# The Meaning of Hiroshima-Nagasaki\*

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#### Foreword

On the morning of August 6, 1945, an atomic bomb rent the sky above Hiroshima and transforemed the city into a hell on earth. A second bomb, dropped three days later on Nagasaki, recreated the hell that Hiroshima had become.

At the time I was a first-year student of physics in the Faculty of Science of Kyushu University in Fukuoka, 380 kilometers away from Hiroshima. On August 9, I returned to my home in Hiroshima to find out if my parents were safe and saw for myself the frightful destruction that had annihilated the city. Happily, my parents had survived, but many of my relatives, neighbours, teachers, friends, and acquaintances had been killed. That experience exerted a crucial influence on my life and thinking.

After graduation from university I became a researcher in nuclear physics, and this occupation influenced strongly on my thinking, too. I began to think about Japan's sin in perpetrating a war of aggression, the sin of scientists who had developed nuclear weapons, and the fundamental sin of a political system that had given rise to these sins. I also began to feel the heavy social responsibility of scientists in the nuclear age. I have since been involved in research on the damage and aftereffects of the atomic bombing of Hiroshima-Nagasaki and in the antinuclear peace movement in Japan. Based on such experiences, I wrote this essay.

The nuclear weapons in existence today are said to be equivalent to 20,000 megatons of TNT (trinitrotoluene powder), or 1.33 million bombs of the kind exploded over Hiroshima. If these weapons were distributed over the 135 million square kilometers of the earth excluding Antarctica, there would be one Hiroshima-type bomb (equivalent to 15 kilotons of TNT) every 100 square kilometers (the approximate size of Hiroshima when it was bombed). Even thinking of these figures makes us realize that humankind could face extinction if there were total nuclear war.

The fate of all who live on "Spaceship Earth" is inextricably linked with death because of the development of nuclear weapons. If we cannot bring about the abolition of these weapons, we will be powerless to solve the other great problems facing us: the destruction of the environment, the inequalities between North and South, controls on science and technology. The abolition of nuclear weapons is the touchstone of basic human values.

On the cenotaph to the victims of the atomic bomb in Peace Memorial Park in Hiroshima is inscribed a pledge: "Let all souls here rest in peace; for we shall

not repeat the evil." These words, rising above bitterness toward those who dropped the bomb, express concern for the future of the entire human race. This loving concern is the meaning of Hiroshima-Nagasaki.

In other words, the meaning of Hiroshima-Nagasaki lies in our asking ourselves what we can and should do in the face of the crisis of total annihilation.

For this, first, we must know exactly what nuclear weapons and nuclear war are like and must tell as many people as possible about the experiences of the atomic bomb victims of Hiroshima-Nagasaki. "Atomic Bomb Victims Today" will be explained later.

Second, we must adopt a completely new way of thinking. We who live at the most critical time in the history of humankind are being pressed to reexamine the values of the past and to create a new value system. "The Need for a Completely New Way of Thinking" will be explained later.

Third, we must revive the true humanity. All people possess the seeds of goodness and justice that humankind was given by nature and has fostered over the ages. We have the ability to cultivate self-control and strive to live together in a humane manner with others. The revival of such humanity - not only between individuals, but also between nations - is an absolute necessity today. "Reviving Our Humanity" will be explained later.

### **Atomic Bomb Victims Today**

Forty years have passed since the atomic bombs were dropped on Hiroshima-Nagasaki, but in that interval the agony, grief, and anger of the survivors of the atomic bombing have not disappeared. Microcephaly caused by the atomic bombing directly symbolizes their continued suffering.

According to a survey conducted in 1972, 48 cases of microcephaly were diagnosed among 388 victims exposed in utero at Hiroshima. In each of these cases, the whereabouts of the mother at the time of the bombing were clearly ascertained. Among 99 victims exposed in utero at Nagasaki, 15 cases of microcephaly were diagnosed. Other physical defects have also been diagnosed in microcephaly victims of both cities.

Mrs. Yoshie Hatanaka, three months pregnant, was 730 meters from the hypocenter at the time of the bombing of Hiroshima, doing evacuation work. After gradually recovering from the acute injuries she incurred, she bore a baby girl, whom she named Yuriko, in February 1946. The baby was extraordinarily

small, weighing only 1,870 grams. When she was given her first bath, it was discovered that her right leg was bent and could not be straightened. She didn't begin to crawl until she was two years old. She managed to walk at the age of five, after being forced to practice, but was incapable of entering kindergarten and elementary school. Later, she was diagnosed as having dislocated hip joints in addition to microcephaly; her mental level was that of a twenty-seven-month-old child, and her social adaptability was that of a twenty-five-month-old child.

Kinoko-kai, the Mushroom Club, was organized by seventeen sufferers of microcephaly and their parents in 1965, supported by some sympathetic journalists. The sufferers' mental ages range from two to nine years. Twelve of them require intensive care and supervision, four a medium degree of care, and one only a slight amount. Twelve live at home, two are in mental hospitals, and three in asylums for the mentally handicapped. Nor can their family circumstances be called happy. Only three have both parents. Eight have only mothers, three have only fathers, and three have neither of their parents; at present more than half of the surviving parents are over sixty-five years old.

Because of the efforts of Kinoko-kai as well as of the Hiroshima municipal and prefectural authorities, the Japanese government finally started an aid program in April 1978. Although the aid was a far cry from the lifetime support that the Kinoko-kai members demanded, sufferers from microcephaly have each been allotted thirty thousand yen a month for treatment.

Yoshie, Yuriko's mother, died at the age of fifty-eight in December of the year that government aid began. She had been complaining of pain in her waist for five years before her death. It turned out that she had a spreading cancer of the bones, and in her last years she fractured her left leg and grew blind in her left eye. But Yoshie died more concerned about her daughter's fate than her own.

Yuriko became forty in February 1986, though her mental age remains that of a two-year-old: her situation is a stark legacy of what took place in Hiroshima-Nagasaki forty years ago.

Approximately 237,000 direct victims of the atomic bomb were alive in 1985. Those who entered the two cities soon after the bombing and became indirect victims numbered about 98,000. Those exposed while engaged in relief activities amounted to 26,000, while 6,000 babies were exposed in utero. The total, and the number who possess health cards under the Atomic Bomb Medic-

al Treatment Law enacted in 1957, is 367,000. The law defines direct victims of the atomic bomb as those who were in the two cities at the time of bombing; early entrants into the cities are those who entered the area within two kilometers of the hypocenter within two weeks; victims engaged in relief activities and others are those who were affected by the residual radioactivity on the day of bombing or later, during relief work or treatment of the direct atomic bomb victims or the disposal of debris or corpses. Victims exposed in utero are those who were exposed to the atomic bomb radiation because their mothers can be identified as victims in one of the above categories. These victims live in various parts of Japan, but 75 percent are inhabitants of Hiroshima and Nagasaki prefectures.

The atomic bomb victims in general have been suffering from three psychological problems. They are afraid of contracting atomic bomb disease; they occasionally vividly recall the bombing itself; and they feel alienated and shut out from society.

It is of course obvious that those victims who actually suffer from atomic bomb disease are under great psychological stress. But all victims of the bombing, whenever they happen to become ill, are afraid that their illness may be caused by the aftereffects of the bombing. Though there may be no scientific basis for such a fear, they cannot believe that they are free from the possibility of contracting atomic bomb disease. Moreover, there is as yet no specific treatment for atomic bomb disease. Therefore, the atomic bomb victims, whenever they fall ill, are attacked by the fear that their illness may be beyond hope. Such a state of mind is very real source of psychological pain in itself and inevitably worsens the condition of victims's illness.

The memories of the shocking sights and terror at the time of the bombing is another source of agony for the atomic bomb victims. Some feel guilt because, in the desperate situation confronting them at the time, they could not save others dear to them. Overwhelmed by the disaster and deprived of a sense of direction, many of them deserted their family members, friends, and neighbors who were buried under crushed buildings; it was all they could do to run to their own safety. This burden of shame and guilt makes their memories even more anguished. Survivors testify that those memories are recalled as if the bombing occurred only yesterday and that whenever they hear about nuclear weapons and tests, or when a mention is made of the atomic bomb, or war, or death, they grow deeply troubled.

The victims' anguish has been aggravated by the belief that their government has not given them proper aid or assistance, especially when Japan's current economic and social development are taken into account. As they watch the violent escalation of the global nuclear arms race, they despair that their wish for peace has not been realized, and they grieve that their horrible ordeal may have been meaningless. Many atomic bomb victims come to have the feeling that they are alienated from other members of society, saying that no one but a victim can understand the agony of another victim.

For all this, they are struggling to help create a world without any nuclear weapons and wars, and striving to join hands with others in promoting peace.

Those who were spared the holocausts at Hiroshima-Nagasaki are nothing but temporary survivors unless nuclear weapons are totally abolished. Only when that is achieved will it be demonstrated that the sacrifice of the atomic bomb victims has not been in vain, and for the first time all human beings will become true survivors; then the story of Hiroshima-Nagasaki will be handed down through the ages as one of the great lessons of history with a moral that humankind can never dare to forget.

## The Need for a Completely New Way of Thinking

Is it possible for us to abolish nuclear weapons? This is the fundamental challenge of our age and the most serious issue that we have faced in the million years of human history. If we cannot solve this problem, it goes without saying that we cannot solve other major issues confronting us, such as the challenges presented by the new scientific-technological civilization, the destruction of the natural environment, and the gap between North and South. The fact is that if we don't wrest an answer from the nuclear dilemma, we may not even survive into the twenty-first century.

The issue of nuclear weapons can be translated into a simple and immediate task: the protection of our own progeny. It is important to realize that the abolishment of nuclear weapons is necessary for the preservation of the human race, a goal to which all our natural instincts are directed. The problem we face is that time mellows and blurs the memory, no matter how horrible that memory may be. The seemingly endless repetition of war and violence in human history is a symptom of our forgetfulness. But in addition to this natural tendency to forget the abominable, a nation's leaders often intentionally and forcefully urge its people to forget past battles when they are preparing the country for another war.

In that case, a considerable degree of personal courage may be required to preserve the memory of war. But there are some things that the human race cannot afford to forget under any conditions. In our nuclear age, faced with the possibility of the total annihilation of the hurman race, the memory of what happened in Hiroshima-Nagasaki cannot be forsaken.

It is true that there are many who struggle to preserve the memory of the nuclear sacrifice of the inhabitants of those places, but there are others who think differently. Some believe that nuclear war will not occur because of the balance of power between the United States and the Soviet Union, and that we should enjoy our daily lives; others hold that nuclear weapons do not spell the destruction of the human race, and therefore have no objection to their use in war, talking about the "limited use" of the arsenal. But the present terrible conditions of nuclear weapons are clear and irrefutable for anyone who calls himself or herself a human being, and no right-thinking person can ignore the only conclusion: that nuclear weapons must be abolished.

To abolish nuclear weapons and survive into the twenty-first century, we must adopt a completely new way of thinking. We who live at the most critical time in the history of humankind are being pressed to reexamine the values of the past and create a new value system.

We can no longer tolerate the old ways of thinking that excuse war, brutality, and the development of new weapons for the sake of the nation. We must discard absolute values regarding the nation, revise our ethical principles, and build a truly humane world order.

We must abandon the old dogma that world peace can be imposed by a single power or a single principle. In order to realize true world peace, we must accept the fact that a plurality of principles and values can coexist in harmony. For this it is vital that the United States and the Soviet Union resolve the hostility and distrust that lie between them.

The United States and the Soviet Union, although they have never opposed each other on the battlefield, have over the years showed varying degrees of mutual hostility and distrust. Their attitude basically stems from the difference in their systems of government.

Though they were allies in World War II against the Axis powers of Germany, Italy, and Japan, one of the motives suggested for the use of nuclear weapons against Japan by the United States was an American attempt to bring pressure to bear on the Soviets for an acceptable conclusion to the war. The ex-

cessive distrust and fear that the two superpowers feel for each other has led to an endless arms race since the conclusion of World War II. What is the most important now is that the United States, which began the nuclear arms race, and the Soviet Union, which has also promoted it as national policy, should both recognize their responsibility to all humankind to put a stop to it. But beyond the responsibilities of the two superpowers, all nations must acknowledge the absolute evil of the possession and use of nuclear weapons under any circumstances.

The United States and the Soviet Union must learn to live in peaceful coexistence and refrain from regarding each other as enemies because of their differing systems of government. Other nations must adopt the same way of thinking and independently aim to create truly democratic societies according to their own circumstances. A related issue is the superpower politics practiced by the United States and the Soviet Union. Recently, the arms buildup of these two giants has brought great pressure to bear on other allied nations, hindering the development of international democracy and suppressing antinuclear world opinion. It is clear that the superpowers must reflect upon and abandon their ways. The other nations of the world must also adopt appropriate measures in response to the superpowers and, above all, cooperate to abolish all nuclear weapons.

It is meaningful to quote here a sentence from the preamble of the Constitution of Japan, which was imposed on Japan by the United States immediately after World War II: "We believe that no nation is responsible to itself alone, but that laws of political morality are universal; and that obedience to such laws is incumbent upon all nations who would sustain their own sovereignty and justify their sovereign relationship with other nations."

#### **Reviving Our Humanity**

Albert Einstein, who had advised President Roosevelt to develop atomic bombs, regretted it on hearing of the holocaust in Hiroshima-Nagasaki, saying: "If I were to be born again, I would like to be a plumber or peddler." Einstein had much to say in his later years concerning the issues surrounding nuclear weapons. He criticized nationalism: "The basic power of the universe cannot be fitted into the outmoded concept of narrow nationalism," and urged the exploration of alternatives: "We shall require a substantially new manner of thinking if mankind is to survive." Einstein took the lead in opposing President Truman's

order to produce hydrogen bombs. In 1955, just after Einstein's death, Bertrand Russell issued "the Russell-Einstein Declaration" to the world. Its main points were as follows: to abolish nuclear weapons as the first step toward general disarmament; to deepen the idea of humanity as sharing a common fate; to promote a new belief in humanity.

Even a great man like Einstein committed the error of advising the development of atomc bombs. Everybody commits errors. People and nations also commit errors. There is no other way to put an end to the nuclear age than to reflect on our errors, consider seriously our responsibilities to the future, and establish a completely new sense of values through ridding ourselves of outdated, inhumane ways of thinking. Such must have been the state of mind that Einstein finally reached at the end of his life.

Some people may conclude that, with all the difficulties the issue of nuclear disarmament entails, humanity is likely to destroy itself before the issue can be solved. Therefore, the best thing to do is to enjoy life while we can. Others may say that we need not regard the nuclear issue so seriously because human beings are not so stupid as to utterly destroy themselves and that we will avoid annihilation by coping carefully and wisely with concrete issues as they arise. An aware pereson, however, can subscribe to neither opinion. Humanity is actually on the verge of self-annihilation. Under these ominous circumstances, to live our lives in a way worthy of being called human we must try ever harder to seek our ideals and make efforts to realize them. This may seem a roundabout way, but it is the only course to take, because the difficulties facing us are not to be solved at a stroke.

Yet we are infirm of purpose and lack foresight, pressed by our daily needs and caught up in finding solutions to our own problems. We lack the time or energy to think full time about the larger perspective. Moreover, we have evil and unfair thoughts as well. Even if we know the right choice, it is often very difficult to make it. On the other hand, we also possess the seeds of goodness and justice that humankind was given by nature and has fostered over the ages. We have the ability to cultivate self-control and consideration for others and to strive to live together in a humane and harmonious manner with others. The revival of such true humanily—not only between individuals, but also between nations—is an absolute necessity today, for the age has come when one nation's selfcentered behavior could lead all humanity to annihilation.

When we trust this humanity and join hands with our fellow human beings

—while admitting differences in thoughts, beliefs, and systems of government —we will be able to courageously progress toward our aim, even though the aim is as grand a one as the abolishment of nuclear arms. It is only through such cooperative efforts that we will be able to go on to create a new, truly humane world order.

With this belief and this goal firmly in mind, we must make a start, however small—to study the issue of nuclear weapons and to discuss the problem with others. This is the beginning, the first step toward our goal, and, like all beginnings, a great achievement in itself.