

## **Fiftieth Anniversary of the Russell-Einstein Manifesto**

July 9, 2005 marks the fiftieth anniversary of a momentous declaration by eleven eminent scientists, led by Lord Bertrand Russell and Albert Einstein: a warning that the survival of humankind requires the abolition of warfare. The Russell-Einstein Manifesto was the statement of a scientific community gravely worried about the mounting dangers of nuclear weaponry.

Ten years had passed since the first atomic bomb was exploded in New Mexico, and the cold war was already on, with East and West racing for nuclear supremacy. Each side possessed hundreds of times as many bombs as required for deterrence. Yet scientists had foreseen this growing peril as early as the first years of World War II. Indeed, it had been a pacifist — Einstein himself — who had warned President Roosevelt that Hitler might be able to produce the first atomic bomb; his warning had initiated the Manhattan Project. By 1945, when the allies were ready to test a bomb at Trinity, it was clear that Nazi Germany was no longer attempting to build such a bomb, but that it was the Russians who would become the competitor in the arms race. One physicist, Joseph Rotblat, had already quit the Manhattan Project on moral grounds, dedicating himself forever to the abolition of these destructive weapons.

Yet the genie would not return to the bottle. By 1952 the United States tested its first hydrogen bomb at Enewetak in the South Pacific, and the following year the Russians tested a hydrogen bomb of their own. Employing fusion rather than fission, these weapons of immense mass destruction were supposedly “cleaner” than the fissile bombs, contaminating the environment less. That presumption was proven false in 1954 when the American explosion at Bikini Atoll doused radioactive fallout onto a Japanese fishing boat, the *Lucky Dragon*, killing one crew member and making the rest sick. It became obvious that nuclear tests were harmful, besides posing terrible dangers to human survival if the bombs should ever be used in war. And the prospect of World War III seemed to be increasing. The Soviets were creating the Warsaw Pact as a counterpart to NATO.

Scientists in all countries recognized their responsibility to intervene against this steady march toward annihilation. They spoke to each other about the possibility of taking a stand against the cold war. As early as 1944, Einstein had proposed consultations bringing together the most outstanding scientists from all the allied countries, including the Soviet Union, to “bring the collective influence of the scientists to bear upon their respective governments, with a view to establishing an international army and a supranational government.” Though little had come of the idea at the time, he and Russell formed a friendship that would become fruitful. Early in 1955, Russell wrote to Einstein proposing that the most eminent scientists of both sides — Communist and anti-Communist — issue a joint statement calling for the abolition of war.

Einstein gladly joined in the project and urged Russell to write the statement. While contacting these

other scientists, Russell would repeatedly hear another suggestion: that the manifesto be followed up with an international conference. Only gradually did he concur with that proposal.

On April 11, 1955, Einstein wrote a three-line letter to Russell expressing full support of the manifesto, which he then signed. Those were the two last signatures of his life, for shortly thereafter he suffered a fatal rupture of an artery in the heart.

When the signatures were all in place, Russell summoned reporters to a press conference that he predicted would have great international importance. In London on July 9, with Joseph Rotblat at his side to chair the event and answer technical questions about physics, Russell read the eloquent manifesto aloud. It ended by asking for endorsement of the following declaration:

*“In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the governments of the world to realize, and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them.”*

The signatories were:

**Professor Max Born**

Professor of Theoretical Physics at  
Göttingen; Nobel Prize in Physics

**Professor P.W. Bridgman**

Professor of Physics, Harvard University,  
Foreign Member of the Royal Society;  
Nobel Prize in Physics

**Albert Einstein**

**Professor L. Infeld**

Professor of Theoretical Physics,  
University of Warsaw;  
Member of the Polish Academy of Sciences

**Professor J.F. Joliot-Curie**

Professor of Physics at the College de France;  
Nobel Prize in Chemistry

**Professor H.J. Muller**

Professor of Zoology, University of Indiana;  
Nobel Prize in Physiology or Medicine

**Professor L. Pauling**

Professor of Chemistry,  
California Institute of Technology;  
Nobel Prize in Chemistry

**Professor C.F. Powell**

Professor of Physics, Bristol University;  
Nobel Prize in Physics

**Professor J. Rotblat**

Professor of Physics in the University of  
London, at St. Bartholomew's Hospital  
Medical College

**Bertrand Russell**

**Professor Hideki Yukawa**

Professor of Theoretical Physics,  
Kyoto University; Nobel Prize in Physics

The Russell-Einstein manifesto was indeed followed up by an international conference hosted by the industrialist Cyrus Eaton at his summer home in Pugwash, Nova Scotia. An organization was founded — Pugwash Conferences on Science and World Affairs — to bring together scientists of both East and West for discussions of policies on a regular basis. These discussions have sometimes influenced the military plans on both sides of the cold war — effects that historians have documented amply. In 1995, Pugwash and Sir Joseph Rotblat were awarded the Nobel Peace Prize for these efforts.

During the fifty years following the announcement of the Russell-Einstein Manifesto, there would in fact be many, many wars — but (so far) no World War III, nor any war in which nuclear weapons have been detonated. Russell and Einstein may have helped us evade some of the worst of their predictions.

Yet there are still vast arsenals of nuclear weapons, and the general public has become complaisant, believing that the problem has been solved and that they need not press their governments for nuclear disarmament. While we do hear concerns expressed about “weapons of mass destruction,” we hear little anymore about the type of WMD that remains, by far, the most dangerous of all: the nuclear bomb. To be sure, during the 1980s, a wonderful breakthrough ended the cold war — but left many nuclear weapons ready for launch-on-warning. Accidental false alarms continue to occur frequently, and no less an authority than the former Secretary of Defense Robert McNamara has warned that a nuclear catastrophe is inevitable unless new steps are taken to dismantle the existing arsenals. He particularly criticizes the Bush Administration for holding onto, and even planning an expansion, of nuclear weapons. He states:

“The average U.S. warhead has a destructive power 20 times that of the Hiroshima bomb. Of the 8,000 active or operational U.S. warheads, 2,000 are on hair-trigger alert, ready to be launched on 15 minutes’ warning. How are these weapons to be used? The United States has never endorsed the policy of “no first use,” not during my seven years as secretary or since. We have been and remain prepared to initiate the use of nuclear weapons—by the decision of one person, the president....

“ On any given day, as we go about our business, the president is prepared to make a decision within 20 minutes that could launch one of the most devastating weapons in the world. To declare war requires an act of congress, but to launch a nuclear holocaust requires 20 minutes’ deliberation by the president and his advisors. But that is what we have lived with for 40 years. With very few changes, this system remains largely intact, including the “football,” the president’s constant companion.”

It has been almost sixty years since Hiroshima and Nagasaki. That is too long for such a tragedy to remain unresolved. Now, a new

generation must take ownership of this cause. Pugwash calls upon all governments of the world to do as Russell and Einstein urged: remember your humanity!