explosive.

The atomic bomb has introduced one chief new element into the problem of defense, and that is its tremendous intensity. In the last war of the previous era—now just behind us—if we shot down from 5 to 10 per cent of the German planes, or if the Germans shot down from 5 to 10 per cent of our planes, the morale of the pilots cracked. It was possible then to say that anti-aircraft was a very important defensive weapon because it was able to destroy more than 5 to 10 per cent of the German planes that came over. But 5 to 10 per cent losses did not demoralize the buzz-bombs. Nor did 90 per cent demoralize them; it just increased the cost to the Germans. Atomic explosives demand not 90 per cent, but 100 per cent defense. This, we do not know how to achieve.

The conclusion to which we are driven, as men experienced in designing equipment and seeing it put into the field, is that there is no adequate defense possible against atomic explosives when the enemy has a free choice of all the possible technical ways of delivering such explosives.

Cooperation is the Key

BY VICTOR WEISSKOPF

*University of Rochester; member of
Association of Los Alamos Scientists*

THE problem of international control of the bomb is a political one, not a scientific one. The question as to whether control is technically feasible is misleading. Of course if you have access to *all* production facilities you can find out where a bomb is made. If, however, a country is resolved to deceive the world, it will be able to do so. One can probably fabricate bombs underground and avoid any radio-activity to penetrate to the outside. It will be expensive, but it is a soluble problem. If a country is out to break the rules, no control system is sufficient.

It should not follow from this that goodwill among nations alone is sufficient. Control is necessary to establish confidence, especially if it makes a circumvention of the agreement difficult, and if special effort and elaborate deceit have to be used to break the agreement.

There are a few points in the character of our problem that make a partial control more efficient than it seems at first glance. The personnel that has to be used for atomic bomb development is very specialized and limited in numbers. The key nuclear scientists are well known. The industrial methods are completely different from those in any other production, and are easily recognizable if no specially great effort is put into camouflage.

It seems, therefore, that measures which may appear weak and insufficient have a chance to go further than one may think. For example, if the pre-war collaboration between scientists is reestablished, and if scientists are encouraged by their own governments to exchange scientific views and results in frequent international meetings, then it would be hard to have the key nuclear physicists in one country work on atomic-bomb development without arousing the strong suspicion of their colleagues in other countries. The problems in modern physics are new and hard and they need concentrated effort. The atomic bomb will not be developed successfully by scientists unknown to the rest of the world.

A more radical step would be to have experienced scientists work as guests for long periods in foreign countries. It would be difficult for a country to use well-known men and equipment for illegal purposes without arousing the suspicions of visiting scientists, especially if the latter were in close touch with the educational institutions and laboratories.

Finally, if the nations consent to have a commission visit any factory they please, extreme caution and expense would be necessary to hide production or development.

One condition of successful international control is successful national control. It is obvious that national legislation must be strong enough to insure that no nuclear research or technological development could be carried on in secrecy, unknown to the government.

International control, however, can succeed only if it is introduced not in the spirit of mutual distrust but in the spirit of mutual reassurance within the frame of a basically well-defined policy.

II. THE SOVIET UNION AND THE BOMB

The Weapons of Peace

BY HELEN GAHAGAN DOUGLAS

Member of Congress from California

WHAT is our real attitude toward the Soviet Union? I don't think we know. I don't think we have thought it out.

I know what it appears to be to one of our fighting men still in the Pacific. I have a letter written by a 19-year-old Texas boy. He volunteered for enlistment in the navy before he was through high school—not because he had any illusions about the “glory” of war, but because he felt there was a job to be done. His letter was dated November 11, 1945—Armistice Day. He wrote:

They have just sent the mailman over to the FPO, which is a landing ship tank. I hope there are some letters and packages for me. It is getting hard to write, not knowing what is going on back there. I might as well tell you now there hasn't been any change out here. Everything is just as SNAFU as ever. In fact, it seems that, instead of getting faster with the discharging, they are getting slower.

Well, Miss, I hope you are having a grand time and enjoying the peace. From what I hear over the radio, it isn't going to last much longer. I guess *we* will start a fight with Russia. From the things we say and write and preach about them, they should be ready to fight now. Every time I hear a news broadcast or read a newspaper, some loud-mouth is slamming Russia.

Why in hell, don't we stop screaming about who owes who and try to *help* Russia? I have talked with men who were in Russia during the war. They say the Russians don't want to fight us; they don't want anything to do with us. All they want is to help their own people, build up their country, better themselves. If we had the sense of a jackass, we'd do the same.

One thing I always had faith in was our Government. Even that is gone.

The American people are a peace-loving people. Except for an hour of parade here and there, they don't like gold braid and martial music in their lives. Peace is our foreign policy. Peace is our most profound desire. But we cannot have peace by just wishing for it.

There are weapons of peace just as there are weapons of war. The most powerful weapon for peace is friendship. Franklin Roosevelt understood this. That is why, when he first came to the office of President, he began to cement the bonds of friendship in this hemisphere. That is why he called for collective security in 1935. That is why, under his leadership, throughout the war, we continuously moved toward the building of world understanding and cooperation, because these are the very few foundations of peace. Even in the darkest days of war, when we were running the scientific race of all time, he sought to strengthen our bonds of friendship with Great Britain and Russia.

Why? The reasons are clear enough: No single country can keep the peace alone. To maintain and build the peace, it is necessary to develop, maintain, and strengthen the solidarity of the United Nations Organization. There is no United Nations Organization unless the Big Five stay together. The core of the Big Five is formed by the United States, Britain, and the Soviet Union. These are the three most powerful nations in the world—the only three nations which can in themselves win a war or win a peace. If any one of these three nations falls out, there is no practical likelihood of the United Nations working.

It is an agony to watch our fears separate us from our future, an agony to watch certain forces play upon those fears, to watch them label as “anti-American” those of us who merely face the facts and point out that, if there is to be peace, it must begin with the United States, Great Britain, and Russia. We are not pro-Russia or pro-Britain. We are pro-man. We are pro-life—not pro-death. For in the

new world into which we have been blown by forces of the universe which we have let loose, there are no boundaries. There are really no differences in tongues. There are just people—black people, white people, yellow people, Russians, Americans, English, French, Chinese, Hungarians, Greeks, Germans, Slavs. And our future is indivisible.

I don't believe we really hate Russia. I don't think we are driven on by a relentless passion to go to war with Russia. We got along all right with Russia before the war—and we got along with her during the war. We can live together again in peace. But there is a nameless fear we have never analyzed. Is Russia our natural enemy? Is it a belligerent nation, a nation bent upon domination of the earth by force of arms, as Germany was? Is this the root of our suspicion? I don't think so. An examination of the facts does not bear this out. Not when we remember that Russia stood for international disarmament, advocated this in the League of Nations, backed President Roosevelt's program of collective security, urged honest non-intervention in Spain, warned against the aggressiveness of Germany, and wanted to go to the aid of Czechoslovakia even though Russia was kept out of the Munich Conference.



Helen Gahagan Douglas

Why should Russia want to go to war? It has all the land it needs—one-sixth of the globe. It is rich with people—rich with natural resources. What Russia needs is peace and the kind of security in the world that will enable it to put its resources and energies into a peace-time program for its people. Moreover, Russia has paid a terrible price in this war. Ten million dead, millions more wounded, cities destroyed, factories demolished, fields and farms devastated.

Do we fear Russia economically? No, we welcome the markets she offers us.

Then what is this fear? Is it a fear which grows out of the anxiety which was born of the Russian Revolution, an anxiety that our own economic free-enterprise system is somehow endangered? But if we take this fear out and examine it from all sides, we find that it dissolves, for there is no basis in fact for antagonism between ourselves and this great sister nation. Those who have this fear have themselves little confidence in our economy and in our ability to realize goals of human happiness for our people.

The idea of apprehension or anxiety or fear among the people of a nation as powerful as the United States is utterly preposterous.

If we set for ourselves here at home, along with the goal of international peace, a goal of full employment and prosperity and really fight to win these objectives, we shall at the same time be an example to the world which will win for us not only friendship and cooperation, but a belief in our way of doing things. We can win this kind of friendship only through example—never through force.

The Heritage of All

BY M. J. COLDWELL

Member of the Canadian Parliament

AS a Canadian, I am deeply interested in the relationship between the United States and Russia, for Canada is the country which lies in between them. In the event of difficulty, Canada would be the cockpit of North America. Then, too, Canada is the source of the material that made possible the discovery and production of atomic energy. We have in our country El Dorado, the mine from which uranium is at the moment being produced.

To me as a layman, the discovery of the secret of atomic energy seems comparable to man's discovery of the use of fire or the wheel long ages ago. This discovery means a revolution in man's way of life, so fundamental that we can scarcely conceive it. There is no doubt that, with the information available to the leading scientists throughout the world, its utilization for human needs is in immediate prospect. Attempts to divide the nations into two groups—those in possession of the knowledge and those without it—are bound to fail. It is against the interests of human progress and of universal peace to try to hide this knowledge.

This afternoon we have heard proposals for the sharing of this knowledge with Russia, which would place it among four nations—three powerful and large nations and one smaller nation—my own country, which we sometimes speak of as a middle power. Speaking as a representative of a little power, or a small nation, I do not believe that the

sharing of this knowledge among a few nations is good enough. It must be the heritage of all nations, not a few.

Therefore, obviously, at the moment the body to which the control should be given is the United Nations Organization, which is about to be set up. Until government at the international level is evolved, only UNO can prevent the atomic bomb from remaining what in fact it has become during the past four months—a divisive influence among the nations of the world.

As early as August 18, 1945, when speaking in Toronto, I made a strong plea for placing this revolutionary discovery under the Assembly of the United Nations, not under the Security Council. I was speaking for one of the smaller nations. We do not like the veto power. This could be done without amending the charter by establishing under one of its principal organs—the Social and Economic Council—a new specialized agency consisting of the leading scientists of the world, who would be charged with the exchange of information, continued research, and such recommendations as may be necessary for the intelligent use of atomic power. Reporting as it does to the General Assembly, the Social and Economic Council could thus make available to all members of the United Nations the specialized opinions of the world's foremost scientists.

By making the discovery available to all nations, great and small, Russia and France, Yugoslavia and other nations, the objections raised by the middle and small powers to the domination of the world by two or three large powers, would to some extent be removed and the danger of the continuance of power politics minimized.

Canada assisted materially in the discovery, and is the present source of uranium—the mineral which provided the basis for the splitting of the atom. But it is certain that, once split, atoms of various elements can also be split and uranium may not long remain the basic element required for atomic energy. This being so, it makes the consideration of the question of international and public control of atomic research a matter of primary importance.

We cannot allow this revolutionary discovery to be controlled by private industry. Its implications are too vast and too dangerous. We know from bitter experience that "big business" in all our countries observes no national loyalties or human ethics where profits are concerned. We have seen how this desire for profits by giant monopolies and through international cartels has caused secret agreements, jeopardizing the welfare and security of all the people throughout the world, written largely in your own *Congressional Record*, written in your own documents, tabled in our Parliament, regarding the operations of monopolies and cartels before and during this war. Yet atomic research is largely in the hands of du Pont in the United States, Imperial Chemical Industries in the United Kingdom, and their creature—Canadian Industries Limited in Canada.

This is a highly improper and dangerous situation. The countries concerned should remove the members of the chemical cartel from the control of research and atomic energy and establish publicly owned organizations to carry on these important functions.

It is essential that atomic research should be on an international level. Its results and benefits should be utilized *only*

for the good of mankind. Government ownership of facilities and control of research is necessary to prevent powerful and unscrupulous private interests from utilizing the principle of atomic energy for their own ends.

Only in this way can we insure that the work will be directed to peaceful purposes and needs. The world cannot afford to allow secret experimentation which has for its purpose the development of increased atomic killing power. The small nations of the world must insist that this most dangerous armament race in history shall be prevented. A thoroughly awakened and aroused labor movement could play a vital role in this regard.

A consciousness of the implications of atomic energy would enable organized labor to demand that workers employed on the project should work only in properly government-owned and internationally-inspected plants. Together with organized scientific workers labor could oppose any attempts to carry on unauthorized and secret work in this connection.

A fully aroused public opinion, demanding government control of the facilities and the international exchange of information, could make it possible to harness atomic energy for the good of the world. The danger of the present policy is that it may be used as political blackmail through the ever-present threats of war.

Share and Share Alike

BY WALTER MILLIS

Editorial writer, New York Herald Tribune

I THINK we should recognize from the outset that the political problem of the atomic bomb is the problem, for the present period at any rate, of our relations with the Soviet Union; and conversely, that the problem of our relations with the Soviet Union has to an unhappy degree become the problem of the atomic bomb.

It seems to me useless to discuss the one except in the direct, explicit context of the other. It seems to me perfectly idle (though no doubt diplomatically necessary) for President Truman or Prime Minister Attlee to speak in a generalized way about publishing the technical secrets of the bomb when it is abundantly clear that the only nation at present in a position to make use of those secrets is the Soviet Union. That is what nine-tenths of the argument has been about, and I believe the time has come to admit it frankly.

That is why I am glad that the agenda of this conference starkly puts the question of whether the secrets of the bomb should be given to Russia.

My own answer to the question is unhesitating. I think we should immediately offer full publication of our own technical data in return for a reasonable reciprocity on Russia's part in the publication of its scientific and technical material. That is the only proviso I would attach to the offer. In advancing it, however, I would point to the many obvious dangers latent in the unregulated development of atomic energy and would request Russia's assistance and counsel in devising an adequate structure of international control.

It may be said that this is, in essence, what the Truman-Attlee communiqué proposes. I cannot agree. I don't think

that the Russians agree. The communiqué expressly reserves the vital technical data. To be sure, the United Nations Organization is to be asked to set up a commission, charged with the formidable task of answering all the innumerable questions—political as well as technical and military—which Mr. Truman and Mr. Attlee and Mr. King left unanswered in their somewhat hurried conference between airplanes. But while the commission pursues its labors, the United States will not only retain all the technical knowledge but will go right ahead manufacturing bombs, as it is continuing to do. When, as, and if the commission has produced a solution satisfactory to all—which, under the circumstances, means satisfactory to the United States—the data will be generally published. So far, Moscow has failed to greet this proposal with the enthusiastic acquiescence which was apparently anticipated. I, for one, am not surprised.

I think President Truman made a tragic mistake when he failed to realize, from the very first moment, the crucial identity between the problems of atomic energy and the problem of Russia. The appalling military terrors implicit in the bomb absolutely demanded a firm settlement of political differences between Russia and the West. It seems to me it might not have been wholly beyond the powers of statesmanship to use the technical discovery for the constructive adjustment of the political issues. Let us glance back at what was actually done.

At Potsdam Mr. Stalin was apparently given only a most guarded and grudging disclosure of the fact that a test bomb had been successfully fired in New Mexico. When the time came for the military use of the bomb, no Russian observers were, so far as I know, invited to be present in order that they could at least judge its potency for themselves. The discharge of the bomb at Hiroshima was, however, immediately announced to the world in a blaze of extravagant official publicity, all built around two ideas: that the United States had developed (with some little assistance from Britain, Canada, and a bunch of dreamy foreign scientists) an invention absolutely decisive in war and revolutionary in peace; and that the magic "secret" of this staggering achievement was and would be guarded from everyone under the most extreme restrictions of top-secret security. Perhaps this publicity was inevitable; for it was, after all, an extravagant moment in world history. I ask you only to consider the sort of impact it must have had upon our Russian allies, who were at that moment loyally preparing to fulfil to the letter their commitment to give Japan the *coup de grâce*. The fact is, at any rate, that from that moment our relations with Soviet Russia have steadily deteriorated.

After the official publicity there came the private outgivings, the statements of Congressmen, the savage May-Johnson bill. Through all this the idea rose ever more prominently, expressed under increasingly transparent veils, that whatever we did we could not give "the secret" to the Russians. We distrusted the purposes, aims, and colossal power of the Soviet Union too deeply. How much this did to inspire the Russians with trust in our own purposes may be guessed. Perhaps it may be seen more directly in the catastrophic breakdown of the Foreign Ministers' Conference.

Finally, there was President Truman's disastrous statement that the technical secrets would be given to no one, and that

anyhow no other nation in the world had the knowledge, resources, or skills to discover them for itself over a period of many years. Even then, when the muddle was about as complete as it could be made, it required Mr. Attlee's initiative to induce our government to do something about it. The result is the communiqué to which I have referred.

I ask you to try for a moment to reverse this history. Supposing that it had been the Russians, and not ourselves, who had exploded this thing at Hiroshima just as our naval and air forces believed that they themselves were knocking Japan cold. Supposing that Mr. Stalin had announced that the secrets of the staggering discovery would be given to nobody, that anyway only a nation with Russia's vast resources and totalitarian economic organization could produce a bomb, and that it would take many years for the backward and chaotic capitalist democracies to catch up, if ever. I think the reaction in this country would have been both violent and unfortunate. Suppose that Mr. Stalin, confronted with that reaction, had rather belatedly proposed that the UNO set up a commission on the matter, with a tentative promise that when the commission had worked out an international control system satisfactory to Soviet Russia, the secrets would be imparted to it, but that meanwhile the Soviet Union would go right ahead manufacturing bombs for "test purposes." I think we would have regarded those "test" bombs with a fierce suspicion. I think we would have seen at once that the commission, in working out a regulatory system satisfactory to Russia, would all but inevitably find itself involved in most of the political issues that at present divide us. It would have to decide them, too, in a manner satisfactory to Russia. I think we would have regarded the whole thing as a Communist trap. I think that we—with our unbounded, war-bred confidence in the power of our technology, comparable to that which the Russians feel in theirs—would have decided that the easier course would be to get busy at once and develop our own atomic bombs. It might take us some years, but we would know that we could count on a decade or so of substantial peace. We would calculate that when we had our bombs ready we could go back to the Russians on an equal footing and so get a genuinely agreed and rational solution of the control problem.

That, I think, would have been our decision. And that, I think, is the Russian decision. I suspect that the one most significant thing that has been said about the atomic bomb since the initial announcement was the brief paragraph in Mr. Molotov's anniversary speech announcing simply that Russia "will have atomic energy, too." I think that Russia means to have it; that she can probably—as Dr. Urey pointed out the other day—develop the leads she has already obtained more quickly than we can in time of peace, and that she will have atomic energy in a military form within a few years.

The resultant situation is well-calculated to breed distrust on both sides, to exacerbate all political issues between the two countries, and to drive both Russian and American diplomacy to extremes. And by the time the Soviet Union has amassed its own stock of atomic bombs and is ready to come back and talk control on equal terms, the whole problem may have got out of hand, and it may be too late for any solution. Meanwhile, the situation is also calculated to cripple the non-military development of atomic energy and nuclear research

in general. In our passion for "security" we are threatening finally to disrupt that marvelous and creative "international of science" which is responsible for all our technical triumphs. Our own nuclear research workers have just protested MacArthur's destruction of the Japanese cyclotrons, comparing the act to the Nazi book-burnings. There, I think, is a notion which should give us pause.

All this is the result of the policy of "keeping the secrets." It is late now to reverse the policy. It may take us a long time to undo the damage which has already been done. But I believe the policy should be reversed. I don't believe we can afford to wait on the United Nations Organization. I think this country should immediately take the initiative with a policy based not on keeping the secrets but on pooling the secrets—all of them. This then would mean that the military and non-military secrets of Russian technology as well as those of our own would be in a common pool.

For Russia has secrets too. It is no use blinking the fact that the extreme secretiveness of the Soviet Union, in technical, cultural, and political as well as military matters, is a major factor in this whole business and one of the most unfortunate elements in the contemporary international world. By sitting now upon our own store of secrets concerning the overwhelmingly important development of nuclear energy, we are simply compounding and encouraging this Russian tendency. We are promoting a general drift backward into nationalistic compartmentation in almost the only great field in which a genuine and constructive internationalism has survived—that of technical advance and scientific investigation.

It seems to me that our present possession of the so-called atomic secrets could be used now, not to promote this tendency but to arrest and reverse it. I think we can make a full and frank offer to pool with the world the great mass of knowledge and data we have accumulated, and that with this offer in our hand we can then ask a similar frankness from the Soviet Union and all other great powers in the publication of both general technological and specifically military development. If we meet with refusal, that will, of course, create a new situation. But we have not tried yet. If we try and succeed, I think we shall then have laid the first absolutely necessary foundation for a working international control of the atomic horror—which is frankness, confidence, and above all knowledge.

What I propose seems to me the one constructive political use that can be made of our present possession of the bomb. I do not think that we can browbeat the Soviet Union into conforming with our wishes by using the bomb as a threat—especially when Moscow knows perfectly well that the people of the United States are not in fact going to launch an atomic war upon Russia in any proximate future. I do believe that we can use an offer of our present knowledge as proof of goodwill and a means of securing Russia's powerful aid in dealing with what is in fact a problem of humanity. To take the attitude that we will do nothing until the rest of the world has solved the problem for us means only that our stock of bombs and our knowledge of how to make them will be put to no use at all during the next few years when they might serve constructive ends, but saved up for a more remote period when their effects will simply be calamitous.

III. ATOMS AND INDUSTRY

The New Energy

BY STUART CHASE
Economist and Author

LET us take a speculative look at some of the peace-time effects of splitting the atom. As we do so, we will not forget the warning of Dr. Harold C. Urey, who helped to split it: "The peace-time applications of atomic energy are of no importance whatever unless the danger of atomic bombs is banished from the earth."

Thorstein Veblen in his grave must now be permitting himself a sardonic smile. His technicians and scientists have come roaring into their own as the acknowledged and undisputed arbiters of human destiny. He traced the trend in a series of books a generation ago, but few paid much attention. The philosophers were off in other pastures. Now the trend has culminated in a self-generating flood of neutrons which can blow up the world. For the first time, scientists are developing a social conscience, and even daring to dispute the generals and politicians. Veblen used to dream of a governing council of technicians. If the politicians do not look alive, it might come to that. They look pretty dead in Congress now.

Energy is a determiner of civilization. Low-energy cultures absorb most of their man-power in getting food. High-energy cultures such as the United States, or Western Europe, in recent years, can release more than half their man-power for the service trades, education, and the arts. The atom may release 90 per cent for higher things—if enough higher things can be found. Not 10 per cent will be needed for farming, mining, and manufacturing. Even before the war, learned committees were worrying about the problem of leisure. Presently they are going to have a superlative opportunity to worry!

Dr. A. H. Compton sees the first use in large central power plants, and most scientists agree with him. A reasonably efficient plant, using superheated steam for driving a turbine, could be put in operation within a year, he says. But costs at first would be high. The generating heat unit will be a pile weighing not less than 50 tons. This dissipates, for the present at least, those bright dreams of lump-of-sugar prime movers, to drive a plane from Chicago to Shanghai.

A pound of uranium now costs \$3, about the same as a ton of coal. But it can deliver as much energy as 1,000 tons of coal under present firing methods. This is the comfortable margin atomic energy has to work on. Dr. Compton expects many big central plants within 10 years, especially in areas where power is now expensive. China and India come to mind as candidates for rapid industrialization. These plants will be easy to operate without smoke or fumes of any kind. Lethal rays must be carefully controlled, but safety methods have already been worked out at Oak Ridge and Hanford.

Atomic energy can be used as a heat for making bricks, cement, ceramics, and glass. It can be used for smelting

metals. Dr. Langer of the California Institute of Technology has suggested that iron might be smelted in the ore bed. Others have suggested that highways in certain areas might be built and surfaced by fusing the ground to lava—as happened under the bomb in New Mexico.

The new energy can work wonders in providing both cheap heat and cheap power for the host of synthetics and plastics which are already revolutionizing industry. The virtue of a plastic from the manufacturing point of view is that it can be molded to unvarying form, and run through the assembly line without the grinding and chipping and shaping needed for natural products, like lumber, stone, and metal. Lavish production of plastics is bound to bring a vast increase in economic self-sufficiency. Synthetic rubber, nylon, and vinyl esters are just the beginning.

Controlled neutrons have a great many medical applications, such as the irradiation of deep cancers, the tracing of physiological processes by tagged atoms. They can make the dream of the alchemists—the transmutation of elements—a commonplace. We could perhaps change all our lead to gold—if we were that foolish. Atomic energy can air-condition cities in the tropics, and warm up polar housing for the comfort of man. By the electrification of soils and other innovations, it might change the whole crop pattern.

This outline is only a bare summary of uses now being suggested, but it is enough to indicate a shattering impact on the structure of business-as-usual. The mining of coal will be hit hard, petroleum only less hard. John L. Lewis can be expected to issue a papal ban against nuclear physics any day now. The steel industry, and metals generally, may be turned upside down. Railroad and steamship lines may lose up to 40 per cent of their revenue freight. Technological unemployment could grow to catastrophic proportions, if everything is left to God and the National Association of Manufacturers, to use Alvin Johnson's phrase.

If we try to go on operating some such economic system as we had before 1930, it does not take an especially discern-



Stuart Chase

ing eye to see that atomic energy will soon break it to pieces. We have here an economic bomb of great explosive power. No nation, except the United States, has any apparent intention of continuing its pre-war economic system. Other states may be expected to nationalize atomic power, easing it into the economic structure under carefully controlled conditions, with regard for both the human beings and the industries made obsolete. It will be a large and complicated operation.

Can the United States avoid a similar course? Professor Hayek's disciples will vigorously protest, but how can any community endure the million to one shock of this new energy without planning for it? On the practical level, how could a wildly disorganized America hope to compete with other powers when they had organized the flow of neutrons?

Before the war no industrial country devoted as much as 1 per cent of its national income to scientific research. This ratio is now destined to leap upward. J. D. Bernal thinks it may go as high as 20 per cent. Not only research, but education and training on all levels, on a scale hitherto undreamed of, are an absolute must for survival in the atomic age.

As the first item on the educational agenda, I respectfully suggest that another two billion dollars be allocated, this time to the *social scientists*. An equally urgent directive should go along with it. Perhaps after some time in the laboratory and plenty of courage and effort, they can show us how to live with the unbelievable power the physical scientists have loosed upon us.

Power and Progress

BY BORIS PREGEL

President, Canadian Radium and Uranium Corporation; expert on radioactivity

AS SOON as the roaring of the atomic explosions over Japan began to resound in the press, in the statements, and in private conversations, I tried in vain to find some indication of interest in the *peaceful* application of atomic energy. With the exception of a few general remarks, the whole interest was concentrated on the bomb and the dangers of a varying nature attached to it. A few statesmen and scientists who ventured some remarks concerning the peace-time field were in a rather negative mood and predicted that we needed more than a generation—and some of them even spoke about a 50-year period—before we could see any possibilities for the peaceful applications of atomic power.

But what a change has occurred during the last few weeks! One may say that they have at last seen the light. Suddenly, from all sides, and sometimes even from the same people who were so pessimistically inclined only a month ago, we hear that the applications of atomic energy to civilian life are possible, imminent, and even unavoidable.

The aims of our forum are constructive. We believe the principal importance of atomic energy lies exclusively in its possibilities for peace-time development. We firmly believe that everything must and will be done to prevent the use of the atomic bomb in war. If this cannot be achieved, we should eliminate further discussion on the subject, because the atomic bomb with its terrific destruction will leave the remnants of

the surviving humanity in no condition to think of any kind of cultural or industrial developments.

Ten days ago, Dr. J. Robert Oppenheimer, one of the leading men of the atomic energy project, said in an interview:

The atomic bomb was not a step on the road to the production of controlled atomic energy. The bomb itself was the end result, the solution of a military problem that had been given to us. In coping with that problem we learned how to create and control atomic energy a year and a half before Hiroshima. But we had to pass that point. We had to find ways to make that energy explode. The production of atomic energy was merely a step on the way to that goal.

It is quite feasible that a city the size of Seattle should be completely heated from an atomic energy source in less than five years.

We may accept this authoritative opinion, in view of the fact that the author has always been very cautious in his statements. What can we expect from the development of science in nuclear physics? What is in the immediate future? We think the first important application of atomic energy will be the production of cheap power by large plants, the locations of which are not dependent on any natural resources of the country. This is a tremendous advantage, especially for desert regions—for backward world areas—and for the development of countries with limited natural resources.

These powerful units will be able to distribute this cheap power to large areas. It is easy to understand what such a phenomenon will mean for these areas. Cheap power in unlimited quantity means abundance of cheap products, and the reduction of working hours.

Science has made important progress in the last few years in the fields of electronics, electrometallurgy, medicine, biology, agriculture, and so on. In all these, the possibility of cheap energy would mean immediate application of a series of new inventions and improvements on a large scale, and an immediate rise in the standard of living of the population.

The application of the cheap power, facilitating the creation of new industries, may reduce the production of certain metals and fuels which are the backbone of our present economy. But they will be replaced by new products, rationally manufactured under better conditions, and in the interest of the progress of the community.

The production of energy by the big power plants will be accompanied by a quasi unlimited production of artificial radioactive materials. Artificial radioactive elements which emit electrons are already being used now for biological, medical, and agricultural experiments, as so-called tracer elements. With the aid of such elements it is possible to investigate the metabolism of men and plants, to recognize and avoid diseases, and to improve the yield of plants.

Artificial radioactive elements, such as emitters of electrons, possibly can replace our electric installations, because electrons are carriers of our electric stream. Collected on plates, they produce electric potentials from which the electricity can be conducted. The replacement of the heated wires in the electronic tubes by radioactive materials makes us independent of heavy storage batteries, or batteries of great current capacity. We do not even need small batteries for collecting the charge of the emitted electrons, if we bend the electrons

with a magnetic field to the place we want to charge. As it is possible today to make very strong magnets, we are independent of any electrical installation. We also can produce heat in metallic plates and wires without any electrical installation, directing the electrons to the parts we want to heat. The heat will be produced in the parts where the electrons are absorbed. Mechanical effects can be produced by ironization current, due to the heavy ironizing radiation. With photo-conductive materials strong relay effects can be obtained.

New aspects are open for television: transmission stations without powerful central stations will be possible.

Also, it is not impossible that we will be able to imitate cosmic radiation, either with the energy of a uranium pile or with a special apparatus. In this case, we would deal with radiation of such an energy that evaporation of atomic nuclei will be possible. That means we could convert any kind of matter into energy, and we would not be limited to the use of rare and expensive materials, such as uranium. All kinds of matter existing in the world could be used as a source of energy.

But perhaps the most important thing that we will learn from all of these experiments is not only how to decompose matter but also how to construct it. And we will be able to produce artificially any kind of material needed, because we will have at our disposal tremendous energies necessary for the artificial production.

Science and philosophy of the pre-atomic era were based on the concept of matter. The new science and philosophy of the atomic era are based on the concept of energy. The possibility of transforming matter into energy, and vice versa, changes completely our philosophical point of view with all the consequences, such as values of power and materials.

Until our time there has been no discovery equal to that of atomic energy. The greatest discoveries up to now advanced humanity a maximum of 50 years. The development of atomic energy moves humanity forward several centuries. It opens up the doors to the golden age without revolution or war, and even without very painful transitional periods. It brings equalization to peoples without large natural resources. It creates the possibility for peoples from the backward areas of the world to enter the family of advanced peoples on equal terms. In other words, the atomic-energy era means—equality, peace, and happiness.

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For the Benefit of All

BY JAMES CAREY

Secretary-Treasurer of the C. I. O.

JUST one month ago, a group of labor leaders, members of the General Executive Board of the C. I. O., met in Washington to discuss the question of atomic energy. One may ask why ordinary labor leaders presume to discuss a scientific phenomenon such as this. I believe it grows out, in part at least, of the change that has taken place in the labor movement in recent years. The C. I. O. is not concerned solely with wages, hours, and working conditions. It considers every important economic, political, and social question, and attempts to formulate a program in the interests of all the people, believing that it can thus best serve the interests of its members.

Labor leaders have a right to speak out because their activity makes it necessary for them to know the possibilities and the dangers in the development of an atomic bomb. They are required to know something about industrial developments in all countries of the world, including their own. In other countries, they may have better access to the factories and to the people than do our diplomatic representatives. We cannot talk about a central pool of information regarding atomic energy, the development of atomic bombs, and the use of atomic energy in good living as well as for destructive purposes unless the workers in the plants are conscious of their responsibilities to workers in other parts of the world.

As we develop our international organization in the field of labor, I believe for the first time we will have an opportunity to get the real facts regarding what is being produced in any given nation. In that way, perhaps, we will cut across these ultra-nationalistic attitudes and make a contribution to peace and security in the world. These workers know what they are producing. They have perhaps a better idea even than those who invented these mechanisms, of how they can be translated into positive and concrete methods either for good use or for destructive purposes. We believe more emphasis must be given to the good that can come out of this important development in the field of science, but like every other step in progress, a great deal of harm can also be anticipated.

We have had other cases of a similar nature; for instance, the development of aircraft was brought about in large part during the stress of war. Yet we had peace-time uses for this tremendous development. Tremendous technological gains have been brought about in this nation under the compulsion of war, the need for production. We have reason to fear that some of those great gains, made through the patriotic effort of the people of this nation, may operate against their interest, and that because of their efforts they may be confronted with the hazards of mass unemployment. We are not able to digest all of our advances, and we still find that many gains made in scientific fields are not transmitted to the people. Unless we pass on such gains for the people, it creates a danger to our society. Perhaps the atomic bomb can serve to awaken the people of the world to the need of moving at a greater pace in solving the simple little problem of living together in peace.

IV. THE PROBLEM OF CONTROL

Several speeches at this session have had to be omitted, among them an excellent extemporaneous comment by Justice Jerome Frank, and remarks by Cord Meyer, Jr., and Kingman Brewster.

Unite—or Else

BY EDGAR ANSEL MOWRER
Columnist and foreign correspondent

EVER since World War I, it has been apparent that world government offers the only visible hope of saving mankind from ultimate destruction. Material techniques have outstripped political institutions. World War II came—as Wilson had predicted it would, and with consequences even worse than Wilson foresaw.

Aviation alone threatened to terrorize mankind. By the end of 1943 Air Marshal William A. Bishop of Canada uttered a warning. In a little book that attracted far less attention than it should have, the greatest Allied ace of World War I pointed out the futility of nations quarreling over their several economic systems if all these systems, regardless, were going to be blown to bits by an aviator "laying" a few blockbusters.

Shortly after this volume appeared, in 1944, V-1's began falling upon London. Allied airmen also discovered a way of shooting many of them down short of their mark. Then the V-2's began to fall. Against them no defense was ever found. London—heroic to the last—just "took" them. Meanwhile normal, garden-variety aviation hammered Germany into surrender. When Germany collapsed our people found more than the launching platforms for V-2. They found the plans for V-10. This was a rocket-propelled bomb that would cross the Atlantic Ocean in the stratosphere. Against it, once more, no defense was known.

Shortly after came Hiroshima and Nagasaki. All existing explosives became obsolete. Mankind entered the atomic age. And it threatens to be his last.

Having spent many hours with the scientists who made the bomb and who certainly know the most about its potentialities, present and future, I am not impressed by laymen, generals, admirals, senators, bankers, and miscellaneous bigmouths who hastened to assure us that the discovery of the atomic bomb had really changed little or nothing. It is a question of definition. I follow the scientists. These men agree: 1) the atomic bomb cannot be kept secret; 2) the atomic bomb will soon be built by all industrial nations; 3) the bombs that razed Hiroshima and Nagasaki are just a faint foretaste of the bigger and better atomic bombs to come; 4) against the atomic bomb there is no adequate defense—and will in all likelihood be none; 5) similar bombs will soon be made in relatively small buildings and ultimately perhaps by lunatics in the kitchen sink; 6) the effect of sudden atomic aggression on the victim country would be not only murderous but would probably so weaken the

receiving country that its capacity for retaliation would be crippled; the only way to prevent mankind from atomizing itself is to make sure that atomic weapons will never be used; finally, the only way sure to do this is to make sure there will be no more war.

For the last decades, it has been growing obvious that technological invention was rendering the system of sovereign states economically and politically obsolescent. Economically obsolescent because it no longer contributed to the material well-being of mankind. Its tariff walls, regulations, red tape, my-country-right-or-wrong thinking, were a hindrance to maximum human prosperity. Politically, obsolescent because it had ceased to provide even relative security for most of mankind. Before the discovery of the bomb, in planning a world organization, we accepted the fact that only three states—the United States, Britain, and the Soviet Union, could enjoy real security on their own. The other countries were asked to "trust" to the good will of these three—the word is that of Secretary of State Stettinius at San Francisco. As though great powers had ever given mankind any reason to trust them!

The atomic age put an end to the security of the three giants as well.

If you accept the fact that mankind must banish war, then inevitably—if you can think straight—you reach the conclusion that mankind must achieve world government. Nothing less can do the trick.

No Middle Ground

BY THOMAS K. FINLETTER
Lawyer and Author

MY MODEST little subject, "Is World Government the Answer?" may be divided into two parts: (1) Can the United Nations Organization be preserved? and (2) Is world government possible in the immediate future? Both of these questions come down to the same thing: that is, are we going to continue our present system of arm's length dealing between independent nation-states or are we going to set up a world state?

We cannot discuss these questions intelligently, I think, unless we define for ourselves, much more clearly than we have, just what we mean by world government and what the consequences of our adopting it and of our not adopting it are. The discussion of these questions so far has been extremely confused. Often those who deny the practicability of world government will propose steps which amount to exactly that. Often those who are convinced that nothing short of world government can stop atomic war shrink from the necessary implications of a super-sovereignty and make proposals which in fact merely perpetuate the concert system on which the League of Nations and the United Nations Organization are founded. They want world government in the abstract not in the particular. There is a need for a definition.

There are only two alternatives before us in this matter of the organization of peace. The first is a world government. The other is an agreement between nations based on good will. There is nothing in between. There are variations in the two categories. But the inescapable fact is that either you have an enforceable world law or you haven't. I emphasize this because there is at the moment an almost frantic search for a middle ground—something that will be more than the old system of agreements between governments, but yet will avoid the violent upheaval in our political concepts and our national independence inherent in the setting up of a super-state. No such middle ground exists or can be created.

Both alternatives—world government or agreements between governments—carry with them certain very disagreeable consequences. We have not, I think, fully taken in what a world government would mean in terms of surrender of national power by the United States. On the other hand, I am sure that we have not yet realized how serious will be the military regulation of our economy and our people—especially the urban populations—if we are to be compelled to live in a world of independent nation states armed with modern weapons of mass destruction. This is a choice between two pills both of which are hard to swallow. But I cannot believe that when we fully consider the alternatives we can reach any conclusion other than that world government is the only course which holds any prospect either for a decent way of life or for the avoidance of atomic war.

First let us see what we mean by world government, not as a broad conceptual matter but in practical terms. The way to do this is, I think, to take one by one the steps necessary to set up an effective control of the modern weapons of mass destruction under a rule of law.

The first proposition is that we cannot stop the use of these weapons except by preventing their manufacture. If they are allowed to come into existence they will be used. Therefore, we must start with a rule enacted by some international organization prohibiting the manufacture of certain types of weapons. The United Nations Organization is a convenient medium for this purpose. Therefore, the UNO Charter should be amended so as to include, as one of its principles, the rule that certain specific weapons shall not be manufactured.

By itself, such a rule would be merely a statement of good intentions like the Kellogg-Briand Pact of 1928 by which 65 nations solemnly and forever renounced war. Therefore, UNO must be given the physical power to enforce this rule. How to give UNO this power is a technical military matter. The political principle is that the power shall be sufficient. If UNO does not have the physical power to see to it that its rules are obeyed, there will be no effective law. Whatever law may mean as a matter of philosophy, for this purpose it means a rule which as a practical matter can and will be enforced.

But even this is not enough. For once you start on this business of setting up an *enforceable* system of stopping the manufacture of certain weapons, certain consequences inevitably follow. There is a package of minimum requirements. If any component part of that package is withdrawn the system ceases to be enforceable and becomes a mere

promise between sovereign governments based on their good will and good faith.

Thus, UNO would have to have the right to send its inspectors into all parts of the world to know whether its rule was being violated. The refusal by a government to let the inspectors inspect would have to be illegal, bringing down with it all the sanctions necessary to compel the recalcitrant government to allow UNO's orders to be carried out. Also, there would have to be some way of supplementing the basic law against the manufacture of certain kinds of weapons—to add new weapons to the proscribed list, to specify the methods of inspection, and generally to keep up with the enormous and changing complications inherent in any effective system of control by law. In other words, UNO would have to have a legislature with the power to make law within its constitutional powers. And such a legislature could not operate by unanimous voting, but would have to act by a majority. And representation in such a legislature could not be on the undemocratic basis of one vote for each nation state.

Another fundamental change would be necessary. The Security Council could not function as it does now as a *political* body, with the power to act or not to act as its sovereign members choose. If the Security Council is to be the executive of UNO it will have to act as any other executive. If there is a law, it must be enforced automatically. It must not require a new *political* decision each time a specific case comes before it that the law shall be enforced. Only the *manner* of enforcement must be open for discussion. This means that the steps to stop a violation of UNO's fundamental law cannot be taken by the present voting system of the Security Council. A majority vote of the Council would be one way, or the setting up of a different kind of executive body of UNO.

Moreover, UNO's law would have to operate directly on the individual citizen. If the UNO inspectors report that plant A in Country X is making atomic bombs, UNO may first tell the government of X to stop the manufacture, but if government X fails to comply, UNO will have to act directly against the offending plant. If UNO were to act only through the government of X, the enforcement of the law would take the form in each instance of a negotiation between UNO and the government of X, with all the delays and inaction such a negotiation would entail. No law can be enforced in this way.

Also, if this enormous power were granted to UNO some judicial body (presumably the Permanent Court of International Justice) would have to determine whether a violation of UNO's law had taken place. UNO could not subject an alleged offender (say a manufacturing plant in a great city) to the frightful penalty of being bombed, or even to any lesser penalty, without having it clearly and judiciously established that it had broken the law.

To summarize: If you want to make a rule that certain weapons shall not be manufactured and to set up an effective system to enforce that rule, you unavoidably, as an absolute minimum, call for a world government which (1) works under a fixed rule of law, (2) has a legislature to modify that law within the limits of the powers of that government's charter, (3) has an executive whose duty it is to apply the

law directly against the offending individuals, with no right to debate, as a political matter, whether it shall or shall not do so, (4) has an information system which will keep the executive informed of what is going on, (5) has a judiciary to determine whether a violation has taken place and (6) has overwhelming physical force to enable it to stop any violation of its fundamental law.

There may be other conditions which would follow if an effective control of armaments is to be set up. I think there are. Thus it is not enough to make illegal the manufacturing of certain weapons if you are to have peace—which is, after all, what we are trying to get by all these mechanics. It will be necessary to make any form of war, civil or otherwise, illegal. But such a law in turn would freeze the *status quo* and would raise the question whether a peaceful change provision would not be necessary—something like the enactment as law of the principle of self-determination. But I do not want to get into these further complexities at this point. I want only to make it clear that those who are suggesting an effective control of weapons of mass destruction, based on enforceable law, are in fact demanding world government with all its component parts.

It is no wonder then that many people, even of those who can contemplate change without distaste, are appalled by the implications of an attempt to control the manufacture of these weapons. World government adds up to—world government, the setting up of something more powerful than the Government of the United States. It is not surprising that there is this search for a middle ground—something in between doing nothing and this crossing of the Rubicon into the land of the World State.

[At this point Mr. Finletter discussed at length several "middle ground proposals."]

The implications of world government are very serious. But what about the implications of *not* having world government? Clearly, tremendously important questions of domestic policy depend on which of these two solutions is adopted. If we had a world state we could, and indeed probably would, be required to disarm almost entirely our national forces. It would be against the law for us to have weapons of mass destruction and there would be no point in having substantial amounts of the others. We would have put all our armament eggs in one basket of world government. But if we decide to go the other course and to continue our experiments with the agreement or good faith method, prudence demands that we take on a defense program the like of which this country has not yet dreamed of. For the agreement method means—unless all history is wrong—that war, some time or other, sooner or later, is inevitable; and we would have to be ready for it.

What these preparations would have to be is a matter which only the military men and the scientists can talk about with authority. But the laymen have to consider these things and, as matters look at the moment, it seems we should think along the following lines:

(1) The important thing is defense against sudden attack. We will be on the receiving end at the beginning of the next war. The attack will probably be extremely violent and without warning.

(2) We will have to make arrangements which will

protect our military installations, industrial centers and urban populations from being destroyed in such an attack, so that we will have something to retaliate with to protect ourselves against invasion and conquest.

(3) Until such time as we learn that other nations have developed atomic and other weapons capable of such an attack—say three to five years or possibly a short time longer—we can, and probably will, disregard the danger. But once we are confronted with the possibility of such an attack, we will have to submit to drastic regulation of our industry and our urban populations. The need for these defensive preparations will increase sharply as we withdraw our troops from Germany and Japan.

(4) What form our preparations for defense against atomic attack will take will depend on (a) the recommendations of the military and the scientists in the light of the armament of other nations, and (b)



Thomas K. Finletter

the political feasibility of putting into effect what they recommend—that is, the willingness of the American people to put up with drastic regulation of their industry and urban populations. A case may well arise where it will be politically impossible for any United States government to enact the kind of law which the experts will say is necessary for the national defense. The people may prefer having the country open to devastating attack rather than accept the drastic regulation of their lives which may be necessary in the light of the then existing weapons in the possession of other countries. This is another way of saying that democracies will always be at a disadvantage.

(5) But even so, if we keep our international organization on the basis of reliance on the good will of the other nations of the world, we will necessarily adopt a high degree of interference by the federal government with the liberty of the individual. If we were to have only a race in the preparation of atomic weapons for offense, this would not greatly increase the control of the government over the affairs of the individual. The difficulty comes from the necessity of preparing the country so that it can *take* an atomic attack and still be able to strike back. How much this will lead in the direction of total control by the government over the location of industry, the right of individuals to live in crowded urban centers, complete military service and the totally militarized state may be left to the imagination.

The people of this country thus have quite a decision to make—whether to try to achieve world government *before* the nations get involved in an armament race, or, on the other hand, to get busy about winning that race.

The decision will probably be made within the next few years, that is within the period of grace allowed to the United States, Canada and the United Kingdom by their exclusive ownership of atomic engineering know-how. If by that time some effective world law preventing the manufacture of these weapons is not set up, the armament race will begin of its own accord. Once started, it will be very much harder to stop it than before it began. It is one thing to get the nations to agree not to manufacture certain weapons; it is *very much another thing* to get them to agree to give those weapons up.

For this reason the UNO commission called for by the Truman-Attlee Atomic Declaration is of the highest importance. A reading of that Declaration shows that it can go either way. It opens up the road—indeed it fairly clearly envisages—world government. It calls for “effective enforceable safeguards against (the) use (of atomic energy) for destructive purposes . . .,” the “control of atomic energy to the extent necessary to insure its use only for peaceful purposes, . . . the elimination from national armaments of atomic weapons and all other major weapons adaptable to mass destruction, . . . effective safeguards by way of inspection and other means” and “the rule of law.” Certainly the necessary implication of such measures is world government.

On the other hand, the atomic declaration makes it clear that the work of the UNO Commission is to “proceed by separate stages, the successful completion of each one of which will develop the necessary confidence of the world before the next stage is undertaken.” There is thus no commitment of the British and American governments to work toward the immediate creation of a world state. The commitment is only to try to create the conditions of mutual confidence which will make the setting up of the “adequate safeguards” possible.

Now what does this policy of gradual stages imply? It can mean one or two things. First, that the governments of the United States and Britain are not sure that their own peoples are ready for world government and that they must be led into it, if at all, by easy stages. Secondly, that no world government can be set up unless Russia agrees, and that the only way to get her to accept it is to take the matter up with her tactfully and gradually.

I believe that the Atomic Declaration means both these things. The first lies within our own power to satisfy. If the American people will show what I believe to be the fact, that they are willing to accept the implications of membership in a world government if they believe that to be the only way of stopping war, then their government can act with vigor in putting this view up to the governments and peoples of the rest of the world.

The other difficulty is beyond our immediate control. I have no idea whether the governments of Great Britain and Russia would agree to set up “enforceable safeguards” against war in the form of a world government. I am however reasonably certain of one thing, and that is that there is only one way in which we can find out, and that is to offer it to them.

But, we will be told, all this is impossible; the people are not ready for such a drastic step. Perhaps they are not. But we must, I think, be careful not to lay the blame for our failure to bring our antiquated international machinery up to

date on shoulders where it does not belong. Are we sure that this failure is not caused by an unjustified lack of faith in the political and moral maturity of the peoples of the world? Are we sure that the peoples would not willingly go along with any sensible plan which would give them some hope of living decently and in peace?

The Veteran's View

BY CHARLES G. BOLTE

Chairman, American Veterans' Committee

OURS is a most extraordinary world, a world in which technological developments have led us into such a literally revolutionary time, that we must also revolutionize our political thinking.

Our situation is dangerous because the present organization of society vests control of extraordinarily destructive weapons in the hands of men who owe their allegiance to some power less inclusive than the sovereign power of all men. It is obvious that we must change our political arrangements, and change them quickly. I agree entirely with what Beardsley Ruml said a few days ago: we need a triple-decker, three-way program. We don't have to say we are in favor of one thing and drop everything else. We can work hard through existing diplomatic channels at the problem of how to get along with Russia and relieve the tensions developing between us. At the same time we can do everything possible to insure support of the United Nations Organization, get the necessary legislation through the Senate, and do what needs to be done to make the meeting in January a success—even work for strengthening amendments to the Charter. Doing either or both of those things does not mean that we cannot at the same time work for world government, for a quick and radical transformation of the UNO into a real world government.

The proposition that we can gradually achieve that third phase—world government—is a little like Norman Cousins' illustration of the man standing at the edge of a wide chasm with a forest fire creeping up behind him, looking across and saying, “I can't make the whole jump at once; I guess I better take one step at a time.” To improve relations with Russia and to improve the UNO, is not to make that gradual approach. Although you have to take the jump all at once, you need a running start. Trying to relieve the tensions, build up as much community of interest as possible, and strengthen the UNO, perhaps will be our running start for world government.

There is not much time, but we can go much faster than we think. We shall have tremendous support from many of the men who fought the war. Sovereignty doesn't seem like much of a defense to a man who has been in a B-29 over Tokyo, with the flak rattling off the cabin walls, or to a man who has lived in six inches of water in a foxhole for two months. That sovereignty, if it is sovereignty, is something we value little. It is a sovereignty which will be no protection to us. It is a false sovereignty in that it ignores the true sovereignty, which is of us, all the people here in this country, and in this world, who feel that we would like to go on living. There will be no veterans of the next war.

Science Must be Free

BY LOUIS N. RIDENOUR

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Department consultant*

NATIONAL and international control of this terrible weapon that has been put into our hands is important and perhaps, within the immediate future, crucial. However, one aspect of this general question which is all too seldom discussed is who, if anyone, is to control the future progress of basic, fundamental science. In the very considerable discussion concerning ways and means of saving man from the armageddon which the invention of the atomic bomb has made relatively cheap and practicable, the question of world-wide scientific freedom versus restrictive nationalistic control of science has scarcely been noticed. Many people, including several competent scientists, feel that it is idle to discuss this question of scientific freedom while the much larger issues of the survival of mankind, or of civilization, cannot yet be dealt with adequately.

I cannot agree with this position. It seems to me that when the view is widely held that it is actually possible for a nation to keep a secret composed of some fragments of knowledge about the interaction of matter and of radiation, and when our army destroys the cyclotrons of Japan presumably on the assumption that these are weapons of war instead of instruments of scientific investigation, and when our treatment of individual scientists in the conquered countries suggests that we are on the verge of regarding these men individually as war criminals, it is necessary to consider the scientist's view of science and the possibility of its control.

Briefly put, the scientist believes that there is a fundamental understandability about nature. He further believes that the virtue of scientific ideas in his field lies in their agreement with experiment, so that ultimately there is no such thing as opinion in science. There is only relative truth, an idea which agrees with experiment, and relative falsity, an idea which does not agree with experiment. Just as ultimately there is no such thing as opinion in science, so ultimately there is no such things as concealment in science. Given then the unscientific belief in the fundamental understandability and universal accessibility of nature, one comes naturally to the scientist's pre-war method of conducting his science: it is in every sense of the word international.

German, French, and English were the universal languages which every advanced student had to learn to read, at least, and scientific papers were always published in one of these three languages. Students and staff members, research workers at all levels, were interchanged between countries. Every country engaged in research and in investigation to the ultimate limit of its desirability and, most important of all, there was immediate international publication of all scientific results. Scientists recognized that in a discipline whose aim was the elucidation of the universe, it was idle and wrong to regard the results of experimentation and of speculative thought as being less than the property of all men.

For reasons of military secrecy, with which no one would take issue while our country was in peril, the pre-war free-

dom of science was entirely lost during the war. Most basic scientific work was stopped, too, because scientists made themselves useful as engineers, applying what was already known to design, an outstanding example being the design of the atomic bomb. However, the war is over now and we have the very interesting present-day situation in which our political leaders and virtually everyone responsible is giving voice to the most pious remarks about the necessity for political internationalism, eventual world government, and a planet-wide brotherhood of man, while at the same time there seems to be little attempt to restore the old internationalism of science. Instead, people seem to assume that science will henceforth be conducted on a nationalistic basis.

Criticism of the nationalization of science, based on idealism, is remarkably easy to make, but it is not likely to move practical people in an age when the threat of an atomic war is as near and as frightening as it is today. What I should like to do is point out that one can make a strong indictment of the nationalization of science on a practical nationalistic basis. Even if we are America Firsters, even if we want our country to prosper in spite of the rest of the world or at its expense or to become strong enough to conquer the rest of the world, it would not be practical to attempt to nationalize science. Science is far less a body of information than it is a group of men who understand this information, who have the knowledge and the ability to make use of it and expend it. The country whose scientists are members of a cult or a secret lodge, a country which restricts its scientific knowledge so that fact A can be taught in the colleges and fact B cannot, is well on the way to destroying its scientific traditions and dispersing its scientists. Even from the standpoint of pure nationalism, this is a bad idea. It is basic to any sort of secrecy that someone must decide who is to be let in on a particular secret. It is equally basic to scientific thought that no man is competent to judge what a person must be told in order that he may make a scientific discovery or an advance or construct a theory or do a meaningful experiment.

It should also be observed that such nationalization of science creates quite natural suspicion of national motives. Since the supposed benefits of scientific nationalism in the minds of those who favor it are limited to its expected usefulness in war, any attempt on our part to nationalize science will be regarded by other nations as part of our preparations for a war. Thus, an attempt to nationalize science can stand in the way of the trust and understanding between nations, which must precede any control of the atomic bomb. But this again is an idealistic argument and I must apologize for advancing it.

Let us say, instead, that any attempt of this sort will cause other countries to put an intense effort into attracting good men to scientific pursuits. It will cause them to finance scientific investigation and, if they are clever, to maintain the most rigid scientific freedom so that their scientists can work effectively. This may enable other countries to be better prepared scientifically for a war than we would like to see them. Our policy of scientific nationalization would have been responsible.

Apart from the type of national control of science that I have so far considered—control of scientific publication and dissemination of scientific information—there is another sort

of control which has been suggested as wise or necessary. This is a kind of supervision which will prevent the scientist from harming the public at large by his practice in the dark arts. There seems to be a confusion in the minds of many people between scientists and scientific knowledge, on the one hand, and so-called scientific weapons of war, on the other. There seems to be a belief that there is something inherently bad about scientific knowledge that fits it uniquely to be turned over to the destruction of other men. Scientists, I am afraid, have done their part to heighten this impres-

sion by being proud of the war-time achievements in engineering weapons. It is difficult not to be proud of a good job. However, I think it is time we pointed out that a body of scientific knowledge and a group of capable scientists, as a natural resource, are quite comparable to a steel mill and the people necessary to run it. You can make either sewing machines and typewriters or machine-guns and cannon out of the steel that comes from the mill. We don't need to fear science and scientists in a world at peace; we need fear only those persons who would lead nations into war.

RESOLUTIONS ADOPTED AT THE FORUM

AT THE close of the last session of the forum Freda Kirchwey presented to the delegates the series of Propositions" which had provided the framework of the discussions. After some debate it was agreed unanimously that the Propositions be accepted as expressing the sense of the forum, and Miss Kirchwey was instructed to formulate resolutions based upon them. A proposal that a paragraph be inserted calling directly for the creation of a world government was rejected because lack of time made adequate discussion impossible. But it was clearly the feeling of the meeting that changes in the United Nations Organization, to increase its authority and convert it as rapidly as possible into a body whose decisions would have the force of law, should be vigorously pressed.

The resolutions agreed upon by the forum follow:

SINCE the basic scientific information about nuclear fission is known everywhere and it is only a matter of time before the production of atomic bombs is possible in all industrially advanced countries; and since the development of aviation, particularly of rocket-propelled robot planes, will soon annihilate distance and minimize the human factor in attack, eliminating the possibility of effective, long-range defense against aggression with atomic weapons; and

SINCE we are therefore faced with the problem of finding political rather than mechanical methods of dealing with the overwhelming dangers created by the discovery of atomic explosives and other new destructive devices; and

SINCE effective political methods can only be devised if the nations succeed in minimizing such existing political factors as (a) long-continued differences of interest and policy between the Soviet Union and the Western powers and (b) the effect on other nations of America's monopoly of the secret of atomic-bomb manufacture and of our continued production of these bombs—

THEREFORE, we are agreed:

1. That the plan for international control through the United Nations Organization proposed by President Truman, Prime Minister Attlee, and Prime Minister King should be fortified by consultation with the Soviet Union so that assurance of full cooperation by the Soviet govern-

ment may be secured in advance of the UNO Assembly meeting in January;

2. That the United States take the initiative in arranging further consultation concerning conflicts of interests in areas of tension such as the Balkans, Iran, the Near East, and the Far East in order to replace the present dangerous tactics of provocation and counter-provocation by conciliation or, if necessary, honest collective bargaining;

3. That, at the same time, plans for establishing atomic control through the UNO should be energetically pushed and the program outlined in the Truman-Attlee-King statement more sharply defined;

4. That one of the first acts of a control commission set up under the UNO should be the outlawing of the manufacture of atomic explosives and the destruction or conversion for industrial uses of those bombs already built by the United States;

5. That since wars and the danger of atomic destruction will be eliminated only when the superior authority of a world organization is accepted by all nations, an essential step in this direction is the abolition of the veto rule which today gives dictatorial power to a small group of great nations;

6. That in order to avoid control by private monopolies, national or international, over the industrial exploitation of atomic energy—which control would hinder the development of a new era of economic security and abundance—the government must keep in its own hands the sources of fissionable material and nationalize the actual production of atomic energy;

7. That Congress must devise control machinery which will insure the security of the country, prevent improper private exploitation of atomic developments, and at the same time encourage scientific experimentation by protecting freedom of research and a free exchange of scientific information;

8. And, finally, that to accomplish these ends a federal control commission must be composed of representatives of the people as a whole, including scientists,*labor, the professions, business and industry, the government, and the armed forces, such commission to remain, however, under full civilian control.

V. DINNER FORUM

"We Turned the Switch"

BY LEO SZILARD

*Atom-bomb scientist; Metallurgical
Laboratory, University of Chicago*

ON MARCH 3, 1939, Dr. Walet Zinn and I, working on the seventh floor of the Pupin Building at Columbia University, completed a simple experiment to which we had been looking forward rather eagerly. Everything was ready, and all we had to do was to lean back, turn a switch, and watch the screen of a television tube. If flashes of light appeared on the screen, it would mean that neutrons were emitted in the fission of uranium, and that in turn would mean that the liberation of atomic energy was possible in our lifetime. We turned the switch, we saw the flashes, we watched them for about ten minutes—and then we switched everything off and went home. That night I knew that the world was headed for sorrow.

From March, 1939 until October of the same year work in the field of atomic energy was carried on by a handful of men who lacked many of the things they needed and most of all official recognition. From October, 1939, to the end of 1941 we still lacked many things, but we suffered from too much official recognition. Our increasing anxiety about what the Germans might be doing made our slow speed all the more intolerable.

At the end of 1941 there was an important change for the better. This change came in the wake of a visit which Dr. Oliphant of Birmingham, England, paid to this country around the middle of the war. Dr. Oliphant attended one of the meetings of the Uranium Committee as a guest and was not very much impressed by the organization and official guidance of our work. Disregarding international etiquette, he told anyone who was willing to listen what he thought of us. Considerations other than military secrecy prevent me from repeating the exact expressions he used. But he got results.

After the reorganization of our work at the end of 1941 we were all happy for a while. Sometime during 1942 the army was brought into the picture, but the officers who were attached to us realized that they did not know what it was all about and did not make life difficult for us. Toward the end of 1942 and during the first half of 1943 all sorts of troubles developed, not all of them originating with the army. At that time it became evident to most of us that unless our organization could be changed quickly, we would have no bombs ready by the spring of 1944, when we expected the invasion of Europe to begin. We saw no way of bringing about a change without a major row, and we could not take the risk of losing thereby more time than we might gain.

During 1943 and part of 1944 our greatest worry was the possibility that Germany would perfect an atomic bomb before the invasion of Europe. I myself was firmly convinced that the Germans were ahead of us in this work. Today I know that I was wrong and that when the war ended the Germans had not reached the point from which we started when our work began in earnest.

In 1945, when we ceased worrying about what the Germans might do to us, we began to worry about what the government of the United States might do to other countries. Discussion of the subject started in Chicago in March of this year. There were those among us who thought that we should not set the precedent of using atomic energy for the purposes of destruction. About sixty of us at Chicago took the view that Japan was essentially defeated and that it would be wrong to attack its cities with atomic bombs as if atomic bombs were simply another military weapon. Many atomic scientists at Oak Ridge took a similar view. The use of atomic bombs against Hiroshima and Nagasaki did not end but rather stimulated the discussion of this question.

The Dinner on December 3, celebrating *The Nation's* Eightieth Anniversary, concluded the forum. Leon Henderson, former head of the OPA, presided, and Mrs. Franklin D. Roosevelt made a brief extemporaneous speech. Another guest of honor, Dr. Urey, also spoke extemporaneously, and his remarks as published here are consequently much abbreviated. Dr. Evatt spoke by radio telephone from Los Angeles. The main speech of the evening, by Harold Laski, chairman of the British Labor Party, was printed in full last week.

For some four to six weeks after Hiroshima atomic scientists expressed no opinion on the political implications of the bomb, having been requested by the War Department to exercise the greatest possible reserve. Our response to this request does not mean that we were intimidated by the War Department. We kept silent because we all believed that Hiroshima was immediately followed by discussions between the United States, Great Britain, and Russia, as indeed it should have been, and we did not want to embarrass the President or the Secretary of State.

Then, early in October, in a visit to Washington, I happened to pick up a copy of the May-Johnson bill and brought it back with me to Chicago. We were somewhat alarmed when we read in the papers that hearings were held for one day before the House Military Affairs Committee and then closed down for good. Our alarm increased when on October 9 we discovered that the War Department's early requests to us to exercise discretion in our public utterances were not occasioned by any negotiations with other powers but by its desire to have the May-Johnson bill passed "without unnecessary discussions in Congress."

This caused the Atomic Scientists of Chicago to issue a manifesto calling for adequate hearings in Congress on the general issue involved before any bill on the domestic control of atomic energy should be passed. Our statement marked the beginning of the fight of the scientists against the May-Johnson bill, a fight which has so far not been lost.

Feeling the need for a better understanding of what was happening in Washington, I went there and stayed six weeks. These are my conclusions: The most hopeful aspect of the

situation in Washington is the fact that the problem of controlling atomic energy has so far not become a political problem, that is, the essential difference is not between Democrats and Republicans or between progressives and conservatives but rather between those who understand what atomic bombs may mean and those who do not understand it. The most important task would therefore seem to be somehow to impart to everyone a realization of the essentially non-terrestrial nature of the atomic bomb.

I would like, therefore, to present tentatively the suggestion that the best way to put our foreign policy on a sound basis might consist in staging a demonstration of an atomic-bomb explosion for members of Congress, the President, and such other citizens as ought to witness it. Those of my friends who saw the tests in New Mexico on July 16 tell me how shaken they were by the experience. Most of them were ten miles or more away; if they had been nearer, the psychological effect would no doubt have been even greater. The risk which the statesmen would run individually by watching from a lesser distance appears to me small in comparison to the risk which we shall all incur collectively if we do not succeed in bringing home to them the non-terrestrial nature of the phenomenon.

Naturally, I am not really worried about the future, except perhaps the next fifteen years. If we manage to get through the next fifteen years, alive, we shall probably emerge immune to atomic bombs. It seems to me that the greatest danger facing us at present is the possibility of a war which would arise more or less automatically out of an arms race in which the United States and Russia built up stockpiles of atomic bombs.

Is it possible to avert this danger? Let us assume that the United States and Russia agreed to have no stockpiles of atomic bombs and to permit no manufacture of atomic bombs on their territory. Let us, moreover, assume for the sake of argument that they both reserve the right to abrogate this arrangement at any time. Could Russia and the United States, under present-day conditions, make arrangements through which they could convince each other, as well as other nations, that secret violations of the agreement would be detected and would become known to the world? My answer to this question is emphatically Yes. Clearly the arrangements would have to include the right of inspection on the part of some international agency.

If Russia and the United States wanted to reassure each other concerning secret violations, they might go about it in the following way: After the agreement is ratified and becomes the law of the land, the President of the United States could call on all American engineers and scientists and ask them to pledge themselves to report to an international agency all violations committed on the territory of the United States. The Espionage Act would have to be modified so that it would no longer cover information of a scientific or technical nature, whether or not relating to national defense. All men classed as scientists or engineers would be invited to spend each year four weeks' vacation or six weeks' if you wish, abroad with their families as guests of the United Nations Organization. The Russian government would be expected to take similar action with respect to its own scientists and engineers.

No arrangement of this sort, of course, could rule out the possibility of war, and in case of war, sooner or later, atomic bombs would drop from the skies. Yet under such an arrangement war would break out only if one of the parties actually decided to start an arms race and risk a war. It would give us a respite which would be worth having, provided we know how to make use of it for building a permanent peace.

The Task Before Us

BY HAROLD C. UREY

Atom-bomb scientist; winner of Nobel Prize

THE year 1945 will go down in history as one of the most crucial, the most epoch-making of many centuries of the past. One can never speak about the future. Future history, in fact, may not last very long. It depends upon what we do with the very important period immediately before us. The point at which we have arrived in history, which is highlighted by the atomic bomb, is this: We have made technological warfare so dreadful that we cannot survive if we practice it. We have that choice to make. Do we wish to have this civilization, which has been built so laboriously for thousands of years, terminated at this point, or do we wish to see it go on? Do we wish to see our own race, evolved through almost endless time—hundreds of millions of years—terminated? Do we wish to go on with this sort of playing with very great fires and have a devastated earth?

These are things which I think can reasonably be expected to be ahead in the next decades if we wish to continue in this direction.

Of course, the problem first of all is how can we impress people with the seriousness of the situation. We need, first of all, to be thoroughly frightened. Of course, fright that leads to hysteria doesn't do us much good, but if we can channel a real good fright into the direction of constructive effort, great benefit may come from it.

As Dr. Szilard has said to you, we need to use equal imagination, equal courage in breaking with the past, in our experience in human affairs, that we have used in developing the atomic bomb. I think that it is possible to arouse the people of this country to the seriousness of the situation and induce them to think differently about the changed situation. Any solution that the scientific fraternity has been able to think of, or any one else has been able to suggest that I know of, involves some legal means of preventing war.

The essential problem of preventing war was considered by the founders of this country. Our own federal government was the result of these discussions. I should like to see the time come when the manufacture of atomic bombs and other weapons of war will be handled by a world organization such as counterfeiting is by our government. I believe this may happen sooner than we think. There should be laws against the manufacture of atomic and other weapons of war, and a police force to detect violations and arrest people (not states) who violate the law. There should be courts of justice to try those accused of violating the law. If guilty they should be imprisoned. I am convinced that only such a procedure will prevent war.

This control of war can come about only when the people of this country and those of other countries are willing to serve as policemen, judges, and juries and give moral sanction to the law. The ultimate source of law and its ultimate enforcement resides in the moral conscience of the citizens of a country and the world. As sovereignty in this country resides in the people of this country, so sovereignty of a world government must also reside in the people. We have atomic bombs and other countries do not. We should lead and not ask others to do so. This is our responsibility and opportunity.

A Stronger UNO

BY HERBERT VERE EVATT
Foreign Minister of Australia

THE advent of the atom bomb has dramatically illustrated but not essentially changed the problems of world security and world organization that were faced at San Francisco. At that great conference it was agreed by all that the human and physical devastation of war was so vast that it could be prevented only by a world organization armed with drastic powers to curb an aggressor.

Although the atom bomb had not yet been used in the war, the delegates to San Francisco thought that another world war would bring an end to our civilization. The devastation wrought in Europe is sufficient evidence that the world cannot endure another war even if the atom bomb is outlawed. However, the atom bomb has made more urgent the need for getting the new organization into working order.

The recent Three Powers statement on atomic energy points to the establishment of an agency under the jurisdiction of the United Nations with power to inspect the plant and laboratories of any nation in order to discover if there has been any violation of the proposed ban against atomic weapons. The setting up of a special atomic commission, the agreement to eliminate atomic weapons from national armaments, and the establishment of machinery for inspection will have to be fully discussed in the assembly of the United Nations Organization and in the legislature of the individual nation. But once international agreement is entered into and the new agency is established, obviously there can be no place for a veto power on the decision of the agency.

Here I desire to state most emphatically that the atom bomb, like every armament both old and new, is clearly covered by the United Nations provision giving the Assembly a right to take the initiative with respect to international agreement for armament regulations.

Above all, we must not lose sight of the fundamental principle that the objectives of the United Nations Organization are, first, to prevent wars; second, to suppress aggressors by force if necessary, and third, to remove the underlying causes of war—economic and otherwise. It would be a great setback to these objectives if the main forces of the United Nations Organization were thought to be the laying down of rules by which future wars should be conducted.

Again the United Nations Charter places a positive obligation on each member nation to place at the disposal of the

Security Council not only its armed forces but its warlike "facilities." In my opinion, no nation can carry out its duties to the organization unless it is prepared, subject of course to reasonable safeguards, to bring all its armaments and all its weapons within the general jurisdiction of the organization.

For these reasons, it is entirely wrong to suppose that the destructive aspects of atomic energy can be regarded as outside the purview of the United Nations Charter. On the contrary, they can be and are included within its scope. Therefore, I do not agree that it is necessary for us to concentrate on world government, i. e., establishing new machinery for

some form of federal government. What is necessary is to concentrate on making the existing United Nations Organization a success.

All this shows how important it is to stress the positive factors of cooperation that must go into the setting up of a United Nations Organization and the building of a world community. Too many have overemphasized the fear that has been almost universally engendered by



Herbert Vere Evatt

the atom bomb and suggested that this fear may stampede us into a solid world organization. But in my opinion fear can never prevent this positive creative quality. Fear may drive us underground. Fear may force us to disperse our industries. Fear may induce a nation to strike a first and decisive blow. But fear will not make us feel more kindly toward our neighbors, and this feeling of kindness and comradeship is vitally necessary if we are to have any world organization that will survive.

What is the task before us? What is needed is an abandonment of mere power politics and the support of all forms of international participation designed to meet the desperate needs of the peoples of the world. Let us not think that our present favored position and apparent economic security leave us immune from future economic disaster.

The urgent necessity of the displaced and starving peoples of Europe and Asia must be met by increasing the resources of the United Nations Relief and Rehabilitation Administration. The Food and Agriculture Organization should be given a larger role to play. The Economic and Social Council of the United Nations Organization must be assigned special tasks in furthering the development of resources in the interests of the people themselves. The trusteeship clauses of the Charter must be given practical application. There must be an extension of international cultural and scientific exchanges. With the peaceful development of atomic energy, the old economic conflict, the struggle for living room, the jealously guarded economic rights in power resources—all contributing to the likelihood of war—can be made things of the past. Mankind has the possibility of entering into a cultural heritage hitherto undreamed of.

PROGRAM PROPOSED AND ADOPTED BY

THE NATION ASSOCIATES

At Its Forum, December 1, 2, 3, 1945

Hotel Astor, New York

As a minimum program necessary to establishing effective international control of atomic energy, the delegates to The Nation Associates Forum called for the following:

(1) Consultation with the Soviet Union, either in conference or through diplomatic processes, so that full cooperation by the Soviet Government may be secured in advance of the United Nations Assembly meeting in January.

(2) Further consultation concerning conflicts of interest in areas of existing tension such as the Balkans, Iran, the Near East and the Far East, in order to replace the present dangerous tactics of provocation and counter-provocation by methods of conciliation or if necessary of honest collective unbargaining.

(3) Sharper definition of the program outlined in the Truman-Attlee-King statement to insure that the UNO will be given actual power to control the military uses of atomic energy.

(4) The setting up by the UNO, as one of its first acts, of a control commission with authority to outlaw the manufacture of atomic explosives and to destroy or convert to industrial use the bombs already built by the United States.

(5) Elimination of the veto rule in the Security Council which today gives dictatorial power to a small group of nations and thus prevents the establishment of a world authority accepted by all nations, large and small.

(6) Action by the government in the domestic field to prevent the possibility of control by private monopolies over the industrial exploitation of atomic energy which would hinder the development of economic security and abundance; to this end the government should keep in its own hands the sources of fissionable material

and nationalize the production of atomic energy to prevent the new power from becoming a source of profit for big business.

(7) Legislative action by Congress to devise machinery which will insure the security of the country, prevent improper private exploitation of atomic development, and at the same time encourage scientific experimentation especially in the peaceful application of nuclear energy.

(8) Establishment of a federal control commission to be composed of representatives of the people as a whole -- including scientific workers, labor, and the professions, as well as business and industry; the government and the armed forces also to be represented, but the commission under no circumstances dominated by the War Department.

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