

重寄

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京都大学基礎物理学研究所 湯川記念館史料室

Prof Yukawa

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Opening Address

August 28, 1975

Hideki Yukawa

As you know already,

I have been ill and in the hospital since May of this year. I have undergone operations twice in June and July. I am still too weak to participate in the discussions of the sessions of the Symposium, because of the aftereffects of the disease and operations. However, I came here since I think it my duty to say a few words of greeting to welcome our friends from abroad, on behalf of Japanese Pugwash group. The present Symposium is rather small in scale with a limited number of participants, but I believe that we may be able to make it very significant. In order to do so, we must first reflect on the spirit of the Russell-Einstein Manifesto of 20 years ago. It was novel because it was called for an international conference to be held by scientists for the survival of mankind. It was novel in denouncing all wars and aiming at the abolition of nuclear weapons, because there was always the possibility for any war to develop into nuclear war which may lead to the destruction of mankind.

In response to the Manifesto, many Pugwash conferences and symposia have been held since 1957. Nevertheless, we find ourselves not in a position to praise our success, but we have rather to grieve over our lack of achievement. This is because we have failed to stop the nuclear arms race. In particular, the two major nuclear powers have been constantly increasing

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their nuclear armament both in quality and quantity during the past 20 years. This trend of vertical proliferation continues to this day.

On the other hand, we have to worry about the horizontal proliferation of nuclear weapons to more and more countries. It is true that the Non-proliferation Treaty was signed by many countries and is being ratified by an increasing number of countries. Behind the signing or ratification by many of the non-nuclear-weapon states in spite of the unfairness and disadvantage of the treaty to them, there is the hope and expectation that by so doing they can influence the nuclear weapon states to live up to their obligations regarding nuclear disarmament.

One of the most important factors hampering the way to nuclear disarmament has been the concept of nuclear deterrence. There have been diverse arguments about it, but it is clear that the policy based on the concept of nuclear deterrence suffers constantly from the positive feedback, which means the nuclear armament of the superpowers is directed toward infinity. This is just the opposite of the way to nuclear disarmament, which is in principle directed toward zero. The measures to achieve nuclear disarmament must be exclusively a process of repeated negative feedback.

Another very important problem is the security of non-nuclear-weapon states. The first thing and the very minimum that we can expect at this moment is a pledge by all nuclear weapon states that they will never use or threaten to use nuclear weapons against non-nuclear-weapon states. Such a pledge may also be useful to prevent the horizontal proliferation of nuclear

weapons. I shall not go further into all such problems, since they are going to be discussed in detail during the sessions of the Symposium.

Among the other main themes of the Symposium are the ethics and the social functions of scientists and engineers. But I leave these to the discussions of the forthcoming sessions. Instead, I would like to conclude my talk by expressing my personal vision about the future of mankind. Although it is necessary for the survival of mankind to achieve nuclear disarmament, it is also clear that nuclear disarmament is only a part of what we must achieve. It is a vital part of general and complete disarmament. Even the latter is not the whole of our aim. The final goal is to establish a world system in which the security of all countries is guaranteed without the need for their own armament. In this respect, I share with Russell and Einstein the idea of world federation.

However, irrespective of whether we have such a vision in mind or not, I think we all agree on the necessity of achieving nuclear disarmament. I believe that we all agree that nuclear weapons are our common enemy and the complete abolition of all of them from the earth is the goal at which we are aiming. I sincerely hope that the concrete proposals in the forthcoming sessions will make an effective contribution to achieve nuclear disarmament.

Ladies and gentlemen, it gives me much pleasure on behalf of Japanese Pugwash Group to open the 25th Pugwash Symposium.

Draft

Greeting
Opening Address

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Aug. 28, 1975

Hideki Yukawa

*Pugwash friends,
Distinguished guests, ladies and gentlemen:
as mentioned by Prof. Toyoka*

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I have been ill and in the hospital since May of this year. I have undergone operations twice in June and July. I am still too weak to participate in the discussions of the sessions of the Symposium, because of the aftereffects of the disease and operations. However, I came here since I think it my duty to say a few words of greeting to welcome our friends from abroad, on behalf of Japanese Pugwash group. The present Symposium is rather small in scale with a limited number of participants, but I believe that we may be able to make it very significant. In order to do so, we must first reflect on the spirit of the Russell-Einstein Manifesto of 20 years ago. It was novel because it was called for an international conference to be held by scientists for the survival of mankind. It was novel in denouncing all wars and aiming at the abolishment of ~~them~~ *not nuclear weapons*, because there was always the possibility for any war to develop into nuclear war which leads to the destruction of mankind.

In response to the Manifesto, the Pugwash conferences and symposia have been held many times since 1957. Nevertheless, we find ourselves not in a position to praise our success, but we have rather to grieve over our lack of efficacy. This is because we have failed to stop nuclear arms races. In particular, two

major nuclear powers have been constantly reinforcing their nuclear armament both in quality and quantity during the past 20 years. This trend of vertical proliferation continues to this day.

On the other hand, we have to worry about the horizontal proliferation of nuclear weapons to more and more countries. It is true that the Non-proliferation Treaty was signed by many countries and is being ratified by an increasing number of countries. Behind the signing or ratification by many of the non-nuclear-weapon states in spite of unfairness and disadvantage of the treaty to them, there is the judgement that by so doing they can lay greater obligation on the nuclear weapon states regarding nuclear disarmament.

Now one of the most important factors hampering the way to nuclear disarmament has been the concept of nuclear deterrence. There have been diverse arguments about it, but it is clear that the policy based on the concept of nuclear deterrence suffers constantly from the positive feedback, which means the nuclear armament of superpowers is directed toward infinity. This is just the opposite of the way to nuclear disarmament, which is in principle directed toward zero. The measures to achieve nuclear disarmament must be nothing else but a process of repeated negative feedback.

Another very important problem is the security of non-nuclear-weapon states. The first thing that we can expect at this moment is the pledge of all nuclear weapon states that they will never make a nuclear attack on non-nuclear-weapon states. It may be also useful to prevent the horizontal proliferation of nuclear weapons. I shall not go further into all such problems, since they are going to be discussed in detail during the sessions of

the Symposium.

Other main themes of the Symposium are the morals and the social functions of scientists and engineers. But I leave them to the discussions of the forthcoming sessions. Instead, I would like to conclude my ^{last ones} talk by expressing my personal vision about the future of mankind. Although it is necessary for the survival of mankind to achieve ^{complete} nuclear disarmament, it is also clear that the nuclear disarmament is a part of what we must achieve. It is to be a vital part of the general and complete disarmament. Even the latter is not the whole of our aim. The final goal is to establish a world system in which the security of all countries without their own armament is guaranteed. In this respect, I share with Russell and Einstein the idea of world federation. ^{in world govern} However, irrespective of whether ^{we have} ~~one has~~ such a vision in mind or not, I think ^{we all} ~~he~~ agree in the necessity of achieving nuclear disarmament. I believe that we all agree that the nuclear weapons are our common enemy and the complete abolishment of all of them ^{at this symposium} from the earth is the goal to which we are aiming. I sincerely hope that the concrete proposals in the forthcoming sessions will ^{it} make an effective contribution to achieve nuclear disarmament.

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