

# The Atomic Engineer AND SCIENTIST

Oak Ridge, Tennessee

Oak Ridge Engineers and Scientists

January 27, 1946

## Miss Wynner Speaks on World Federation

Representatives of the O.R.E.S. and the A.O.R.S. (X-10) met with Miss Edith Wynner at the house of Dr. Burton of X-10 on January 17 for an informal discussion of the U.N.O., World Government, and a "scientist's speaking pool". Miss Wynner, who is coauthor of Searchlight on Peace Plans, was in agreement with our platform and our thoughts concerning World Government. Miss Wynner felt that the scientist's efforts in informing the public and Congress of the significance of the atomic bomb have been very effective and valuable.

Miss Wynner was very emphatic in her observation that the public is clamoring for the advice and ideas of scientists. In order to help satisfy this demand she offered assistance in the management of a scientist's lecturing pool. The idea seems to be very promising in providing a fruitful outlet for the ideas of the organizations.

At a general meeting the following evening Miss Wynner lectured on "World Peace Through World Government". Three possible paths were suggested which may result in world peace:

1. Continuation of the U.N.O. and drastic revision of the charter to form, eventually, a Federal World Government.
2. Scrapping the U.N.O. and having the nations call a World Constitutional Convention for the establishment of a Federal World Government.
3. The people of the world calling their own World Constitutional Convention to insure the existence of a plan if the governments do not provide a satisfactory solution.

Assuming that atomic energy will be under international control, Miss Wynner is very concerned about how we can convince the world that the United States will not be secretly holding back atomic bombs we have already produced.

PLEASE READ THE OAK RIDGE ENGINEER AND SCIENTIST THROUGH  
Due to difficulties in preparing and assembling the material, items of the greatest import are not always displayed most prominently.

## Atomic Energy and the U.N.O.

The New York Times reported on January 15 that Secretary of State Byrnes had assured the United Nations Assembly that this time the United States would give its whole-hearted cooperation to the nations organizing for peace. He warned the great powers that they must use their strength only in defense of law, and cautioned the small powers not to expect too much from the U.N.O. in its infancy.

Byrnes told the General Assembly that the discovery of atomic energy was "inseparably connected with the problem of security", and emphasized that "we must not fail to devise the safeguards necessary to insure that this great discovery is used for human welfare and not for more deadly warfare".

At the Political and Security Committee meetings Senator Tom Connally will make a statement on behalf of the United States in which the administration's position that American security must be preserved in all discussions about atomic bombs will be placed on record.

Australians and New Zealanders have expressed misgivings about the intention of placing the Atomic Energy Commission under the direction of the Security Council. However, it appears that there is no inclination to begin a row over having it responsible to the General Assembly as a whole instead.

Meanwhile, Americans United for World Organization, a group that is campaigning actively for a stronger U.N.O., made public a statement by the Association of Oak Ridge Scientists declaring that no foolproof system of atomic bomb control and inspection was possible without world law. The Association asked as minimum changes in the U.N.O. setup that the major powers' veto power be eliminated; that all nations either be members of or controlled by the U.N.O., and that atomic energy control rulings be extended to individuals.

On the other hand, Soviet Ambassador Gromyko told the General Assembly that any revision of the U.N.O. Charter would be dangerous and might lead to serious consequences. He stressed the importance of the Security Council, particularly in controlling the Atomic Energy Commission, and condemned efforts to give small nations equality with the big powers.

Nations to be represented on the Atomic Energy Commission are Canada (included because of the part it played in the development of atomic energy) and the eleven members of the Security Council; Britain, Russia, the United States, France, China, Australia, the Netherlands, Poland, Egypt, Brazil, and Mexico.

### Atom Bomb Test on Naval Vessels

Admiral Blandy, former Chief of Naval Ordnance, stated that tests of atomic bombs against naval vessels of various classifications will be held this Spring or Summer. They are to be "a thoroughly joint effort among the Army, Navy, and civilian scientists", rather than a contest between the Army and the Navy. He advanced no suggestions that the Navy hoped to prove the invulnerability of its ships against the atomic bomb. The purpose of the coming tests, he asserted, was "to find things important to the national defense".

The tests (as announced on January 24) will be observed only by American, British, and Canadian military observers, Congressmen, civilian scientists, and a few American newspaper men. According to these tentative plans other nations will be excluded to permit the military to decide what information will be released.

Rear Admiral Russell S. Berkeley, chief of the Navy's civil liaison section, estimated that the cost of the test would be \$100,000,000. He stated that the scientists "have calculated that the bomb's greatest effect upon shipping may be reached when it is exploded a mile and a half under the sea". He hopes that the tests will enable the Navy to redesign its ships better to withstand atom bomb attacks. One thousand fifty vessels, constructed or reconditioned from this point of view will constitute the peacetime fleet according to his comments.

Representative Vinson, Chairman of the House Naval Affairs Committee has stated that he will oppose the inclusion of the aircraft carriers Saratoga and Enterprise among the ships to be tested because of the sentimental value attached to them.

#### Technical Comment and Speculation

The discovery of a new type of earth wave during the atomic bomb test in New Mexico last Summer was reported by Dr. L. Don Leet, Harvard University seismologist. The most important feature was the fact that the greatest part of the energy from the blast was carried by two wave types. One type, called the couple wave, was found to be one of the dominant forms on the atomic bomb record. The coupled wave was first observed and reported by Dr. Leet in 1938, but work on its uses and its importance was delayed by the war until the atomic bomb test. The other wave known as the hydrodynamic wave had never been reported before. "These waves are as fundamental to seismology as are atomic structures to nuclear physics," Leet said.

Dr. Glenn T. Seaborg has stated that heat from atomic energy is being produced on a large scale though no effort has yet been made to put it to practical use.

Robert D. Potter, science editor of the American Weekly, estimates that it will be many years before atomic energy will be harnessed for useful purposes. He stated that the great quantities of heat produced could be used for purposes as far reaching as changing the climatic conditions of various areas.

Dean George R. Harrison of M.I.T. said that an automobile powered by atomic energy could be constructed today if it was desired, but that the shielding necessary to protect passengers and passers-by from the radiation would be so great (eight feet of concrete) that it would be, to say the least, quite impractical.

Concerning the Manhattan District Project, General Groves has stated that it is "drifting" and requires direction. There is no policy in force and key workers are leaving, he said, and added that he himself is tired and wants to quit.

#### Congress

Senate: Since reconvening on January 4, the Senate has received some committee reports (but not that of the Atomic Energy Committee), has heard the President's message on the state of the union and budget, and since then has filibustered on the FEPC issue.

Senator Smith entered into the Congressional Record of January 17 an editorial from the Newark Evening News of November 29, 1945, entitled Solely For Science. The editorial backed the Magnuson (not Kilgore) bill and advocated the removal of the social sciences from the foundation grants to devote them solely to science.

House: Representative C.L. Gifford of Massachusetts entered into the Congressional Record of January 21 an article by Theodore Koppanyi of Georgetown University which

Oak Ridge Scientific Groups — Newsletters, bulletins, informational material

appeared in the 1945 Bulletin of the American Association of University Professors. Mr. Koppanyi opposes the Kilgore-Magnus compromise bill stating that it would be "a disruption of serious proportion in American Science." He states that any type of government regulation of science whatsoever will impede scientific development to the detriment of the people as a whole. If a bill to create a National Science Foundation is passed, however, it should confine itself to the following phases: a) support government research, particularly in public health and national defense, b) coordinate government research to prevent duplication, and c) secure advice from private laboratories and individuals in the interest of such programs.

Articles of Interest

Atomic Bomb Hysteria by Major Alexander de Seversky appears in the February Reader's Digest. In it de Seversky first sets forth his credentials as an authority on bomb damage because of his investigations in Europe and Japan for the Army and then gives his reasons for thinking that the A-bomb was so effective only because of the flimsy construction of the cities against which it was used. His conclusion is that the bombs used at Hiroshima and Nagasaki had a moderate but very extensive blast. He claims that one ten ton blockbuster would be as effective as the present A-bomb against a city of modern construction such as New York or Chicago. Because of his conclusion that the effectiveness of the A bomb has been greatly exaggerated, he advocates that we do not indulge in "atomic bomb hysteria." The article is well written and includes much that we would all agree to, but it implies that the threat of the atomic bomb is overrated.

The Ladies Home Journal of February contains four articles on the Atomic Bomb and the prevention of war.

In A Scientist Tells Us "What We May Expect", J.C. Furnas takes A.H. Compton's published statements and interpolates his own comments to present them in a form which will strike the average American more forcefully. "The unblinking fact is that here is the ...test whether human beings really are capable of civilization."

In A Man Tells Us "What We Must Do", Struthers Burt says that all nations have been made equal by the Atomic Bomb. "...imagine an enraged Switzerland destroying the rest of mankind." There's no use doing any planning for the future until "...we, and the rest of mankind, come together in good faith to present a common front against universal and adventitious death."

In A Woman Says "You Must Come Into The Room of Your Mother Unarmed", Dorothy Thompson makes a plea from the mothers of the world to the leaders of the nations to work sincerely for international peace and human freedom.

In Wishful Thinking About the Atomic Bomb, Marjorie Lawrence Street brings up and then bats down conclusively the following statements:

- " Don't talk about it."
- " The higher-ups will solve it."
- " A defense will be found."
- " They won't use it."
- " But that was against the Japs."
- " That was a demonstration."
- " We can stay ahead of any enemy."
- " We're keeping the secret."
- " By the time it comes we'll be adjusted to the idea."
- " We'll outlaw the bomb."
- " We'll have an international organization with power behind it."

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" We've never lost a war."  
" They won't use it for fear of retaliation."  
" If your number's up -."  
" We all have to die sometime."  
" You can't change human nature."  
" I've heard all this."  
" I'll be dead by then."  
" I'll leave town right away."  
" Pursuit of knowledge must stop."  
" You can't stop the forces of nature."

Fear in the Atomic Age, an article by K.A. Kraus and M.E. Kraus appearing in the January 12 edition of The Saturday Review of Literature, is summarized by the following paragraph.

"It is realized that strengthening of the United Nations Organization may eventually lead to world tyranny. There also will always exist the danger of a civil war of the future, which of course would be tantamount to a world war. There appears to be no alternative, however, since continuation under the present arrangement leaves a much higher probability for a war with weapons against which all nations are defenseless. In this war atomic bombs will strike suddenly, without warning, possibly anonymously. The bombs may be planted as mines, which we have no means to detect. We cannot defend ourselves effectively by burying underground or even dispersing our cities, and sacrificing our present way of life, since future developments will be specifically designed to counteract our earlier defenses. Thus, like it or not, we must put our trust in a strong international organization.

#### Proposed Resolutions

The AORS has come out with a statement that the veto power permitted in the United Nations Charter "must be replaced by a system of world law from which no state is exempt." If the ORES is also to remain active in its work of informing the public of the problems that the world faces and the solutions to these problems that we feel are most satisfactory, we, the members of the ORES, must make decisions on such basic problems as the UNO and then make our decisions known.

The Editorial Committee has asked for a resolution to be passed soon on the problem of UNO in particular so that the committee will know what stand to take in its articles. Read the following two resolutions through, then study them. Decide what you like about them and what you don't like about them and be sure that you think your reasons through. These resolutions will have to be voted on soon and the resolution we pass must be thoroughly thought out, because it will be a guide for the policy of the ORES in its press releases.

"We, the Oak Ridge Engineers and Scientists who helped develop and produce atomic energy, determined to stress the facts and conditions governing the control of this new power to save ourselves and succeeding generations from the scourge of war and total destruction, are convinced that the present set-up of the United Nations Organization is wholly inadequate for solving the problem of removing this threat to the peace and security of our times.

The era has come now when no half measures or compromises on principal issues of world affairs can be permitted to endanger the future of civilization, when each nation must be willing eventually to relinquish some integral part of its independence and sovereignty and become in fact and function a member of a family of nations - a world government.

The same reasons that prompted thirteen colonies to join and form the "United States of America" should compel us now to authorize our statesmen to support and work towards the ideas so ably expressed by the British spokesmen, Mr. Eden and Mr. Bevin.

In order to decrease the chances of open conflict and the use of atomic power to destructive ends, before the establishment of a true family of nations can be realized, we propose that our delegates to the UNO be instructed at once to initiate the following minimum modifications in the functions of the UNO.

- (1) In a case of a threat or even the suspicion of a threat based on atomic power, action by the UNO must be prompt.
- (2) Action must be taken legally against any offender, including the big five powers. No, possibly from the aggressor nation itself, can be permitted to cause confusion in a state of emergency.
- (3) Individuals or groups as well as nations violating the rules of the UNO control of atomic energy are placing themselves under the jurisdiction of the UNO and can be acted upon by the UNO.
- (4) No nation, member or not, can be permitted to place itself outside the jurisdiction of the central regulations concerning atomic energy.
- (5) The UNO shall have its own security agents within the territories of all nations, fully authorized to contact individuals and groups and to take appropriate action to apprehend violators."

"We, the Oak Ridge Engineers and Scientists, who produced the Uranium for the atomic bomb, do hereby give as our considered opinion:

- (1) That other nations can acquire the necessary knowledge to manufacture atomic bombs within a relatively short period of time.
- (2) That international control to prevent secret manufacture of atomic bombs by any nation *(is, from a technical standpoint, easily feasible)* provided certain political requirements are met; but that this control is impossible if they are not met.
- (3) That these minimum political requirements are,
  - (a) that the international inspectors cannot be prevented by any individual or government from being able to investigate any plant, mine, or section of territory.
  - (b) that if operations are detected and proved to be illegal, effective coercive action against the offending government or individual be automatic.
- (4) That the UNO, as presently constituted, does not meet either of these political requirements.

#### A Review of the Meeting of January 22, 1946

At the January 22 meeting of the ORES, a panel discussion was held on the UNO. The occasion was highlighted by two guest speakers, Mr. Khouri and Dr. Williamson, political scientists from the University of Tennessee. Mr. Khouri supplied the historical background for Dr. Williamson's brief talk on the UNO.

In their speeches and in the subsequent discussion, Mr. Khouri and Dr. Williamson emphasized the following considerations: The UNO was an instrument. The success or failure of this instrument is the responsibility of the people of the world. In order to insure the success of the UNO the issues must be brought to the public, clarified and then sufficient public pressure brought to bear on the national leaders and representatives to use this instrument with maximum effectiveness.

Compared to the League of Nations the UNO is in many ways superior. Not only does it have the support of all the big powers but it differs fundamentally in some respects from the League of Nations Covenant. This difference is exemplified in opening phraseology. "Whereas the Charter begins "We, the peoples of the United Nations...", the League Covenant began "The High Contracting Parties." Thus the Charter represents an agreement between peoples while the Covenant represented an agreement between governments. Furthermore the Charter has the advantage of flexibility. It can be amended though admittedly this is a difficult process. The remainder of Dr. Williamson's speech was devoted to an exposition of the ideals embodied in the Charter in the first Chapter entitled "Purpose and Principles."

In the ensuing panel discussion Mr. Khouri and Dr. Williamson made the following comments. When dissatisfaction with the veto power is expressed, it should be borne in mind that Russia had the support of the U.S. on this issue. It was further pointed out that we have ample evidence to believe and trust Russia's good intentions. The following evidence was cited: (1) Russia has not dominated any other nations, (2) Russia has held its armies in check when they could have overrun countries like Greece, (3) there is no Moscow controlled political activity in this country.

In the discussion regarding the Security Council Dr. Williamson interpreted the Charter as providing the UNO with military forces at its immediate disposal. According to this view consent of the nation contributing the forces will not be necessary prior to assignment of a military mission.

In regard to control of Atomic Energy it was stated that the UNO should be empowered to act on individuals as well as nations. This would admittedly be a departure from the confederate system of government on which the UNO is based and therefore would be an "exception". Finally it was argued by Dr. Williamson that a federation, though it would be highly desirable, cannot be obtained now. Its advocates are the perfectionists.

Two panel members, Sgt. Steven J. Kwiatkowski and Sgt. Wynn E. McCoy, present the following as a result of their study of the UNO:

An attempt was made to study the UNO objectively and dispassionately with the express purpose of revealing its strength and weakness and the fundamental principles on which it is based. Emotional attitudes such as optimism or pessimism were carefully avoided. It was felt that only such a study could be of any value in appraising the UNO as an instrument for preserving international peace in this Atomic Age.

The Charter provides for all the organs of government. It establishes an Assembly, a Security Council, and an International Court of Justice, which are to fulfill the legislative, executive, and judiciary functions respectively. Thus a structure for effective government is erected. This structure, however, possesses at best limited functional reality. The Assembly has no legislative authority. It can only make recommendations which must be ratified by the 51 member nations before they become law. The serious weakness of this body is best illustrated by momentarily transposing this system of government to the United States. When Congress passed a bill after due debate and deliberation, it would go to the 48 individual state legislatures for ratification. Thus a total of 49 legislative battles would have to be fought instead of one. In the case of the UNO the number of battles would be 52. Only mention need be made of the prohibitive amount of time consumed in this procedure. In effect, the legislature machinery is geared to a snail's pace while war can erupt with the speed of a V-2 rocket. Fur-

thermore one nation can effectively throttle any immediate action by dilatory tactics. Miss Edith Wynner has pointed out that:

"Then called upon for assistance the fellow confederates get busy looking the other way. Of course, they consult and pact and scurry about and even take such drastic measures as wiggling a severe finger at the erring colleague. These activities take a lot of time, so much in fact that the weaker confederate, alias 'the victim of aggression' is gobbled up at last and then nearly everyone heaves a sigh of relief. This is the usual obituary of confederations." Any one of the "Big Five" can effectively stall proceedings since unanimity is a prerequisite in all important decisions. Simultaneously this requisite unanimity precludes the possibility of disciplinary action against a "Big Five" power. No security is to be found in the Charter against a war between two or more of the Big Five.

Since the UNO is built on the premise that the participation by all great powers is necessary for its success, and since it is permissible for a power to withdraw from the organization, all decisions arrived at must be made in the face of the constant threat of withdrawal of one of the powerful members. In this fashion the Charter institutionalizes the appeasement of the big powers.

In Chapter I the Charter embodies a good deal of the language of idealism. In succeeding chapters the idealism is difficult to find. For this reason it is dangerous since it unfuly raises hopes of the people. For example in Chapter I the principle of equal national sovereignty is affirmed. In subsequent chapters all real power is concentrated in the hands of the five great powers. As a consequence there is not a square inch of soil over which one of the Big Five powers cannot exercise their influence directly or by means of satellite powers. In effect the Big Five retain their own internal and external sovereignty and usurp that of the small powers simultaneously. A noteworthy feature of this doctrine of absolute national sovereignty is that in practice it depends on military might for implementation of its decisions. Thus coercive action is supported by war and not by police power. The delegates to the American Constitutional Convention had no illusions on the subject. To them coercion of states in their collective capacity was war; they did not evade it by calling it "police action."

Miss Wynner clarifies the issue as follows:

"Elaborate confusion has been created on the whole subject of world law enforcement by the misuse of the term International Police Force. Most of its advocates do not mean a police operating on individuals, but military, naval air forces making war on nations. They consider international enforcement only at the point when national armies are already unlawfully moving into neighboring territory. They fail to see that international enforcement must take place before this riot level is reached. If local governments could not stop the individual law-breaker until he had provoked wholesale riot, local government would not have had the long, honorable and hardy life it has enjoyed. Locally and nationally we have accepted the necessity and wisdom of restrictive and preventive governmental authority operating on the individual. Anything less than this minimum which produces internal peace will hardly produce world peace."

The current trials of war criminals indicate a general recognition of the guilt of individuals in starting wars. Justice Jackson's first indictment consists of crimes committed by the Nazi leaders against their own people. In this connection, it is fitting to quote some of the framers of our Constitution. Alexander Hamilton in the New York State Convention to ratify the constitution said, "It has been observed to coerce the states is one of the maddest projects that was ever devised... Can any reasonable man be well disposed towards a government which makes war and carnage the only means of supporting itself... Every such war



must involve the innocent with the guilty. A single consideration should be sufficient to dispose every peaceable citizen against such a government... What is the cure for this great evil? Nothing, but to enable the national laws to operate on individuals, in the same manner as those of states do."

From the few considerations mentioned above, certain changes become apparent and necessary in the UNO. However, it must be pointed out that many of these changes would be changes in kind rather than degree, therefore incompatible with the confederate system of government. A confederation is characterized as follows:

- a. The member nations retain complete sovereignty. Action on individuals is alien to the confederate system.
- b. The people have a very limited representation. It is fundamentally government by the nations, rather than by the people.
- c. The confederation is completely dependent on the member nations for political, economic and military support.

From this it becomes apparent that the weaknesses described are not weaknesses of the UNO, but are the weaknesses of any confederate system of government. If differences between the member nations are not very great then, this eighteenth century instrument could be adequate to preserve the peace. If the differences are great a more powerful instrument is necessary to reconcile these differences. The remaining possibilities are world domination by a single nation, or federation.

Edith F. Ymmer has stated, "Federations are seldom built on the maybe-I'll-play-and-maybe-I-won't basis of alliances and confederations. The decision to enter the federation is voluntary but, once made, it is usually permanent. To prevent future misunderstandings and evasions, the distribution of power is written down in a tight little contract, called a constitution. Local, state (or national) autonomy (or sovereignty) is retained and safeguarded. A new level of government is created to deal with problems that were inadequately handled by the smaller sovereign units. Because the new government is expected to accomplish things within the sphere allotted to it, it is empowered to raise its own revenues and to pass legislation applying directly to the individual citizens of its member units."

There is no intermediate ground between a confederation and a federation. A system of government embodying a few of the characteristics of the confederation and a few of the characteristics of the federation is unstable and will gravitate to either one form or the other.

To identify the proponents of federation now, as perfectionists is inaccurate since federation would only be the first step toward perfection. Our own federation of 48 states has a long way to travel on the road to perfection. Furthermore, as Norman Thomas justly observes, "Perfectionism is a political fault which has to be avoided, but things have come to a sorry pass when it is made a major crime by preachers of righteousness in a world which they bid to be content with remedies that cannot cure its mortal sickness."

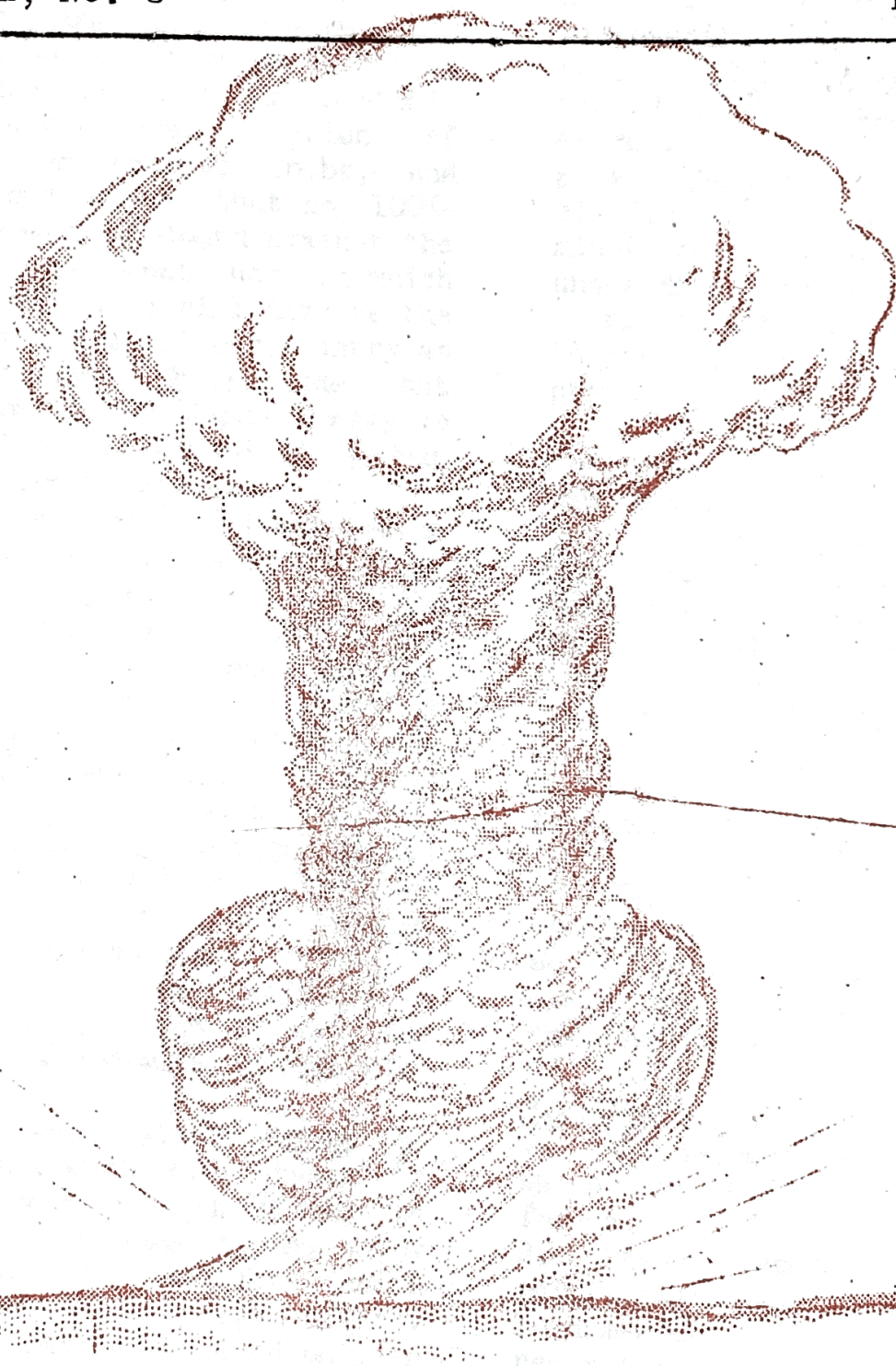
#### NEXT MEETING

Next meeting of the Oak Ridge Engineers and Scientists will be at the usual time and place - the Elm Grove School at 7:30 P.M. on Tuesday night, January 9.

# The Atomic Engineer AND SCIENTIST

Vol. II, No. 8

March 2, 1946



## EDITORIAL

### NATIONAL LEGISLATION FOR CONTROL OF ATOMIC ENERGY

The Oak Ridge Engineers and Scientists is an organization of technical men working in the two large Oak Ridge plants which produce U-235 for use in atomic bombs. We have organized because of our knowledge that atomic scientists in this country possess no secrets not known to scientists throughout the world, because of our belief that the secrets of the technical developments of our plants - the production know-how - can soon be duplicated in other countries and that sooner or later, in an atomic armament race, every nation of consequence can possess bombs, and because of our belief that no 100% sure defense will be found against the atomic bomb and that war in which atomic bombs are used will involve the complete destruction of our country as we know it today. We conclude that world-wide control of atomic energy is the only solution which will permit our civilization to survive.

The Senate Special Committee on Atomic Energy retired into executive session on February 16 with the object of reporting out a bill for the national control of atomic energy. This legislation, while not directly leading to world-wide control, can constitute a first step. It should set a pattern for world-wide control, which requires full inspection of all industrial and research activities, no undeclared work on atomic energy developments, and adequate penalties for violations. The legislation should certainly not make the achievement of world-wide control more difficult.

Not only must atomic energy be controlled on a world-wide basis to prevent an atomic war but it must be controlled so that humanity may enjoy the material benefits which this source of energy offers. These benefits may be attained only in accordance with the vision and vitality of the Atomic Energy Commission in this field.

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We believe that the following provisions are essential if such a bill is to set a national pattern for effective control and development of atomic energy, a pattern which will be adaptable later for world-wide application:

1. Control must be under the jurisdiction of a commission composed of qualified civilians, and not of active members of the military forces;
2. There must be free interchange of scientific information, except for discoveries made in the course of research and development directed toward military application of atomic energy;
3. a. The production and distribution of fissionable materials except in minor research quantities must be under direct government control;  
b. No national shall be permitted to participate or invest in foreign production of fissionable materials;
- c. No private import or export of fissionable material shall be permitted;
4. a. The field of research on atomic energy must be free from governmental restriction to the greatest extent consistent with public safety;  
b. The government should encourage independent research in the field of atomic energy by allocating fissionable materials, and by providing financial aid.

The principal bills now being considered by the Senate Committee may be criticized on the following points, which are numbered to correspond to the essential provisions stated above:

S. 1463, the first Johnson Bill --

1. All members of the Commission may be active members of the military forces;
2. The Commission may issue restrictions on the dissemination of fundamental scientific information, regardless of its origin;
3. Private production, ownership, export, and import of fissionable materials is permitted;

## EDITORIAL (Continued)

### S. 1557, the Ball Bill --

3. Private production and ownership of fissionable materials is permitted; no specific provisions are made regarding export or import of fissionable materials;

4. Licenses for private research shall be revoked if the research is wasteful of materials or incompetent in the opinion of the Commission;

### S. 1717, the McMahon Bill --

This bill contains provisions which are in substantial agreement with the essential provisions listed above;

### S. 1824, the second Johnson Bill --

1. The membership of the Commission proposed in this bill consists of the President of the Senate as Chairman, five members from the Senate, and five

from the House of Representatives.

We believe that several members of the Commission must be engineers and scientists familiar with atomic energy problems.

In view of the statements above, it is our opinion that the McMahon Bill, S. 1717, deserves full support, since it is the only one of the bills above which incorporates all of the provisions we consider essential to provide effective control of atomic energy, with maximum encouragement of scientific research, in a pattern adaptable to later world-wide control.

(The above editorial represents the findings of the special committee set up by the O. R. E. S. to discuss national legislation for the control of atomic energy.)

## NATIONAL LEGISLATION

### IN THE SENATE

Senator A. H. Vandenburg introduced a bill (S.1850) to promote the progress of science and the useful arts, to secure the national defense, to advance the national health and welfare, and for other purposes. The bill was referred to the Committee on Military affairs. (Cong. Rec'd, Feb. 21)

Senator Carl Hatch introduced a bill to reserve for the use of the United States all deposits of fissionable material contained on all public lands. The bill was referred to the Committee on Public Lands and Surveys. (Cong. Record, Feb. 21)

### PATTERSON FIGHTS FOR VOICE ON ATOM

Patterson, Sec. of War, took a firm stand against any policy for the domestic control of atomic energy that would bar direct participation by the Army & Navy in the military applications of the force and would make the services "Utter strangers to what was going on."

Patterson testifying before Senate Special Committee on Atomic Energy attacked the legislations sponsored by the Committee's Chairman, Sen. McMahon, but concentrated his fire on the failure of the bill to recognize the direct concern of the military in atomic weapons.

Such a policy he contended "is taking the greatest risks with the safety of the nation."

Although he expressed the hope that international controls over atomic weapons and their ultimate elimination would be achieved soon by the United Nations, Patterson asserted that the interests of the military in the "most devastating weapon in existence is warranted under present day conditions and until there is firm assurance of effective international control."

Patterson indicated that he favored May-Johnson Bill as modified in accord with policies urged by Pres. Truman. (N.Y. TIMES, Feb. 15)

Can we act warlike and still expect others to believe we want peace?

## NATIONAL

### GROVES TESTIFIES

Major General Leslie E. Groves has stated that it would take "another generation" for Russia to produce an atomic bomb, and "even if we gave them unlimited help.....five or six years." He also told the McMahon Committee, in answer to a question on whether this country's interest should be placed on military applications, "Yes, predominantly as a weapon....." (UP, Feb. 27)

### HUTCHINS DISAGREES

Dr. Robert M. Hutchins of Chicago University disagreed with Groves testimony before the Senate Atomic Energy Committee. He asserted:

1. To treat atomic energy as a weapon is to prevent permanent peace.
  2. To assume the Russians will require a generation to produce A-bombs, is to credit them with only one tenth of our mentality since it took us only three years.
  3. Atomic energy is already of very great use in medicine and biological research. He likens its importance to the discovery of the microscope. Industrial uses are around the corner.
- (AP, Feb. 28)

### U.S. IS NOW IN THE BUSINESS

The US News, analyzing the spy scare points out that "even the United States, which never officially indulged in espionage in the past, now is going into the business openly."

The US News would seem to agree with the scientists who "scoff at the idea of anybody's stealing plans for the bomb. A full set of plans would fill the hold of a ship." They suggest that Russia might have been interested in comparing the Canadian Uranium ore with the Czechoslovakian variety, and point out further that one immediate consequence is the tightening up of security.

(US News, March 1)

### CANADIAN PROFESSOR COMMENTS

"Commenting on the Canadian spy round-up Prof. J. D. Bernal who helped in development of the atom bomb, said here: 'We would not have anything like we are having in Canada if we had a full exchange of scientific information. The slowness of sharing atomic energy is a major cause for continued and dangerously increasing tension in the world.'" (Toronto Globe and Mail, Feb. 19)

### VACATION FROM BOMBS

In a letter to the editor a group of Columbia University professors, in view of the establishment of a UNO Commission on Atomic Energy, suggest the declaration of the following policy by the President of the U. S. in order that the discussions of the UNO Commission may proceed in an atmosphere of good faith:

1) "The U. S. will at once stop the production of bombs from material currently produced.

2) For one year, which would seem to be a reasonable time for the commission to mature its plans and to secure action on them by the governments concerned, we will stop accumulating purified plutonium and U-235 which are the essential ingredients of the atomic bombs. The plants which produce these materials will be kept in a stand-by condition.. .."

3) We are prepared to have the disposition of our present stockpile of bombs considered as one of the items in an agreement to be entered into by us and the other governments.

(N.Y. Times, Feb. 16)

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The above letter is strangely disturbing, not because we strongly agree or disagree with the program outlined, but because it seems to us that a group of sane and responsible men are daring to face a fundamental problem. Their program carries one viewpoint to its logical conclusion.

# SCIENTISTS IN THE NEWS

## WEAPONS WORSE THAN ATOM BOMB

Dr. Robert M. Hutchins, chancellor of the University of Chicago, first witness as hearings were resumed on universal military training told House Military affairs committee: "You'll have worse bombs than the atomic bombs... It is perfectly clear that the atomic bomb is simply the beginning." He summed up his views on universal training by stating that it would only instruct masses of men in the techniques of obsolescent weapons. He said that training was useless, as it is a question of "peace or suicide," and that the only possible means of preventing a third world war was through a world government. (INS about Feb. 15)

Dr. F.H. Spedding, head of the division of physical chemistry at Iowa State College and one of the directors of Uranium purification research at Aimes, told members of the Rotary Club of Cedar Rapids, Iowa, that "we must not make atomic bombs," ... That the "United Nations - must outlaw the manufacture of the bomb, as that is the only method of avoiding its destructive use." He termed the present atom bomb, a "city buster" and warned that within twenty years the world might see the development of a "county buster." However, he explained, that the scientists have not created a Frankenstein which will destroy the world, but have "unleashed an energy which can be used either for great good or great handicap to the world..." Dr. Spedding believes that the public should not look for immediate use of atomic energy in commercial fields. Perhaps, "within 20 years, atomic engines may be competing with other forms of power," was his prediction.

It was under the direction of Dr. Spedding and J.C. Rodd of the national bureau of standards that the process for producing uranium in pure form for the atomic bomb was devised, saving the government \$100,000,000 over previous process. (Cedar Rapids Gazette Feb. 14.)

## ANOTHER APPROACH

The following is an extract from a letter received from Prof. Lewis Mumford author of The Technics and Civilization and other social and historical studies.

"So far the actions of perhaps the greater part of the atomic workers have been exemplary. But I believe that there is one more department in which their own actions would carry great weight, if they could persuade themselves as a group to make the necessary renunciations. You are correctly asking the sovereign state to give up one of its historic attributes: its internal self-sufficiency. But there has been no hint of any similar abatement within the realm of science itself; at the very moment that the danger from the exploitation of atomic energy has become absolute, the scientists themselves demand unabated effort in physical research, thus proposing to widen still further the disastrous breach that already exists between man's physical powers and his moral and political controls. Unless the physical scientist himself overcomes this parochialism, unless he realizes that on the scale of our present danger, it may be necessary temporarily to sacrifice the swift advance of science in order to preserve the civilization that supports it -- and so in the long run, to preserve the possibilities of future scientific discoveries -- I fear we are lost."

## TEN YEARS FOR RUSSIAN A-BOMB

Harold C. Urey and Harlow Shapley stated that Russia could have atomic bombs within ten years without any help from the U.S. Urey declared that there is no defence and never will be any defence against the A-Bomb.

Urey also warned that a World Government must be established soon as the only hope for world peace and thus for the U.S. to avoid destruction in the next war.

## A T O M B O M B S

### NIMITZ SEES NAVY AS ATOMIC SHIELD

The surest defense of the U.S. against atomic bombs or attack by guided missiles is a strong Navy with bases sufficiently distant to control all approaches to either surface or airborne launchers, Admiral Chester W. Nimitz told the Senate Naval Affairs Committee according to the N.Y. TIMES of Feb. 15. This testimony followed and amplified similar reasoning by Secretary of the Navy Forrestal.

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"It is now possible to strike at any point on the earth from any other point on the earth", said Norman Cousins here last Wednesday.

### ATOMIC DESTRUCTION POPULARIZED

LOOK magazine for March 5th in an article entitled "Your Last Chance" examines and portrays vividly the horrors of an atomic war and concludes as the courses open to the United States:

1. Conquer the world.
2. TRY to develop a defense.
3. Put an end to war.

LOOK proceeds effectively to show what is to be gained by and how to go about gaining the third alternative.

A realistic description of the

horrible destruction inflicted by an atomic bomb is given by Robert De Vore in the March 2nd issue of COLLIERS. The artist's conception of the city of New York after an atomic bomb hit on the downtown section is appalling.

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The COLLIERS article will appear to most as nothing more than science-fiction. Right now it may be. But then, who knows what ten or twenty years may bring?

### FISH LIFE

Former Secretary Ickes has selected a committee to study the effect of the atomic bomb on fish life in the proposed test at Bikini. At first, there was considerable concern over possible damage to commercial fishery resources, but the location selected eliminates most of these worries. (Gaylor Technical Journal)

### ANTARCTIC RICHES

It is believed that Eddie Rickenbacker's suggestion to use atomic bombs for melting the antarctic circle ice crust to uncover gold and other deposits will begin a stock promotion campaign. (Smith, Financial World, Feb. 13)

## I N T E R N A T I O N A L

### UNO ATOMIC CONTROL COMMISSION

The achievements of UNO to date were summarized by TIME, Feb. 25, 1946. Following are those relating to atomic power:

The Atomic Control Commission was created by the General Assembly (51 nations each with one vote). It is composed of representatives from the eleven nations on the Security Council (Britain, China, France, Russia, U.S., permanent; Egypt, Mexico, the Netherlands, until 1947; Australia, Brazil, Poland, until 1948) and Canada is the twelfth member.

The Commission reports to the

Security Council.

The Commission will meet for the first time in March in New York or Washington. The Security Council meets again about March 21 at New York.

### WORLD COUNCIL OF CHURCHES

The World Council of Churches, representing 32 countries, appealed in an official message released from Geneva to all men of good will to cooperate in the furtherance of justice and humanity to avoid the extinction of mankind by atomic energy. (UP, Feb. 27)

## BRITAIN NOT BEING INFORMED

The Globe and Mail, Toronto, Canada, Feb. 26, 1946, carried this news item dated London, Feb. 25,

"The Daily Express said to-day that the United States Army had 'stopped the flow of atom research results to Britain' because the British 'have nothing new to offer' in exchange.

'The British atomic bomb project is almost at a standstill', the Daily

Express added. 'Progress in building and equipping the experimental station at Didcot, Berkshire, is deadlocked for lack of staff. For more than four months our scientists have heard virtually nothing of the activities of nuclear physicists in the United States'."

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It seems that we need a better understanding, even among the three nations who have "the secret".

## READING LIST

As an indication of the shape of things to come, we quote from pre-atom literature. "...Already the suggestion has been made that international control is necessary to curb pilotless weapons and to outlaw their use. It seems sad that jet propulsion, which holds such great possibilities for future travel and commerce, should make its first appearance propelling a terrifying weapon that may make any war of the future even more far reaching and destructive than World War II." These are prophetic words indeed. They appear on page 301 of Rockets and Jets, a book by Herbert Zim, published by Harcourt, Brace and Co., New York.

The February issue of CHEMICAL AND METALLURGICAL ENGINEERING features an article entitled The Role of the Process Engineer in the Atomic Bomb Project by P. C. Keith formerly Vice President and Technical Director of the Kellogg Corporation associated with the development of the gaseous diffusion plant.

The February 15th and 22nd issues of SCIENCE discuss the current status of legislation regarding the research program originally recommended by Dr. Vannevar Bush. For scientists and engineers the importance of this subject is second only to the problem of atomic energy control.

The UNITED STATES NEWS article on February 22, 1946, entitled Senator

McMahon's Atomic Crusade describes the Senator's background, his interest in the subject of nucleonics and how he managed to obtain the chairmanship of such an important committee. Perhaps some of the scientists will here find a clue as to the type of action which is likely to be successful in the attainment of their objective.

Andrew W. Kramer, Managing Editor of POWER PLANT ENGINEERING in the fifth of a series of articles entitled The Development of Atomic Energy, this month discusses the construction of the bomb itself.

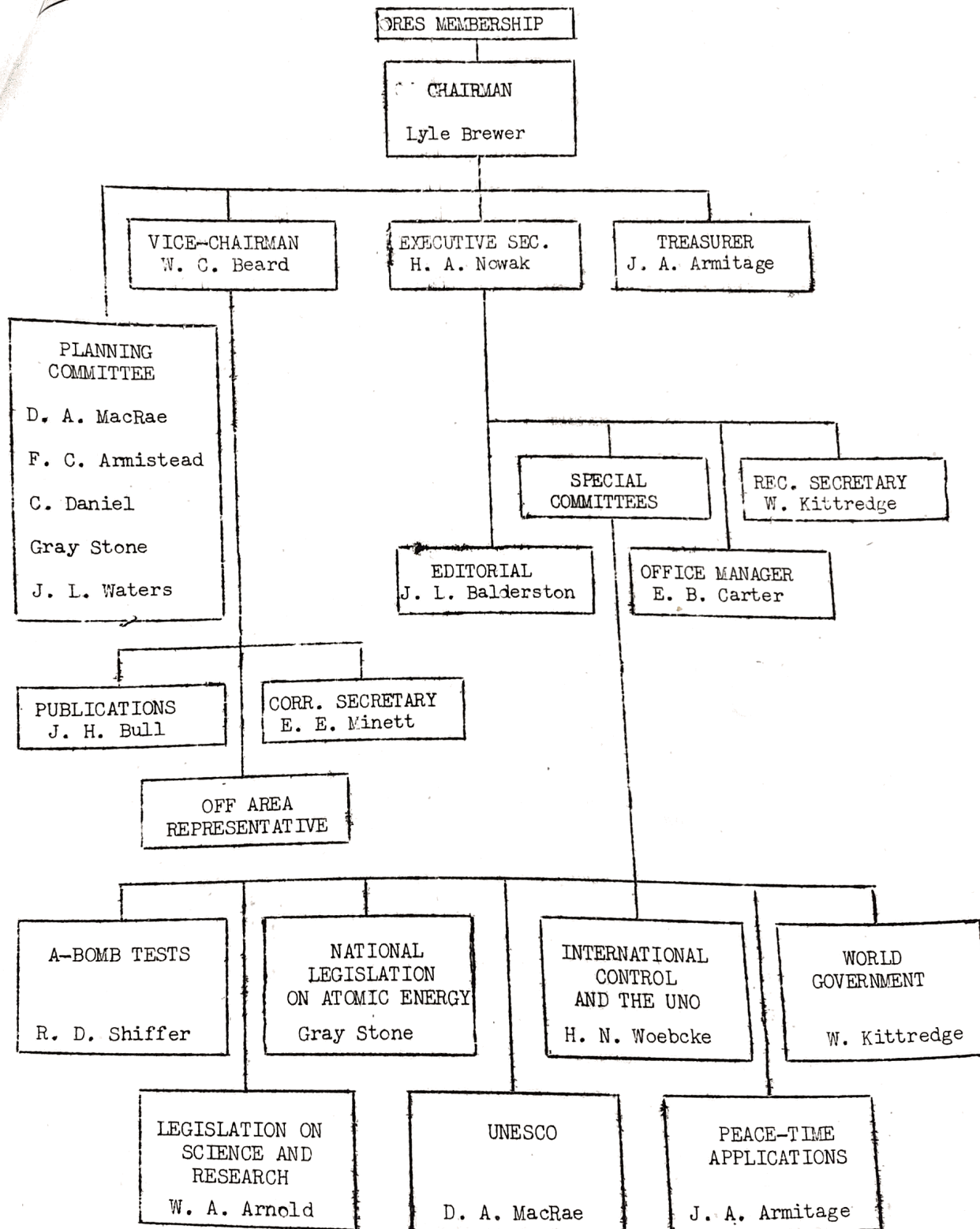
The GENERAL ELECTRIC REVIEW for February states editorially, "The atomic age that was ushered in by 1945 will inexorably compel us to develop a world federation and a world court which will adjust and police international affairs as we now do internal ones."

The NEW YORK TIMES magazine section on February 17th gives a pictorial preview of the proposed "Operation Crossroads".

Under Science (TIME, Feb. 25, 1946) the atomic scientists, their activities, and hopes for the future were discussed at greater length and with more sympathy than TIME has before accorded them. The article dealt chiefly with their new interest in national legislation and its bearing on nuclear research.



ORGANIZATION OF THE ORES



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# The ATOMIC ENGINEER AND SCIENTIST

Vol. II, No. 3

March 16, 1946.



PUBLISHED BY THE OAK RIDGE ENGINEERS AND SCIENTISTS, P.O. BOX 382, OAK RIDGE, TENN.

At the present time the Bulletin of the O.R.E.S. is being distributed bi-weekly to a mailing list of approximately 2500, made up of 450 members, 531 members of Congress, 800 editors and publicists, 150 college presidents, and 550 interested organizations and friends. We have been providing this bulletin without charge, and we desire to continue to furnish it on the same basis. However, each issue costs us, over and above the labor which is gladly furnished free, from \$100 to \$150.

We urge those of our readers who are interested in the wide distribution of the Bulletin to contribute a few dollars to help defray these expenses. Contributions should be sent to:

THE TREASURER,  
O.R.E.S.  
P.O. Box 382  
Oak Ridge, Tenn.

relations, conservatively we could then follow the old pattern of secrecy and reliance upon national military superiority, and depend upon international caution to stay the future use of the weapon. But, to my view, the recent unlocking of atomic energy constitutes a first step--and only a first step--in a new control by man over the primal forces of nature too revolutionary and dangerous to fit into the old patterns. The military application of this discovery underscores most sharply the divergence between man's growing technical power for destructiveness and his psychological power of self-control and group control--his moral power. If this is so, how this problem is approached in the sphere of the relations among the nations is a question of the most vital importance in the evolution of human progress.

The chief lesson I have learned in a long life is that the only way to make a man trustworthy is to trust him; and the surest way to make him untrustworthy, is to distrust him and show your distrust. And it is from this lesson that I draw the conviction that only a direct and open dealing with other nations on the most pressing problem of our time, can bring us enduring co-operation and an effective community of purpose among the nations of the earth. It is the first step on the path of unreserved co-operation among nations which is the most important. Once the course of national conviction and action is set in this direction by the example of the major powers of the world, petty differences will be recognized for what they are, and the way toward a real fraternity of nations will be open.

We must not delay. The poisons of the past are persistent and cannot be purged by timid treatment. By its sole possession of the bomb, at least for the present, the United States finds itself in a position of world leadership. But this solitary possession is most certainly very transient. It must recognize this and act swiftly. It must take the lead by holding out an open hand to other nations in a spirit of genuine trust and with a real desire for a thorough-going co-operative effort in meeting and solving this problem. Truly this is a time for greatness of heart and of purpose, and unless we demonstrate these traits now other nations cannot be expected to do so.

The development of atomic energy holds great, but as yet unexploited, promise for the well-being of civilization. Whether this promise will be realized depends on whether the danger of swift and unprecedented destruction can be removed from the earth. Whether it is removed depends on whether we and other nations move firmly, quickly, and with frank transparency of purpose toward the goal of uniting all men of good will against the appalling threat to man's very existence. The focus of the problem does not lie in the atom; it resides in the hearts of men.

## THE BOMB AND THE OPPORTUNITY

(The following article by Henry L. Stimson, Secretary of War during the development, production, and use of the atomic bomb, was published in HARPER'S MAGAZINE for March.)

The advent of the atomic bomb has created a profound impression in all quarters of the globe. Bidden or unbidden, the atomic bomb sits in on all the councils of nations; in its light all other problems of international relations are dwarfed. This is so not because these other problems are no longer important in themselves, but because the question of the control of the atomic bomb towers above all else. No other problem has been so constantly in my thoughts as this one.

If the atomic bomb were merely another--though more devastating--military weapon, which could be assimilated into the customary pattern of international relations, conceivably we could then follow the old pattern of secrecy and sole reliance upon national military superiority, and depend upon international caution to stay the future use of the weapon. But, to my view, the recent unlocking of atomic energy constitutes a first step--and only a first step--in a new control by man over the primal forces of nature too revolutionary and dangerous to fit into the old patterns. The military application of this discovery underscores most sharply the divergence between man's growing technical power for destructiveness and his psychological power of self-control and group control--his moral power. If this is so, how this problem is approached in the sphere of the relations among the nations is a question of the most vital importance in the evolution of human progress.

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NATIONAL

THE VANDENBURG AMENDMENT

Proponents of all-civilian control of atomic energy were struck a blow on March 13th when the McMahan Committee approved a proposal by Senator A. Vandenburg setting up a "military liason board" which would review all actions of the civilian atomic energy commission. The military board, appointed by the President, could go to him for decisions on all actions which they deem it advisable to question. Vandenburg's proposal was passed by a 10 - 1 margin, Senator McMahan being the only dissenter.

Immediate opposition to the proposal was headed by Secretary Wallace, who declaimed angrily that the provision "has the potentiality of delivering us into the hands of military fascism in this country." The Federation of American Scientists stated that the action was "a clear declaration to the world that the people of the United States will put their faith only in military might." The National League of Women Voters said that "the move would gravely affect our foreign policy," and that it "could throttle the possible development of atomic energy in the public interest."

Senator Vandenburg answered the storm of protest by complaining that there was general misunderstanding of his plan. "Every decision is finally decided by civilian authorities", he pointed out.

The McMahan Committee is preparing to report out a revised bill on atomic energy control.

The following is the complete text of the Vandenburg Amendment:

"There shall be a Military Liason Board appointed by the President composed of representatives of the Departments of War and Navy, in such number as the President may determine. The Commission shall advise and consult with the Board on all atomic energy matters which the board deems to relate to the common defense and

security. The Board shall have full opportunity to acquaint itself with all matters before the Commission.

"The Board shall have authority to make written recommendations to the Commission from time to time as it may deem appropriate. If the Board at any time concludes that any action or proposed action of the Commission, or failure to act by the Commission, is inimical to the common defense and security, the Board may appeal such actions of the Commission to the President, whose decisions shall be final." (N.Y. Times, March 13)

WHO HAS T.E.L. U-235

Several hundred "key men" at the final finishing plant at Oak Ridge have been given lie detector tests, the War Department confirmed this week. Among the questions were "Did you give anyone information about it? The test, it says, was given voluntarily, as an "experiment". The tests were conducted by the inventor of the lie detector, Leonard Keeler who said he had been told to "keep my trap shut." (Scripps-Howard - March 13)

BED TIME STORY

Representative Francis J. Myers, in a talk at Temple University on Feb. 15th, gave this little bedtime story. "I've never seen an atom and I know none of you have either. But we know enough about it to make us wish sometimes that we'd never heard of the thing. The tiny atom has put the whole world in a short-sheeted bed. It's made it that we can't pull the covers over our heads any more."

Army and navy chiefs of staff were working on the size and make-up of the United States contingent to the world police force last week, and were also investigating the feasibility of inspection programs to control nuclear production.

Oak Ridge Scientific Groups — Newsletters, bulletins, informational material

N A T I O N A L (continued)

U. S. DELAYS ACTION

Failure of the United States to name its representative is delaying the creation of the United Nations atomic commission, according to a recent United Press Article by staff correspondent R. H. Shackford.

According to the article, the failure is partially attributed to the inability of Congress and the White H. to agree on a domestic atomic program. Another factor, says Shackford, may be

rivalry among the military, scientists and diplomats for the position.

Other nations are waiting to see what type of person the United States selects as a representative. This country had been expected to lead all nations in naming its representative to the UNO commission, the article says.

Other nations on the commission had hoped to hold the first meeting by April 1, to coincide with the New York meeting of the Security Council March 21, Shackford's story says.

I N T E R N A T I O N A L

CADOGAN APPOINTED BY BRITISH  
TO ATOMIC COMMISSION

Sir Alexander Cadogan, who is the permanent representative from Britain on the UNO Security Council, has been appointed to represent the British Government on the Atomic Energy Commission of the United Nations. Sir James Chadwick will be his alternate. (NY TIMES, March 10)

they should be entrusted to a special council composed of scientists from the eleven countries on the Security Council, plus an equal number of international lawyers."

ATOMS INCLUDED  
IN SOVIET FIVE YEAR PLAN

Specific inclusion of development of atomic energy in the new Russian five year plan was announced recently. The Russian government is taking extraordinary measures to aid all fields of science. (UP, March 14)

NO INSURANCE AGAINST A-BOMB

In a UP dispatch from London the Sun Life Assurance Society announced on March first that its future life insurance policies will not pay if death is caused by atom bombs. The company claimed that the dropping of one atom bomb would result in a loss of \$3,000,000.

UNO PROCEDURE NEEDED

Criticism of the present UNO debate procedure came from James W. Ryan recently when he declared that the Security Council should adopt a set of rules organizing its activities on the basis of the laws stated in the Charter. If this were done, he says, sessions would involve trials with the nations represented as judges, on specific indictments based on secretly accumulated facts, rather than charges and counter-charges based on ethereal ideas of aggression, protection, and spheres of influence. Mr. Ryan is the chairman of the Committee on International Law of the New York County Lawyers Association. (NY TIMES, letter to the editor, March 3)

BRITISH REACTION TO  
CHURCHILL'S MISSOURI SPEECH

A London correspondent for the NEW YORK TIMES reported some of the reactions to Churchill's Missouri speech. "Viscount Stangate emphasized that the Government believed the whole aim of Russian policy was security.... Lord Lindsay blamed Russian suspicions on the atomic bomb" and the secrecy. "He thought that instead of turning the secrets of the bomb over to UNO

Dak Ridge Scientific Groups - Newsletters, bulletins, informational material

# A T O M B O M B S

## RADIATION DEATHS CITED

A recent report on casualties in the Hiroshima and Nagasaki bombings, by the Navy, classifies the deaths from radioactive rays as:

1. Deaths within a very few days from a large doses of the rays.

2. Those whose white blood cells were greatly reduced and who died usually within three weeks.

3. Deaths in three to five weeks from gradual destruction of blood platelets, necessary for clotting, with consequent hemorrhages induced by radiation damage to the magakaryocytes of the bone marrow.

4. Deaths from anemia in six weeks or more due to injury to cells that form red blood cells, the counts dropping in one occasion to less than one fourth the normal. Approximately 80,000 were killed at Hiroshima and 45,000 at Nagasaki. The report states definitely that the number of deaths from radioactivity were greater than those from flash burns. (N. Y. TIMES, March 12.)

## "CEASE STOCKPILING"

In a release on March 10th, the American Association for the United Nations urges that the United States government cease the stockpiling of atomic bombs. It also advocated the invitation of representatives of the UNO Atomic Energy Commission to witness the Bikini bomb tests on "equal terms". It based these demands on the statement that these actions would constitute evidence of "moral leadership" and of the positive policies that the United States must exhibit to insure the success of the UNO. From the NEW YORK TIMES for March 11th. (A conference is being held this Tuesday at Hanover N.H. to pass a resolution that we; 1. Declare our readiness to submit to UNO inspection and control; 2. Stop manufacture of A\*Bombs; 3. Place stockpile under UNO)

## A-BOMBS DO IT BETTER

American industry can have no possible protection from bomb damage during any future war, according to a report by the Oil Division of the United States Strategic Bombing Survey published recently.

The report was a survey of bomb damage to German industry during the war from Allied heavy bombing attacks, which indicated that all defense measures instituted by the Germans were useless in preventing damage. The only foreseeable measures that might be successful, said the report, are measures that would prevent an enemy from attacking.

"Pinpoint" daylight bombing was more effective than mass "area" bombing, according to the report. The former totaled 26.8 per cent hits of bombs dropped and the latter 15.8 per cent.

The dependency of German heavy industry on fuel was brought out by the fact that damage to generating plants vitally affected production in all other plants.

## IT'S GOING TO COST MONEY

A passenger - freight airline service to Bikini Atoll has been established by the Army and Navy in connection with preparations for the atomic bomb test. Before the bomb is dropped on May 15, Bikini will have housed 25,000 temporary American residents. Polynesians, formerly inhabiting the atoll, have been moved to another island.

## DEFENSE ?

A giant anti-aircraft cannon with the latest electronic calculator, "ENIC", is being grommed as a defense against atom bomb bearing rockets, according to General G.M. Barnes, although there is no record of a V-2 rocket being shot down. (News-Sentinel)

The only way to assure our survival and preserve our liberties is to create with other peoples a world government, says the conclusion of a set of principles set up at the start of the conference. The government would be federal and would have power to maintain peace, based on law and justice.

The conclusion was based on propositions stating that there can be no defense against superweapons of the future, no secrets concerning their development and no guaranty of peace when nations have the right to decide between war and peace.

### SCIENTISTS ON THE MOVE

NEWSWEEK reports in the February 25th issue, the scattering of the top flight scientists from the atom - bomb project back to the more important research institutions. Professor Harold C. Urey and Professor Enrico Fermi have gone to the University of Chicago. Particular attention is given in this article to the medals obtained by Dr. Ernest O. Lawrence for the University of California Radiation Laboratory at Berkeley. Those mentioned include Glenn T. Seaborg, 33, a chemistry professor who discovered plutonium and elements 94 and 96; Luis Walter Alvarez, 34, nuclear physicist; Robert Serber, 36, one of the country's foremost experts on the measurement of radioactivity; William Morris Brobeck, 37, mechanical engineer now in charge of the engineering phases of the 184 inch cyclotron at Berkeley; Robert L. Thornton, 37, "the British born physicist who helped build the University of Michigan cyclotron and directed the construction of the cyclotron at Washington University." Kenneth Mackenzie, 33, a nuclear physicist; Emilio Segrè, 41, a physicist who helped discover elements 43 and 45. He is an Italian by birth. NEWSWEEK includes a brief doo | |



otherwise assist in our campaign.".... Major General G. M. Barnes, chief of research and development for Army ordnance says that a giant stratosphere cannon controlled by radar and equipped with an electronic brain is the Army's principal hope of defense against the 3000 mile per hour atomic rockets of the future.... Jim C. Lucas, Scripps-Howard staff writer, says, "There's never been a lobby like that of the Atomic Scientists".... According to W. H. Stoneman, Chicago Daily News Foreign Service, Europeans say, "What next, Mr. Byrnes?".... The Canadian Association of Scientific Workers said it had learned that an eminent Canadian scientist was being detained.... The Oak Ridge Engineers and Scientists concluded that "world wide control of atomic energy is the only solution which will permit our civilization to survive."

#### WHY SCIENTISTS ARE ON THE MOVE

Marquis Childs, in the March 7th Cedar Rapids Gazette highlights two reasons why the government is having an increasingly difficult time in holding key scientific personnel, or in filling vacancies on the atomic energy project laboratories. One reason is the scientists' rebellion against the petty bossism exercised by offices knowing little or nothing of the scientific problems involved. The other reason he cites as being the "short sighted policy of selective service in regard to scientific training."

#### WARNS AGAINST COMPLACENCY

The public was warned not to become complacent about the atomic bomb and atomic energy control in a recent article by columnist Thomas I. Stokes. The basic decisions about to be made by Congress are momentous Stokes said, pointing out that the basic problem is military or civilian

L O C A L

POPE TO SPEAK AT ORES MEETING

James P. Pope, member of the TVA, Board of Directors and former senator from Idaho, will speak at the next ORES meeting. Pope will speak on some Aspects of the National Situation and will probably touch on the present status of national atomic legislation. The meeting will be held Tuesday March 19 at 7:30 PM at Elm Grove School.

Well-known for his liberal views, Pope is reported to be interested in international affairs and in the future of atomic energy. Roosevelt appointed him to the TVA Board of Directors in 1941, and he is one of three men now on the Board.

ORES WASHINGTON REPRESENTATIVE

At a meeting on March 12, the ORES special committee considering national atomic energy legislation passed unanimously the following motion after prolonged discussion of the Washington situation:

"Resolved, that we recommend that the ORES send a representative to Washington as soon as possible. This representative shall discuss with key legislators our position on the question of national atomic energy legislation, as outlined in a written statement to be approved by the ORES membership."

Such a statement will be presented to the membership for discussion and action at the next meeting.

ARE YOU AN ORES MEMBER?

Wives and friends of ORES members are urged to attend all meetings of the organization and to take part in all group activities. The next meeting will be held Tuesday March 19 at 7:30 PM at Elm Grove School.

An associate ORES membership is open to any interested person who desires to participate in the group discussions and assist with the ORES program.

NEW TREASURER

One of the features of Tuesday night's meeting will be the election of a treasurer to fill the post being vacated by Jack Armitage, who is leaving Oak Ridge.

The three nominees proposed by the nominating committee are Jack Pennock, William Arnold, and James Nuding. Other nominations may be made from the floor. The election will be by secret ballot and simple majority.

DUTCH EDITORS IMPRESSED

Peter Edson reported in his column in the News-Sentinel March 14 speaking of the Dutch Editors with whom the ORES Executive Committee met three weeks ago that they were impressed "most by U. S. scientists, particularly the youngsters who worked on the atomic bomb project at Oak Ridge".

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I here by apply for ( ) regular, ( ) associate membership in the ORES and enclose \$\_\_\_\_\_ in payment of dues. (Dues are \$5 per six months)

I am an ORES member and enclose \$\_\_\_\_\_ to cover \_\_\_\_\_ months dues.

Please add the following names to the ORES mailing list. (Print on the reverse side)

signature \_\_\_\_\_

address \_\_\_\_\_

Mail to the Oak Ridge Engineers and Scientists, P. O. Box 382, Oak Ridge.

Oak Ridge Scientific Groups - Newsletters, bulletins, informational material

# ORES News-Letter

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OAK RIDGE ENGINEERS AND SCIENTISTS

April 15, 1946

## N E X T M E E T I N G

The next meeting of the ORES will be at the usual time and place, 7:30 Tuesday night, April 16, at the Elm Grove School gymnasium. The following items are on the program:

1. Lyle Brewer, our Chairman, will report on his week's stay in Washington where he talked to many and varied people and did a lot of getting around. He has a lot of interesting information to present on how the scientists and other active groups in Washington are attacking the problem of getting atomic energy legislation that will help rather than hinder the US in active leadership toward the international control of atomic energy.

2. Hank Nowak will report briefly on his lecture tour to Owensboro, Kentucky, where he made four speeches in two days. He spoke to a combined meeting of the Kiwanis Club, the League of Women Voters, the Pilot Club, and the Business and Professional Women's Club on Monday night, to a combined group of high school students on Tuesday morning, to the Lions Club at noon on Tuesday, and to the Rotary Club at a luncheon on Wednesday. The Tuesday Owensboro paper carried a two column spread on the front page on his speech to the Kiwanis et al.

Hank had David Scoble, representative of the Oak Ridge High School Youth Council on the Atomic Crisis, with him and says that David succeeded in getting across a big push for the formation of a YCAC in Owensboro.

The whole trip seems to have gone over well and lends strong support to the idea of extending our activities along those lines. Interested parties should come and hear Hank's report and then contact Leo Waters.

3. All of the chairmen of the special committees will be asked to give brief reports on the activities and the plans of their committees.

## T H E L A S T M E E T I N G

Chairman Brewer was in Washington so Vice-chairman Walter Beard presided and opened the meeting by reporting to the membership on the recent activities of the organization.

Everett Minett, our Corresponding Secretary, brought the group up to date on correspondence with the FAMS regarding the Washington organization's activities.

Mrs. F. C. Armistead outlined the functions of the women's associate membership group and issued a call for women to support the efforts of the ORES.

The chief speaker of the evening, Senator Pope, member of the board of directors of TVA, presented in an interesting fashion his views on the international control of atomic energy.

### SPECIAL COMMITTEES

The UNO & INTERNATIONAL CONTROL and the World Government committees have been amalgamated and an announcement of their plans and the time and place of their next meeting will be made Tuesday night at Elm Grove. These committees are sorely in need of additional members. Persons interested in getting into some interesting and important work with them should get in touch with Bill Kittredge, Chairman of the World Government committee.

The committee on National Legislation on Atomic Energy will meet on Wednesday, April 17, at 7:30 in the ORES office. Bill Boardman is chairman. This committee is working along lines that will guide a very important phase of the efforts of the ORES for the next few months. Many more active members are needed on this committee. Contact Bill at 5-1415 or at the meeting Tuesday night at Elm Grove or just come out to the committee meeting on Wednesday night.

The UNESCO committee, A. H. Patterson chairman, will meet on Tuesday, April 25, at 7:30 in the ORES office. They have formulated a set of eight fundamental questions on the UNESCO and are attempting to supply themselves and the ORES with the answers. In addition, they are building up a correspondence with foreign scientists and in order to make the contacts they have compiled lists of:

1. U. S. State Department men in foreign service.
2. Foreign diplomatic representatives in Washington.
3. Scientists in the USSR.

These lists are filed at the ORES office.

This committee needs two or three active and interested new members to replace men who have left the area.

### WORLD GOVERNMENT POLL

A poll of opinion on world government was conducted recently by the World Government committee with the assistance of the Youth Council on the Atomic Crisis. The following questions were asked of a large cross section (about 1200 people) of Oak Ridge and then the same questions were put to those in attendance at the April 2 meeting of the ORES:

If a world government can be established that will:

- (a) Guarantee the same rights to every person in the world.
- (b) Have among its powers the sole right to maintain any army and control atomic energy.
- (c) Enforce its laws on all peoples and governments by means of a world police force.

- (1) Would you favor such a world government?
- (2) Do you think that the United States should work towards the formation of such a world government immediately?

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- (3) Do you believe that the UNO, as it now stands, is going to prevent war?
- (4) Do you believe that a world government, as defined above, would prevent war?

The following summarizes the answers to these questions:

Ques. No.	Yes	OAK RIDGE		Yes	ORES	
		<u>No</u>	<u>No Opinion</u>		<u>No</u>	<u>No Opinion</u>
1.	73%	17%	10%	98%	2%	0%
2.	70%	19%	11%	82%	12%	6%
3.	12%	67%	21%	16%	72%	12%
4.	53%	29%	18%	78%	10%	12%

T H E   A T O M I C   E N G I N E E R   &   S C I E N T I S T

The AE&S has been merged with the Bulletin of the Atomic Scientists, published by the Atomic Scientists of Chicago. Our Publications Committee is now sending them the news summaries formerly published in the AE&S and they are sending the BAS to all of the people on our mailing list. The first issue under this agreement will be in your hands soon. The delay can be blamed on difficulties with the railway express system.

C H A N G E D   A D D R E S S ?

The Publication's Committee urges members who are leaving the Area to send a card or short letter to the ORES, P. O. Box 382, Oak Ridge, Tenn., giving their new address. This will enable us to continue to send all publications to off-Area members.



THE ATOMIC CRISIS

"Atomic power can make life immensely better, but it can also destroy it entirely.....We have been convinced that the atomic bomb must be controlled..... We cannot tolerate another war...Not only will other nations have these bombs, but there is no defense against them...There has to be an international control with teeth in it and placed above the sovereignty of nations...Only with world wide control can we look forward to a lasting era of peace."

Statement made by the Editorial committee of the Atomic Scientists at Clinton Laboratories, Oak Ridge, Tennessee, November 13, 1945.

Intelligent discussion of the fundamental facts and problems of atomic energy, the bomb and its control is imperative at this time. This bibliography attempts to point out the best authoritative books and other printed materials which are available on this important topic.

Mary Ann Roberts, Librarian  
Winona Waldroup, Asst. Librarian  
Oak Ridge High School  
Oak Ridge, Tenn.

February 22, 1946

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