

OBITUARY

Joseph Rotblat 1908–2005

Physicist who committed his life to the cause of nuclear disarmament.

The closing words of Joseph Rotblat's lecture on acceptance of the 1995 Nobel Peace Prize sum up his nature. "The quest for a war-free world has a basic purpose: survival. But if in the process we learn how to achieve it by love rather than by fear, by kindness rather than by compulsion; if in the process we learn to combine the essential with the enjoyable, the expedient with the benevolent, the practical with the beautiful, this will be an extra incentive to embark on this great task. Above all, remember your humanity." Joseph Rotblat died on 31 August, aged 96.

Rotblat was born in Warsaw on 4 November 1908 into a middle-class Jewish family. The family was left impoverished by the First World War: at the age of 15, Rotblat worked as an electrician during the day and studied physics in the evening. He won an open scholarship to the Free University of Poland, later obtaining a doctorate from the University of Warsaw with research on the inelastic scattering of neutrons. It was while working in the radiological laboratory of the Scientific Society of Warsaw that he heard of the discovery of nuclear fission. He then himself showed experimentally that neutrons are emitted in the process, and envisaged a divergent chain reaction with a vast release of energy. This, he realized, could result in an explosion of unprecedented power.

Rotblat moved to England in 1939 to work under James Chadwick in Liverpool, first on the university's new cyclotron particle accelerator, and then on the feasibility of the atomic bomb. In Poland he had married a student of literature, Tola Gryn, and he returned to Warsaw to fetch her. But she developed appendicitis, and Rotblat had to leave for England again on his own. Before she could follow him, Germany invaded Poland and war began. Despite all his efforts he was unable to get her out. She died during the war without his seeing her again.

In 1943, Rotblat followed Chadwick to Los Alamos National Laboratory in New Mexico, to work on the Manhattan Project that developed the atomic bomb. The project's morality disquieted him, but he feared that the Germans would develop the bomb first, and believed the Allies must be able to threaten retaliation. When intelligence showed that German progress was minimal, he resigned from the Manhattan Project on grounds of conscience and returned to Liverpool. After the war he took British citizenship, deciding not to return to communist Poland.

The bombing of Hiroshima and Nagasaki

in 1945 appalled Rotblat, and his life's mission began. He worked at first through the Atomic Scientists Association to educate the public about nuclear matters, and campaigned for the international control of nuclear energy. He switched his research to the medical applications of nuclear physics and joined the staff of St Bartholomew's Hospital Medical College at the University of London in 1949, becoming professor of physics in 1950. There he explored the use of linear accelerators for radiotherapy, and produced several landmark studies with Patricia Lindop on the effects of high-energy radiation on living tissue. But it was an American bomb test in 1954, which showered a Japanese fishing boat with radioactive fallout, that made Rotblat an international figure. He calculated that the bomb had been vastly more 'dirty' than the public had been told. His move to bring this matter into the open horrified government circles, which considered that all nuclear matters should be secret.

Around this time Rotblat met Bertrand Russell, who also was becoming increasingly concerned about the hydrogen bomb. In 1955 Rotblat was one of 11 prominent signatories of the Russell–Einstein Manifesto, a stark statement of the dangers of nuclear war. The manifesto led to the initial Pugwash Conference in 1957, in the village of Pugwash on the northern shore of Nova Scotia, at which scientists from across the world gathered to discuss how to avert a nuclear catastrophe. It was the first of more than 300 international conferences and workshops, in which participants speak as individuals whose remarks are unattributable. Throughout his life, Rotblat was a driving force in the Pugwash organization, becoming its secretary-general (1957–73), president (1988–97) and emeritus president.

Since its inception, Pugwash has been one of the foremost advocates of détente and disarmament in the nuclear age. It kept lines of communication open during the cold war and helped lay the foundation for important arms-control treaties. It provided the first links between Henry Kissinger and the North Vietnamese in the Vietnam war, and was an informal channel for officials and public figures in the Arab–Israeli, Korean and Kashmiri conflicts. In 1995, the Nobel Peace Prize was awarded jointly to Pugwash and to Joseph Rotblat.

But Rotblat's pacifist activities extended beyond Pugwash. He co-founded the UK Campaign for Nuclear Disarmament and was



the initiator of the Stockholm International Peace Research Institute. He participated in the Medical Exchange Programme between Britain and the Soviet Union, and was largely responsible for the comprehensive reports of the World Health Organization of 1984 and 1987 on the effects of nuclear war on health and health services. Shortly before his death, Rotblat had become increasingly concerned about developments in nuclear policy, particularly in the United States. He contacted leaders of other non-governmental organizations to initiate the Weapons of Mass Destruction Awareness Programme, launched in London in 2004 by himself and the former Soviet president Mikhail Gorbachev.

In addition to numerous papers on nuclear physics and radiation biology, Rotblat wrote, or co-wrote, more than 40 books on various aspects of the control of nuclear weapons and the prevention of war. Alongside the Nobel prize, he received the Bertrand Russell Society Award in 1983 and the Albert Einstein Peace Prize in 1992. Among British honours, he was appointed a Commander of the British Empire in 1965, and knighted in 1998.

Rotblat was a towering figure in the struggle for peace. He was brilliant, energetic, determined and eloquent: a man of utter integrity and great humanity, who committed his life to the pursuit of a saner, safer world. In his autobiography, Bertrand Russell said of Rotblat's work for disarmament: "If ever these evils are eradicated, his name should stand very high indeed among the heroes." ■

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