

On the fortieth anniversary of the victory of the Soviet people in the Great Patriotic War

Usp. Fiz. Nauk 146, 3-6 (May 1985)

During these May days of 1985 the Soviet People, and together with them all progressive mankind, celebrates the fortieth anniversary of the utter defeat of the armed forces of Hitler's facism, and their unconditional surrender.

It was a hard ordeal that befell the Soviet people in the Great Patriotic War. Twenty million lives were given up to achieve victory. The Soviet people devoted all its energy to this victory, it believed in victory even during the most difficult period of the war when the fascist armies occupied six Soviet republics, the Don Basin, surrounded Leningrad, reached the suburbs of Moscow, the shores of Volga and the foothills of the Caucasus.

The victory over fascism was a notable event in the life of the Soviet people and of the whole of progresive mankind. It liberated the people of Europe from fascism and opened a new era in the development of civilization, in which socialism became firmly entrenched.

Soviet scientists together with the whole nation made their contribution towards victory. Wide was the circle of problems of defence significance on which the physicists worked: improvement of detection of enemy aircraft; defence of ships from acoustic and magnetic mines; development of defence devices based on the use of some methods of nuclear physics; the development of the problems of gas combustion in the famous "Katyushas"; the investigation of kinetics and detonation of explosives and many others. This improvement of military technology of that period represented the carrying out of their patriotic duty by the Soviet physicists.

The war was a great calamity for all the people taking part in it. Memories of it summon the greatest efforts to be made to preserve peace. The active peaceful policy of the Soviet state serves this enterprise. It finds support and sympathy from all the peaceful peoples. This policy is also shared by the realistically thinking public figures of a number of capitalist countries.

The entire postwar activity of Soviet physicists was determined, on the one hand, by the peaceful position of the Soviet state and, on the other hand, by the forced actions of the Soviet nation to hinder the aim of American imperialism to attain supremacy over socialist countries and to dictate their conditions to them. It is specifically the monopoly of the USA in atomic armaments and the policy of the USA based on this that compelled Soviet physicists to work on the creation of atomic and thermonuclear armaments. Working on problems directed towards strengthening the military potential of the nation the Soviet physicists understand that this is a necessary measure to preserve the socialist system and peace.

But even in developing fields required to enhance the defensive potential the Soviet scientists endeavour to find within them peaceful applications. Thus Soviet scientists constructed the first atomic power station, they used the

achievements of rocket technology to launch the first artificial satellite, to launch the first man into space. The experience in the development of society shows that different forms of cooperation have a great significance for preserving peace. The interaction between scientists from different countries promotes the creation of a benevolent atmosphere. Soviet physicists participate in international cooperation in all fields where they have achieved successes—in space exploration, in thermonuclear investigations, etc. They know that international cooperation not only makes possible the successful solution of scientific and technical problems, but also promotes the strengthening of peace.

Mankind encounters the fortieth anniversary of the victory over fascist Germany in a complex international situation. Europe is saturated with nuclear rockets and this in itself represents a threat to peace. But what is even worse, some aggressive politicians in the West make attempts to justify the possibility of nuclear war. In this they refer to investigations by scientists according to which civilization will not be completely destroyed as a result of nuclear war. We note that the authors of such statements take upon themselves too great a responsibility, for they do not take into account the subtle and complex interactions in living and nonliving nature which will be inevitably disturbed as a result of nuclear war. According to authoritative statements of special commissions of different international organizations of scientists for peace, nuclear war threatens the destruction of mankind and its civilization.

The time in which mankind finds itself now is highly disturbing and complex. It requires the joining of all the progressive forces of the planet. The Soviet physicists are making their contribution in the struggle for peace, and by their activity they strive to convince any potential aggressor of the futility of illusions concerning the possibility of victory in a nuclear war, and the omnipotence of a "first strike". They summon the scientists of all countries to increase their contributions towards the unmasking of the proponents of nuclear war. Mankind must be and will be saved from a nuclear catastrophe.

PHYSICISTS IN DEFENSE OF PEACE

The letter of Niels Bohr to President Roosevelt of the USA (1944)

Below we publish the translation of the letter of the outstanding physicist Niels Bohr to President F.D. Roosevelt of the USA dated 7 September 1944 which until recent times has not been widely known to Soviet physicists.¹⁾ The letter expresses Bohr's alarm in connection with the tendency already apparent at the time towards monopolization of the production of the atomic bomb in the hands of the USA and Great Britain. Bohr insisted on the necessity of an agreement on international control over the use of atomic armament and of the advantages of honest collaboration in estab-

lishing control measures. The letter was preceded by conversations between Bohr and Roosevelt in the Spring of 1944, and by an audience with Churchill (May 16) who heard Bohr's proposal with obvious irritation, then an audience with Roosevelt (August 26), who encouraged Bohr by a promise of support and a statement that the problem would be discussed by the two leaders at their forthcoming meeting on September 19.

The aim of Bohr's letter was to remind Roosevelt before this conference of his arguments in favor of international control. However, as follows from the "Aide-Memoire of the Conversation between the President and the Prime-Minister at Hyde Park, 19th September 1944" (cf., R. Moore, Niels Bohr: The Man, His Science and the World They Changed", Alfred A. Knopf, New York, 1966, p. 353. Russ. Transl., Mir, M., 1969, p. 390), it was decided at the meeting that everything referring to the atomic problem "should continue to be regarded as of the utmost secrecy, but when a 'bomb' is finally available" it might perhaps "after mature consideration be used against the Japanese". Regarding Bohr himself it was stated: "3. Inquiry should be made regarding the activities of Professor Bohr and steps taken to ensure that he is responsible for no leakage of information, particularly to the Russians".

Thus Bohr's attempts to take a stand for international control over atomic armaments were rejected, and he had to defend himself against accusations of "leakage of information, particularly to the Russians". We call the attention of the readers to the fact that all these events took place in 1944 when the work on producing an atomic bomb had not yet been completed, and the war against Hitler's fascism was also far from over. Work on the atomic bomb was kept secret even from the ally who had undertaken to carry the principal burden of the war against fascism.

My dear Mr. President.

I wish to thank you most heartily for the honor and confidence you showed me by receiving me and talking with me of your concern about the great and urgent problems raised by the recent extraordinary development of physical science.

The impending realization of the prospects of releasing atomic energy on a large scale, secured by the great pioneer work in this country, is surely destined deeply to influence the future of mankind. But, as you appreciate so fully, the bright promises which the wonderful adventure entails may be overshadowed by most ominous threats to human security unless in due time international agreement can be obtained as regards an effective control of the new formidable weapon.

The achievement of this great object belongs, of course, to a domain in which the responsible statesmen alone can have the required insight. As a physicist who has been given the privilege to follow the latest development at close hand, I was, however, most grateful for the opportunity to bring before you some considerations concerning the technical aspects of the great enterprise with special regard to the question of control and the possibilities of competing efforts in other countries.

In the last respect it should be borne in mind that, as a result of a fruitful international scientific co-operation, the principles on which a large scale release of atomic energy can be effected were, at any rate in outline, perceived already before the war and are thus common knowledge to physicists all over the world.

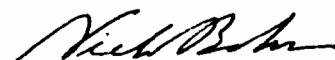
It is also known that preparations for the realization of the prospects have been made in various countries, and, although it seems certain that the American and British effort has achieved a decisive lead, any information, however scanty, about the success of the work in this country which may have leaked out is likely to have caused an intensification of similar efforts elsewhere.

Fortunately the course of the war has probably removed any danger of a military use of the purposeful endeavours on such lines made in Germany. It must, however, be realized that with the final defeat of Germany all expert knowledge and technical experience collected there will presumably become available in equal measure for the great victorious nations.

Under these circumstances personal connections between scientists originating from pre-war co-operation might perhaps prove valuable in conveying, with entire regard to security, an understanding of how much would be at stake should the great prospects of atomic physics materialize, and in preparing an adequate realization of the great benefit which would ensue from a whole-hearted co-operation on effective control measures.

I am most thankful for the great kindness you showed me and for the wish you expressed to see me again at some later occasion. I need not assure you that I shall be most happy to respond to the honor of a call from you.

Most respectfully yours



The President.

Here it is appropriate to recall that also later in 1950 in his "Open Letter to the United Nations"²⁾ Niels Bohr insisted on the necessity of an "open world" in which there would be guaranteed peace and peaceful cooperation of all states, free communication among them and free exchange of information, and all sources of mutual mistrust are eliminated [cf., the article on Niels Bohr by I. E. Tamm in Usp. Fiz. Nauk **80**, 191 (1963)] [Not translated in Sov. Phys. Usp.].

Max Born and the declaration by West-German physicists (1950)

An active member of the Pugwash movement of scientists for peace, the prominent physicist Max Born after returning from emigration to his native land (FRG) became the initiator in the early 1950's of the famous declaration by 18 West-German physicists, in which they warned the FRG society of the dangerous consequences of arming the Bundeswehr with atomic weapons, and solemnly declared that "none of the undersigned intends to participate in any way in

the manufacture, testing or use of atomic armaments". This declaration was signed by the well known physicists C. F. von Weizsacker, O. Hahn, M. Von Laue and others.

Joint action against militarization of space (1984)

The appeal of the Göttingen congress of scientists which was devoted to problems of preventing militarization of space welcomes the unilateral undertaking of the USSR not to be the first to introduce into cosmic space any kind of antisatellite armaments, and proposes to forbid the development, testing and introduction of new systems of armaments into space, and to liquidate antisatellite systems.

In the name of the Committee of Soviet Scientists for the Defense of Peace this appeal was signed in Moscow on 6 December 1984 by the Vice-President of the Academy of

Sciences of the USSR Academician E. P. Velikhov and other members of the committee.

¹For the first time the translation (into Russian) of the letter by N. Bohr was published in the article by V. Mal'kov "when and by whom was trust destroyed? Concerning an unknown letter by Niels Bohr".—Kommunist, No. 17, p. 108 (1984). The original text of the letter is preserved in the papers of R. Oppenheimer (Department of manuscripts of the USA Library of Congress).

²*Translator's note:* For the complete text cf., Science 112, 1–6 (July 7, 1950).

Translated by G. M. Volkoff

Editors note: Rather than retranslating the Russian translation of Bohr's letter back into English, the original English text of the letter kindly supplied by the Manuscript Division of the Library of Congress is published here.