

# The Nobel Peace Prize 2005



Awarded to the **IAEA** and **Mohamed ElBaradei** “for their efforts to prevent nuclear energy from being used for **military** purposes and to **ensure** that nuclear energy for **peaceful** purposes is used in the **safest** possible way.”

# A World Within Our Grasp

The Nobel Lecture given by the 2005 Nobel Peace Prize Laureate, Mohamed ElBaradei in Oslo, December 10, 2005



**Imagine a world  
where every human  
being would live in  
freedom and dignity...**

**where we would settle  
our differences through  
diplomacy and dialogue  
and not through  
bombs or bullets...**

**where the only nuclear  
weapons remaining  
were the relics in our  
museums.**

**Imagine the legacy  
we could leave to our  
children.**

Your Majesties, Your Royal Highness, Honourable Members of the Norwegian Nobel Committee, Excellencies, Ladies and Gentlemen.

The International Atomic Energy Agency and I are humbled, proud, delighted and above all strengthened in our resolve by this most worthy of honours.

My sister-in-law works for a group that supports orphanages in Cairo. She and her colleagues take care of children left behind by circumstances beyond their control. They feed these children, clothe them and teach them to read.

At the International Atomic Energy Agency, my colleagues and I work to keep nuclear materials out of the reach of extremist groups. We inspect nuclear facilities all over the world, to be sure that peaceful nuclear activities are not being used as a cloak for weapons programmes.

My sister-in-law and I are working towards the same goal, through different paths: the security of the human family. But why has this security so far eluded us?

I believe it is because our security strategies have not yet caught up with the risks we are facing. The globalization that has swept away the barriers to the movement of goods, ideas and people has also swept with it barriers that confined and localized security threats.

A recent United Nations High-Level Panel identified five categories of threats that we face:

- ① Poverty, Infectious Disease, and Environmental Degradation;
- ② Armed Conflict — both within and among States;
- ③ Organized Crime;
- ④ Terrorism; and
- ⑤ Weapons of Mass Destruction.

These are all ‘threats without borders’ — where traditional notions of national security have become obsolete. We cannot respond to these threats by building more walls, developing bigger weapons, or dispatching more troops. Quite to the contrary. By their very nature, these security threats require primarily multinational cooperation.

But what is more important is that these are not separate or distinct threats. When we scratch the surface, we find them closely connected and interrelated.

We are 1000 people here today in this august hall. Imagine for a moment that we represent the world's population. These 200 people on my left would be the wealthy of the world, who consume 80% of the available resources. And these 400 people on my right would be living on an income of less than \$2 per day.

This underprivileged group of people on my right is no less intelligent or less worthy than their fellow human beings on the other side of the aisle. They were simply born into this fate.

In the real world, this imbalance in living conditions inevitably leads to inequality of opportunity, and in many cases loss of hope. And what is worse, all too often the plight of the poor is compounded by and results in human rights abuses, a lack of good governance, and a deep sense of injustice. This combination naturally creates a most fertile breeding ground for civil wars, organized crime, and extremism in its different forms.

In regions where conflicts have been left to fester for decades, countries continue to look for ways to offset their insecurities or project their 'power'. In some cases, they may be tempted to seek their own weapons of mass destruction, like others who have preceded them.

Fifteen years ago, when the Cold War ended, many of us hoped for a new world order to emerge. A world order rooted in human solidarity — a world order that would be equitable, inclusive and effective.

But today we are nowhere near that goal. We may have torn down the walls between East and West, but we have yet to build the bridges between North and South — the rich and the poor.

Consider our development aid record. Last year, the nations of the world spent over \$1 trillion on armaments. But we contributed less than 10% of that amount — a mere \$80 billion — as official development assistance to the developing parts of the world, where 850 million people suffer from hunger.

My friend James Morris heads the World Food Programme, whose task it is to feed the hungry. He recently told me, "If I could have just 1% of the money spent on global armaments, no one in this world would go to bed hungry."

It should not be a surprise then that poverty continues to breed conflict. Of the 13 million deaths due to armed conflict in the last ten years, 9 million occurred in sub-Saharan Africa, where the poorest of the poor live.

Consider also our approach to the sanctity and value of human life. In the aftermath of the September 2001 ter-

rorist attacks in the United States, we all grieved deeply, and expressed outrage at this heinous crime — and rightly so. But many people today are unaware that, as the result of civil war in the Democratic Republic of the Congo, 3.8 million people have lost their lives since 1998.

Are we to conclude that our priorities are skewed, and our approaches uneven?

With this 'big picture' in mind, we can better understand the changing landscape in nuclear non-proliferation and disarmament.

There are three main features to this changing landscape: the emergence of an extensive black market in nuclear material and equipment; the proliferation of nuclear weapons and sensitive nuclear technology; and the stagnation in nuclear disarmament.

Today, with globalization bringing us ever closer together, if we choose to ignore the insecurities of some, they will soon become the insecurities of all.

Equally, with the spread of advanced science and technology, as long as some of us choose to rely on nuclear weapons, we continue to risk that these same weapons will become increasingly attractive to others.

I have no doubt that, if we hope to escape self-destruction, then nuclear weapons should have no place in our collective conscience, and no role in our security.

To that end, we must ensure — absolutely — that no more countries acquire these deadly weapons.

We must see to it that nuclear-weapon States take concrete steps towards nuclear disarmament.

And we must put in place a security system that does not rely on nuclear deterrence.

Are these goals realistic and within reach? I do believe they are. But then three steps are urgently required.

First, keep nuclear and radiological material out of the hands of extremist groups. In 2001, the IAEA together with the international community launched a worldwide campaign to enhance the security of such material. Protecting nuclear facilities. Securing powerful radioactive sources. Training law enforcement officials. Monitoring border crossings. In four years, we have completed perhaps 50% of the work. But this is not fast enough, because we are in a race against time.

Second, tighten control over the operations for producing the nuclear material that could be used in weapons. Under the current system, any country has the right to

master these operations for civilian uses. But in doing so, it also masters the most difficult steps in making a nuclear bomb.

To overcome this, I am hoping that we can make these operations multinational — so that no one country can have exclusive control over any such operation. My plan is to begin by setting up a reserve fuel bank, under IAEA control, so that every country will be assured that it will get the fuel needed for its bona fide peaceful nuclear activities. This assurance of supply will remove the incentive — and the justification — for each country to develop its own fuel cycle. We should then be able to agree on a moratorium on new national facilities, and to begin work on multinational arrangements for enrichment, fuel production, waste disposal and reprocessing.

## How do we create an environment in which nuclear weapons — like slavery or genocide — are regarded as a taboo and a historical anomaly?

We must also strengthen the verification system. IAEA inspections are the heart and soul of the nuclear non-proliferation regime. To be effective, it is essential that we are provided with the necessary authority, information, advanced technology, and resources. And our inspections must be backed by the UN Security Council, to be called on in cases of non-compliance.

Third, accelerate disarmament efforts. We still have eight or nine countries who possess nuclear weapons. We still have 27 000 warheads in existence. I believe this is 27,000 too many.

A good start would be if the nuclear-weapon States reduced the strategic role given to these weapons. More than 15 years after the end of the Cold War, it is incomprehensible to many that the major nuclear-weapon States operate with their arsenals on hair-trigger alert — such that, in the case of a possible launch of a nuclear attack, their leaders could have only 30 minutes to decide whether to retaliate, risking the devastation of entire nations in a matter of minutes.

These are three concrete steps that, I believe, can readily be taken. Protect the material and strengthen verification. Control the fuel cycle. Accelerate disarmament efforts.

But that is not enough. The hard part is: how do we create an environment in which nuclear weapons — like slav-

ery or genocide — are regarded as a taboo and a historical anomaly?

Whether one believes in evolution, intelligent design, or Divine Creation, one thing is certain. Since the beginning of history, human beings have been at war with each other, under the pretext of religion, ideology, ethnicity and other reasons. And no civilization has ever willingly given up its most powerful weapons. We seem to agree today that we can share modern technology, but we still refuse to acknowledge that our values — at their very core — are shared values.

I am an Egyptian Muslim, educated in Cairo and New York, and now living in Vienna. My wife and I have spent half our lives in the North, half in the South. And we have experienced first hand the unique nature of the human family and the common values we all share.

Shakespeare speaks of every single member of that family in *The Merchant of Venice*, when he asks: “If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die? And if you wrong us, shall we not revenge?”

And lest we forget:

There is no religion that was founded on intolerance — and no religion that does not value the sanctity of human life.

**Judaism** asks that we value the beauty and joy of human existence.

**Christianity** says we should treat our neighbours as we would be treated.

**Islam** declares that killing one person unjustly is the same as killing all of humanity.

**Hinduism** recognizes the entire universe as one family.

**Buddhism** calls on us to cherish the oneness of all creation.

Some would say that it is too idealistic to believe in a society based on tolerance and the sanctity of human life, where borders, nationalities and ideologies are of marginal importance. To those I say, this is not idealism, but rather realism, because history has taught us that war rarely resolves our differences. Force does not heal old wounds; it opens new ones.

I have talked about our efforts to combat the misuse of nuclear energy. Let me now tell you how this very same energy is used for the benefit of humankind.

At the IAEA, we work daily on every continent to put nuclear and radiation techniques in the service of human-

kind. In Vietnam, farmers plant rice with greater nutritional value that was developed with IAEA assistance. Throughout Latin America, nuclear technology is being used to map underground aquifers, so that water supplies can be managed sustainably. In Ghana, a new radiotherapy machine is offering cancer treatment to thousands of patients. In the South Pacific, Japanese scientists are using nuclear techniques to study climate change. In India, eight new nuclear plants are under construction, to provide clean electricity for a growing nation — a case in point of the rising expectation for a surge in the use of nuclear energy worldwide.

These projects, and a thousand others, exemplify the IAEA ideal: Atoms for Peace.

But the expanding use of nuclear energy and technology also makes it crucial that nuclear safety and security are maintained at the highest level.

Since the Chernobyl accident, we have worked all over the globe to raise nuclear safety performance. And since the September 2001 terrorist attacks, we have worked with even greater intensity on nuclear security. On both fronts, we have built an international network of legal norms and performance standards. But our most tangible impact has been on the ground. Hundreds of missions, in every part of the world, with international experts making sure nuclear activities are safe and secure.

I am very proud of the 2300 hard working men and women that make up the IAEA staff — the colleagues with whom I share this honour. Some of them are here with me today. We come from over 90 countries. We bring many different perspectives to our work. Our diversity is our strength.

We are limited in our authority. We have a very modest budget. And we have no armies.

But armed with the strength of our convictions, we will continue to speak truth to power. And we will continue to carry out our mandate with independence and objectivity.

The Nobel Peace Prize is a powerful message for us — to endure in our efforts to work for security and development. A durable peace is not a single achievement, but an environment, a process and a commitment.

The picture I have painted today may have seemed somewhat grim. Let me conclude by telling you why I have hope.

I have hope because the positive aspects of globalization are enabling nations and peoples to become politically, economically and socially interdependent, making war an increasingly unacceptable option.

Among the 25 members of the European Union, the degree of economic and socio-political dependencies has made the prospect of the use of force to resolve differences almost absurd. The same is emerging with regard to the Organization for Security and Co-operation in Europe, with some 55 member countries from Europe, Central Asia and North America. Could these models be expanded to a world model, through the same creative multilateral engagement and active international cooperation, where the strong are just and the weak secure?

I have hope because civil society is becoming better informed and more engaged. They are pressing their governments for change — to create democratic societies based on diversity, tolerance and equality. They are proposing creative solutions. They are raising awareness, donating funds, working to transform civic spirit from the local to the global. Working to bring the human family closer together.

We now have the opportunity, more than at any time before, to give an affirmative answer to one of the oldest questions of all time: “Am I my brother’s keeper?”

What is required is a new mindset and a change of heart, to be able to see the person across the ocean as our neighbour.

Finally, I have hope because of what I see in my children, and some of their generation.

I took my first trip abroad at the age of 19. My children were even more fortunate than I. They had their first exposure to foreign culture as infants, and they were raised in a multicultural environment. And I can say absolutely that my son and daughter are oblivious to colour and race and nationality. They see no difference between their friends Noriko, Mafupo, Justin, Saulo and Hussam; to them, they are only fellow human beings and good friends.

Globalization, through travel, media and communication, can also help us — as it has with my children and many of their peers — to see each other simply as human beings.

Your Majesties, Your Royal Highness, Ladies and Gentlemen. Imagine what would happen if the nations of the world spent as much on development as on building the machines of war. Imagine a world where every human being would live in freedom and dignity. Imagine a world in which we would shed the same tears when a child dies in Darfur or Vancouver. Imagine a world where we would settle our differences through diplomacy and dialogue and not through bombs or bullets. Imagine if the only nuclear weapons remaining were the relics in our museums. Imagine the legacy we could leave to our children.

**Imagine that such a world is within our grasp.**

# Message in a Medal



**Professor Ole Danbolt Mjøs is Chairman of the Nobel Peace Prize Committee and Professor of Medicine at the University of Tromsø. He headed the five-member Norwegian committee that deliberated over the choice of 2005's Nobel Peace Prize winner. Professor Mjøs spoke with the IAEA Bulletin to give us a rare glimpse into the decision making process that goes on behind closed doors.**

**Q:** Selecting the winner for the Nobel Peace Prize seems like a daunting task. Every year you receive many nominations. Can you describe your selection process?

**A:** The process starts in February, once all the nominations have been received. Nominations can come in from governments, university chancellors, leaders of peace research institutes, members of the Nobel Committee and even former Nobel Peace Prize Laureates. The five-member committee, appointed by the Norwegian Parliament, meets monthly to review the candidates and gradually the list of names narrows. Over the years the list of nominees has been growing and this year we received 199 nominations.

The method we use for selecting is not easy to describe. We come to our meetings with an open mind, are aware of the world's situation and are mindful of Alfred Nobel's will where the criteria for winning the peace prize is spelled out: *"to the person who shall have done the most or the best work for fraternity between the nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses."*

**Q:** Dr. ElBaradei found out that he won the Nobel Peace Prize by watching the live announcement on CNN—is that usual?

**A:** The tradition is that Geir Lundestad, the Director of the Nobel Institute, places a phone call to the winner half an hour before I announce it—which is usually in mid-October and on a Friday. Of course it's not always possible to get a hold of the recipient. But this year the Norwegian Broadcasting System was quick to speculate and one particular journalist always seems to find out the winner and leak it before we've had a chance to do so

formally. Bearing in mind previous 'scoops', we decided that we wouldn't call the IAEA because as it's such a large organization it would likely be leaked.

**Q:** Why is the Nobel Peace Prize considered to be so prestigious?

**A:** One factor is that the Peace Prize belongs to a family of prizes that are awarded every year in literature, chemistry, physics, economics and medicine. And, while the Peace Prize gets the most publicity, nevertheless it is a family of prestigious prizes. So that helps in the reputation of the Peace Prize.

In addition, if you look at our record of awarding the Peace Prize over the past 100 years, our selections have not been perfect, but reasonable. If you look at the list of past recipients, you might think of some who should have been awarded it — but for the most part they are reasonably good choices. I will mention one great omission and that is Mahatma Gandhi. He was short-listed five times but because of controversy in the committee around 1947, he was never awarded the prize.

**Q:** Geir Lundestad, the Director of the Norwegian Nobel Institute, has said that with the awarding of the Peace Prize, the Committee was trying to give Dr. ElBaradei a 'shot in the arm'—and to motivate the IAEA to keep doing what it's doing. Do you share his view?

**A:** Who could replace IAEA today on these matters? There is no one else, because each nation on its own cannot do this. Society has given the IAEA a mandate to work in cooperation with different nations. It can be an organization that has a leader that is only following strict

rules. Or as in the case of the IAEA, with a leader who has a vision, who has a mission, who has courage to do it—in collaboration with 2300 people who work at the IAEA. You are awarded this together. There is nobody else.

At a time of increasing threat from the proliferation of nuclear weapons, the IAEA is the only international organization tasked to halt their spread. The Nobel Committee hoped the award would inspire the Agency in its work.

Yes, there's been some criticism as to what you have achieved—there have been pluses and minuses—but the steady work that has been done by the IAEA since its establishment has had its successes. And, in addition, it is critically important for the future for a peaceful world. The committee recognises that this is a difficult job and we hope the prize is a 'shot in the arm'—an inspiration for further work.

**Q: How can the IAEA leverage this award ?**

**A:** You have to keep the pressure on the fight against atomic weapons and on the reduction of atomic weapons in those countries that already have them. While the main mandate for the IAEA is, as I understand it, to inhibit nuclear weapons proliferation to other nations, in our decision we thought both in terms of reduction and non-proliferation.

**Q: What are the criteria for measuring peace?**

**A:** I think we first can look at the underpinnings of peace. There are many regions in the world where you would think there would be war because the cultural sensitivities in that area could potentially cause conflict. The media focuses all the time on war zones, but luckily today there are more areas in the world at peace than at war. It is interesting to consider why there is peace in some areas where one would think there would be war.

For example, I live in northern Norway in the university town of Tromsø. Northern Norway partly borders Sweden and partly Finland but we have a common border with Russia. This border is one where the differences between the two sides—socially, economically—is one of the greatest I have ever seen. But there has not been a war with Russia even during the Cold War. Conflicts have been managed, and that is great to see. We have established a Peace Centre at our University (I am the Chairman) to look at these underpinnings of peace.

But what would be a success for peaceful development and what are the criteria for peaceful development? The

ultimate goal is to eliminate nuclear weapons, if we can have that as a hope.

**Q: Which previous Nobel Peace Prize winner speaks most to you?**

**A:** That's not an easy question—there are so many. If I should mention only one then it would be Nelson Mandela—for personal reasons. I work at Tromsø University which is the northernmost university in the world and the smallest in Norway. In June 2005 we hosted a big concert to highlight the fight against AIDS. Nelson Mandela was invited but no one thought that he'd go up there with his ailing health. But he did. He said he wanted to come to the top of the world to say thank you to Scandinavia for what the region had done to fight against apartheid and to send a message to the world to fight AIDS. Because this is the land of the midnight sun, the sun was shining well past midnight as he spoke before the crowd saying, 'You are all Africans.'

**Q: What message do you hope to convey by this year's awarding of the Peace Prize to Dr. ElBaradei and the IAEA?**

**A:** We come back time and again to the importance of working against the spread of nuclear weapons. In 1975 the peace prize was awarded to Andrei Sakharov. In 1985, it was the International Physicians for the Prevention of Nuclear War, and in 1995 the award went to Joseph Rotblat and the Pugwash Conferences on Science and World Affairs. The decade intervals are purely coincidental. But what is worth noting is that this year also marks 60 years since the UN was established, and it is also 60 years since Nagasaki and Hiroshima in August 1945. All of this speaks to 'never more.'

It is very important to limit the spread of nuclear weapons. We haven't really achieved much through these decades but we shouldn't give up. We hope to reinvigorate the work in nuclear non-proliferation.

It is a challenge to every nation, to all powerful persons, every man and woman, to the whole world, that we must fight nuclear weapons. We must reduce and eliminate them. It is a challenge, with great expectations for everybody to work along the lines of Dr. ElBaradei and the IAEA.

*—Interview conducted by Kirstie Hansen in Oslo for the IAEA Bulletin.*

# A Nobel

**The Nobel Prize** is awarded annually in recognition of achievements in the fields of medicine, physics, literature, and chemistry, as well as for peace. Since 1901, the best and brightest minds across the globe — 776 of them, in fact — have had the distinct privilege of being honoured by the Swedish Nobel Committee for their work and efforts in these fields.

The International Atomic Energy Agency and its Director General, Mohamed ElBaradei, were awarded the 2005 Nobel Peace Prize. Although this is a tremendous achievement for the Agency, it is by no means an isolated one within the UN family. The IAEA award is the eighth time the United Nations or partner international organization has won the Peace Prize. UN Secretary-General Kofi Annan and the UN shared the 2001 prize; the UN Peacekeeping Forces were honored in 1988; the UN Children's Fund (UNICEF) in 1965; the UN High Commissioner for Refugees in 1981 and 1954; and the International Labor Organization in 1969. The late UN Secretary General Dag Hammarskjöld won the prize posthumously in 1961.

Several other Nobel Laureates have also had strong ties and close relationships with the IAEA, demonstrating the value of the Agency's work.

## Isidor Isaac Rabi

**1944 Nobel Prize for Physics** “for his resonance method for recording the magnetic properties of atomic nuclei.”

American physicist who was awarded the Nobel Prize for Physics in 1944 for his invention (in 1937) of the atomic and molecular beam magnetic resonance method of observing atomic spectra. Mr. Rabi's most important scientific work was his development (in the 1930s) of a method for measuring the magnetic properties of atoms, atomic nuclei, and molecules. His method provided the central technique for virtually all molecular and atomic beam experimentation.

Mr. Rabi was a member of the IAEA Scientific Advisory Committee in the early 1960s. (b.1898 – d. 1988)

## Hans Albrecht Bethe

**1967 Nobel Prize for Physics** “for his contributions to the theory of nuclear reactions, especially his discoveries concerning the energy production in stars.”

German-American physicist who won the 1967 Nobel Prize in Physics for his discovery of stellar nucleosynthesis. His passion for physics took him first to the Massachusetts Institute of Technology—where he worked on microwave radar—and then to the Los Alamos Scientific Laboratory, which was engaged in assembling the first atomic bomb. Much of Mr. Bethe's work focused on the theory of atomic nuclei. Over the course of his professional life, he worked and collaborated with other physicists on: deuteron theory, nuclear reactions, atomic physics, collision theory, and solid-state theory.

Mr. Bethe was an ardent supporter of the International Centre for Theoretical Physics (ICTP), which operates under the authority of the IAEA, UNESCO and the Italian federal government. (b.1906 – d.2005)

## Burton Richter



**1976 Nobel Prize for Physics** “for pioneering work in the discovery of a heavy elementary particle of a new kind.”

American physicist who shared the 1976 Nobel Prize in Physics with Samuel C.C. Ting for the discovery of a new type of heavy elementary particle. Mr. Richter became a physics professor at Stanford in 1967, and went on to work as a director of the Stanford Linear Accelerator Center. His research focused on experimental particle physics and colliding beam technology.

He gave the opening speech and participated in the Scientific Forum at the 2005 IAEA General Conference. (b.1931) See his article on page 14.

## Abdus Salam



**1979 Nobel Prize for Physics** “for contributions to the theory of the unified weak and electromagnetic interaction between elementary particles, including, inter alia, the prediction of the weak neutral current.”

Prof. Salam, a Pakistani theoretical physicist, taught mathematics at Punjab University and has been a science policy advisor for Pakistan. He was also

# House

a professor of theoretical physics at the Imperial College of Science and Technology in London. His work mainly focused on exploring the relationship between electromagnetic force and weak nuclear force.

Prof. Salam created the International Centre for Theoretical Physics—which operates under the authority of the IAEA, UNESCO and the Italian federal government—to encourage professional communication between scientists. (b.1926 – d.1996)

## Carlo Rubbia



**1984 Nobel Prize for Physics** “for decisive contributions to the large project, which led to the discovery of the field particles W and Z, communicators of weak interaction.”

An Italian physicist who shared the 1984 Nobel Prize in Physics with colleague Dr. Simon Van der Meer. Mr. Rubbia worked at Columbia University in the United States researching particle accelerators. He later moved back to Europe to experiment with weak interactions at CERN, the world’s biggest particle physics laboratory. He served as Director General of CERN from 1989 to 1993.

Mr. Rubbia was the opening speaker and participant at the 2004 IAEA General Conference Scientific Forum. (b.1934)

## Russell A. Hulse

**1993 Nobel Prize for Physics** “for the discovery of a new type of pulsar, a discovery that has opened up new possibilities for the study of gravitation.”

An American physicist who was awarded the 1993 Nobel Prize in Physics jointly with Joseph H. Taylor for the discovery of a new type of pulsar, Mr. Hulse started his career working on large-scale surveys for pulsars (stars that, according to Einstein, emit gravitational waves). Changing his professional focus from astrophysics to plasma physics, he joined the Plasma Physics Laboratory at Princeton University. Mr. Hulse developed a computer data format adopted by the IAEA as a standard for interchange of fusion applications atomic data. (b. 1950)

## Bertram N. Brockhouse



**1994 Nobel Prize for Physics** “for pioneering contributions to the development of neutron scattering techniques for studies of condensed matter” and “for the development of neutron spectroscopy.”

Canadian physicist who shared the 1994 Nobel Prize in Physics with American Clifford Shull for developing neutron scattering techniques. Mr. Brockhouse worked for the Atomic Energy of Canada’s Chalk River Nuclear Laboratory. In 1962, he became a professor at McMaster University in Canada, where he worked until his retirement in 1984. In addition to his Nobel-winning efforts on neutron scattering techniques, Mr. Brockhouse also developed the neutron spectrometer and was among the first to measure the phonon dispersion curve of a solid.

He gave presentations and participated in two IAEA conferences. (b.1918 – d.2003)

## Joseph Rotblat

**1995 Nobel Peace Prize** “for efforts to diminish the part played by nuclear arms in international politics and, in the longer run, to eliminate such arms.”

Polish physicist who jointly shared the Nobel Peace Prize in 1995 with his organisation, the Pugwash Conferences on Science and World Affairs, for their contributions towards nuclear disarmament. He was one of the founding members, secretary-general and eventually president of the Pugwash Conferences on Science and World Affairs, an international body that works on problems of international safety/security and development. Mr. Rotblat worked on the Manhattan Project at Los Alamos, and became a physics professor at the University of London. A vocal critic of nuclear weapons, he changed gears after World War II to focus his work on medical physics instead.

Mr. Rotblat co-wrote an op-ed piece on nuclear disarmament with IAEA Director General Mohamed ElBaradei for the February 2004 edition of the *Financial Times*. (b.1908 – d.2005)

# Praise For The Prize

## World Leaders React



The Secretary-General is delighted that the double peace prize for 2005 has been awarded to the International Atomic Energy Agency and its Director-General Mohamed ElBaradei. Since 1957, the IAEA has worked tirelessly and expertly to stem the proliferation of nuclear weapons and to promote the safe and peaceful uses of nuclear technology. Dr. ElBaradei has guided this vital mission with great skill since 1997. The Secretary-General congratulates him and the entire staff of the agency, past and present, on their contributions to global peace. The Prize is a welcome reminder of the acute need to make progress on the issue of nuclear non-proliferation and disarmament at a time when weapons of mass destruction continue to pose a grave danger to us all.

— **Kofi Annan**  
Nobel Laureate 2001 and UN Secretary-General (CNN).

He (ElBaradei) is a worthy winner, although not the perfect choice. There are many holes in the apparatus (to prevent nuclear arms proliferation), but... the Agency has contributed much to halt the arms race and to prevent (weapons) from falling into dangerous hands. The message is to prevent the proliferation of weapons of mass destruction because if irresponsible people around the world — of whom there are many — manage to acquire nuclear arms, it will be very hard to continue to live on this Earth.

— **Shimon Peres**  
Nobel Laureate 1994 and Israeli Deputy Prime Minister (CNN).



I congratulate the International Atomic Energy Agency and its Director General, Dr. Mohamed ElBaradei, on being awarded this year's Nobel Peace Prize. In conferring this well-deserved honor on the IAEA, the Nobel Committee noted, "At a time when... there is a danger that nuclear arms will spread both to states and to terrorist groups, and when nuclear power again appears to be playing an increasingly significant role, the IAEA's work is of incalculable importance." The United States is committed to working with the IAEA to prevent the spread of nuclear weapons technology.

— **Condoleezza Rice**  
US Secretary of State ([www.state.gov](http://www.state.gov)).



This underlines the IAEA's role and... strengthens Mohamed ElBaradei's standing even more. The main thing for the IAEA today is the discussion about Iran's nuclear energy program. In that work it is important to continue with the professional and independent investigations that characterize the IAEA.

— **Hans Blix, Former IAEA Director General and Chief UN Weapons Inspector in Iraq** (Reuters).

This was an absolutely correct decision because this man deserves highest praise. He is truly a man of peace, not war.

— **Sergei Prikhodko**  
Russian Presidential aide (Reuters).

It is well deserved and very important, and shows the significance that is attached to the work that the Agency does.

— **Tony Blair, Britain's Prime Minister** (Reuters).

# Hopes For Peace

It's a very perceptive award. I'm absolutely delighted by it. It's absolutely splendid that the efforts of the IAEA are recognised. (The IAEA's achievement lies in) just being very assiduous in their duties and following on the tradition of monitoring and not towing an American or any particular nation's line. It's just doing what they're supposed to be doing, but doing it incredibly well and efficiently.

— **Jack Harris, Vice Chair of Pugwash, the global movement of scientists for nuclear disarmament that won the Nobel Peace Prize in 1995** (AP).

The chancellor praised the Nobel prize committee's decision as... a very wise decision, on account of the position that Mr. ElBaradei and his organization took during the Iraq war and during the Iraq crisis. It is at the same time recognition for his stance in the negotiations with Iran.

— **Bela Anda, Former German Chancellor Gerhard Schroeder's Spokesman** (Reuters).

The work of the IAEA and Mr. ElBaradei shows the value of multilateral cooperation on the biggest challenges we face today. We fully support Dr. ElBaradei and the IAEA in their continued efforts in tackling particularly sensitive cases, including Iran.

— **Pia Ahrenkilde Hansen, European Commission Spokeswoman** (Reuters).

I would like to say... how delighted I am to learn that the relevant authorities have given the Nobel Peace prize to the IAEA and its director Mr. Mohamed ElBaradei for their quite significant, and I would go so far as to say, key contribution for this vital search for peace, stability and security throughout the world — something we all aspire to.

— **Jacques Chirac, President of France** (Reuters).



The security of nuclear materials is very relevant to the security problems we have in the world at the moment. It has not always been easy for the IAEA to secure the resources they need from Member States. If this is a strong signal which allows them to generate resources to carry out the work they do effectively, then it is a very positive outcome.

— **Ian Anthony, Stockholm Peace Research Institute** (AP).

It is a worthy reward for his efforts over many years. He (ElBaradei) is a man who does his job solidly and responsibly. He avoids extremes and does staunch work building up IAEA's role in controlling nuclear non-proliferation.

— **Mikhail Gorbachev, 1990 Winner of the Nobel Peace Prize** (Itar-Tass).



# Work in Progress



Hours after being awarded the Nobel Peace Prize, Dr. ElBaradei sat down for a candid conversation with CNN anchor Jonathan Mann whose probing questions spotlighted the world's most contentious problems. Following are excerpts from this CNN broadcast.

**Jonathan Mann (JM):** Dr. ElBaradei, do you think of yourself as a detective?

**ElBaradei (EIB):** Well, I think of my organization as a detective. I manage this organization, so I'm referred to sometimes as a chief detective. I don't know all the detective tools, but I know how to work with detectives.

**JM:** Let me ask you about one of the cases in the news recently: North Korea. Your agency has been shut out for three years now. Since 2002, Pyongyang has not allowed any inspectors into the country. What have they been up to and what kind of weapons do you think they've built in that time?

**EIB:** Well, I think in North Korea, we're in a better situation to have an opinion, unlike India, Israel, Pakistan because we've never really done proper verification. In Korea, as we were there up until three years ago, we know they have plutonium. We know they have plutonium that could go into weapons; we know they have enough plutonium for weapons. They said that they weaponized that material. We know they have the infrastructure to weaponize, so I would not be surprised that they have plutonium weapons.

**JM:** The detective work aside, why bother? Why bother getting all the scientific information and what faith should we have in all these efforts if, at the end of the day, we know they have something terrible, and it's been years, and there's been very little done about it.

**EIB:** I think that question has to absolutely be addressed. In 1992, we reported North Korea to the Security Council. We said they are in non-compliance with their non-proliferation obligation. In 2003, again, we reported them back and said they are in further non-compliance; they kicked us out. I still need to hear from the Security Council.

**JM:** On that note, and you make an important point, let's go back to Iran. Does the IAEA have a bigger problem than Iran does? Everyone is talking about the threat of reporting Iran to the Security Council. What happens if the IAEA does exactly that? Reports Iran the way it reported North Korea, and again, nothing happens. Non-proliferation is exposed as a system that has no enforcement and no one really tried to make sure it works. Is Iran a crisis for your agency as much or more than it is for leaders in Tehran?

**EIB:** I think it's a crisis for the world, and not for the IAEA. Our role is an early warning system. We did sound the alarm as early as 1992 on North Korea. Nothing was done. We did sound the alarm in Iran three years ago. Things have not been going the way they should have been going.

**JM:** Let me interrupt you on that thought. How nervous are you about sounding the alarm this time? Not because of what you find in Iran, and not because of your anxieties, but because of your fear of the UN Security Council doing nothing again?

**EIB:** I have to sound the alarm because it is my job to sound the alarm. I hope then that somebody picks up the pieces, which is the Security Council. I mentioned this morning that you need a compliance mechanism so that countries cannot get away with murder. If a country is not fulfilling its obligation, they need to be taken to account. North Korea was not the best example, but again, when you talk about the Security Council, you really talk about different varieties of options. You talk about understanding the underlying issues, trying to have a peaceful settlement. You talk about sanctions; you talk about, ultimately, using force. So, the Security Council does not necessarily mean using force; it means coercive measures. It means sanctions. It means primarily, trying to get a dialogue going between parties and trying to find a peaceful solution. But I agree with you. The system does not have enough teeth right now. It is on-again, off-again. In the case of North Korea, nothing was done. So, we need to have an even system of compliance.

**JM:** It has been an interesting year for the IAEA, Director General. You're sitting here, and you're the winner of the Nobel Peace Prize. One year ago this time, the Bush administration was trying to push you out of your job. Dr. ElBaradei, what was it like contradicting the President of the US, the Vice-President of the US, the entire Administration on weapons on Iraq?

**EIB:** I think I was just simply doing my job. I was not supposed to be liked by everybody.

**JM:** Couldn't have been easy though. It had to make for a few sleepless nights.

**EIB:** It was not easy. I didn't lose sleep on that issue. I lost sleep over reports about being wire-tapped, not being able to talk to my daughter without being listened to. I did not really lose sleep about stating what I believed was absolutely the correct facts. We are not to be liked; we are to be respected. That's the key for me.

**JM:** Does the war in Iraq, does the entire experience change everything? And I mean that with respect to trusting the evidence of Member States, with respect to assembling a consensus about what the evidence might mean among countries as different as Russia, China and the US. Does it mean that sanctions are harder to impose because no one trusts the information that's now at hand? And because Iraq suggests, to countries around the world, that if they don't have nuclear weapons, they're subject to regime change. Does Iraq change everything for you?

**EIB:** Iraq has changed a lot, not just for me, but for everybody. Lots of lessons to learn from Iraq. We need to be careful about intelligence. We need not jump the gun. We need to see if use of force is better than enduring with diplomacy. There are a lot of lessons we're all going through, but everybody understands that we cannot just focus on the past. We have so much ahead of us. Terrorism, dissemination of nuclear weapons; we just can't afford to disagree. We need to continue to work together—Member States, intelligence, international organizations, individuals. The threats we are facing are so overwhelming that we need to put our differences behind. That's what we did and that's what the new Bush administration has done.

**JM:** How badly would you like to talk to A. Q. Khan and what could he tell you?

**EIB:** I'd like to talk to him. I should add that the Pakistani government has been quite cooperative, providing us with information, acting as an intermediary between A. Q. Khan and us. Obviously, ultimately it would be good for us to talk to the man directly. But I'd like to say three things here. One: the technology is out of the tube. Controlling nuclear proliferation simply through export control does not work any longer because technology is out. What we have seen in Libya, what we have seen in Iran, was not really a failure of the Agency as such; it was a failure of the countries to get control over what is being exported from their own countries. The A.Q. Khan network was all over the place. We found 30 companies in 30 countries everywhere in the world operating as part of the—

**JM:** Thirty countries? A nuclear supermarket with franchises in 30 countries?

**EIB:** In Europe, in Africa, in the Middle East, in Asia, everywhere. So that's one of the problems. Second problem, of course, is looking at why countries are tempted to develop nuclear weapons. It is security. People feel insecure. If we settle the Palestinian issue; if we settle the Kashmir issue, if we settle the Korean issue 90% of the problem of proliferation will disappear. The last 10% ...

**JM:** Someone is going to jump in and say that the Iranian government does not need nuclear weapons to solve the Kashmir issue, the Palestinian problem. That's not really the problem. The problem is that governments can buy this form of security and can get it and no one really is able to stop them.

**EIB:** Iran might not need to solve the Middle East issue, but Iran is in a very unfriendly neighbourhood.

**JM:** Let me just add to that. It's an unfriendly world. So even if those three problems you described went away, unless there was universal peace for eternity, nuclear weapons would be an extraordinarily tempting thing for a government to buy. And once again, the problem would be how to stop them.

**EIB:** Absolutely. If you feel insecure, if you want to project power... Usually, you develop nuclear weapons because you feel insecure or you want to project power or influence. If you want to do either of that, you look to those in the major league. And the people in the major league are still relying on nuclear weapons. You have these eight countries that continue to tell everybody else that nuclear weapons are not good for you but they continue to refine their nuclear arsenal.

**JM:** This is what the President of Iran, in fact, calls a nuclear apartheid — that some countries can decide on nuclear rights of other countries.

**EIB:** Well, I would not call it apartheid. We need a security system that's equitable. As the chairman of the Nobel committee said this morning, you cannot ask everybody not to smoke while you're dangling a cigarette from your mouth. It is not credible; it is not sustainable. You need to lead by example.

**JM:** The A. Q. Khan network was in talks with al Qaeda. What does that tell you about what terrorists are thinking about nuclear weapons?

**EIB:** It's very obvious that terrorists are interested in acquiring nuclear weapons, radioactive sources. If you have seen the sophistication we have seen with 9/11... then you have to be a very worried person indeed. We are in a race against time. The number one security threat in my view we are facing today is not more countries acquiring nuclear weapons as much as terrorists acquiring nuclear weapons. Because even if a country were to acquire nuclear weapons, one would hope they would still go through nuclear deterrence, the MAD, Mutual Assured Destruction. If you are a terrorist and you acquire a nuclear weapon, I don't think they will think twice about using it. That's precisely their message.

**JM:** You're making a very important point here. For all of the attention that we hear, that the newspapers, the diplomats and governments around the world pay to North Korea, to Iran, India, Pakistan or Israel, there are people who believe that the next time a nuclear weapon is used, it will be used by a terrorist group and potentially one that we don't even know the name of.

**EIB:** I think that's probable. And I hate to use hyperbole. There is more danger in nuclear weapons being used by a terrorist... than by a State, because we're still acting on this concept of mutually assured destruction.

**JM:** So does the world have the tools it takes to address that problem, to stop that terrible threat?

**EIB:** We're doing as much as we can — and when I say 'we' I mean the IAEA in conjunction with the rest of the international community...we are working as fast as we can to make sure that every nuclear facility, every nuclear material, every radioactive source is adequately secured. We have done 50% of the job. We still have a lot to do. We need to focus on this mission; we need to pool all the resources we have...because we are in a race against time.

**JM:** The Nobel Prize confers enormous prestige. There is a handsome gold medal and a beautifully hand-made diploma that goes out every year. There is also the money — \$1.3 million that is split every year between the laureates, in this case it will be Dr. ElBaradei and the Agency. What are you going to do with the money?

**EIB:** The Agency part of the money is going to treating young people from developing countries, primarily women in fighting cancer and providing nutrition for young children. My part of the money... I'm going to use it to help an orphanage in Egypt. I come from a country with a lot of poverty. I know what poverty can do to people and that's where I'm putting the money. The prize has a lot of meaning for me. It is not the money. If it were about money, I would have been out of a job a long time ago. It really is the visibility, the credibility, and the added moral authority to go with all the difficulties we talked about: the limited authority, the limited budget. I think we got that prize not because we succeeded every time, but because of our consistent effort to try to have our world slightly safer, slightly more humane.

**JM:** One last question. On the front page of a local newspaper today, there's a very dramatic picture of your face, and it says, 'Can he save the world?' Can you?

**EIB:** If you help me.

**JM:** That's a good way to close. I want to pick up on something you just said a moment ago. Every year, the Norwegian Nobel committee chooses a laureate for any one of number of reasons. But for one year to the next, there are some reasons that stay the same. One of them, we heard alluded to just a moment ago, is to reward achievement. Another is to reward effort when the achievement is not entirely at hand. The IAEA, it's safe to say, is a case in point. Governments around the world, terror groups, are still trying to acquire nuclear weapons and the Agency is itself a work in progress trying to accumulate the tools that will really stop them. It doesn't have all it needs yet. As a result, some of its critics say it didn't deserve the Nobel Prize. It's supporters say that is the very reason that it deserves the prize. Because in a world without any guarantees or easy answers, the IAEA or something very much like it, is our best hope.

# Prize Money

to Fund Cancer & Nutrition

Fellowships in the Developing World

The Norwegian Nobel Committee awarded the 2005 Nobel Peace Prize on 7 October to the IAEA and Director General ElBaradei in equal shares.

The Nobel Peace Prize money awarded to the Agency will be used to create a fund for fellowships and training to improve cancer management and childhood nutrition in the developing world.

A special fund known as the "IAEA Nobel Cancer and Nutrition Fund" was established for receipt of the Agency's share of the prestigious million dollar prize.

The €525,000 will be rolled out to expand human resources in developing regions of the world. In the area of cancer management, it will be spent on training in radiation oncology to improve cancer treatment and care, as part of the IAEA's Programme of Action on Cancer Therapy (PACT).

In the area of nutrition, the focus of the training is on the role of nutrition to help ensure healthy development of children by using nuclear techniques to identify problems and evaluate the effectiveness of preventive measures taken.

Fellowship awards will be offered that target young professionals, particularly women, from developing Member States, through the Agency's Technical Cooperation Programme. It is also proposed to organize training courses in regional centres in Africa, Asia and Latin America.

Dr. ElBaradei has encouraged Member States and donors to contribute to the Special Fund by giving additional resources both in cash and in kind. "It will be used to maximize the Agency's ability to build capacity and transfer the needed know-how to developing countries," Dr. ElBaradei said.

Dr. ElBaradei has directed his share of the prize money to charitable purposes.

# SNAPSHOTS

The Nobel Peace Prize festivities in Oslo from December 9-11, were a kaleidoscope of sights and sounds — from the cheers of well-wishers to the Laureate's words of hope and peace, from the chants



The excitement of the Nobel festivities is palpable on the streets of Oslo with Nobel Peace Prize banners flapping in the crisp winter air. While Alfred Nobel was Swedish, in his will he gave the task of selecting and awarding the Peace Prize to the Norwegian Parliament.



HM Queen Sonja and HRH Crown Prince Haakon of Norway, congratulate Dr. Mohamed ElBaradei and Japanese Ambassador Yukiya Amano, IAEA's Chairman of the Board of Directors, who accepted the Nobel Peace Prize on behalf of the IAEA.



Flanked by an invitation-only audience, which included previous Nobel Laureates, dignitaries, royalty, celebrities, IAEA staffers and family, Dr. ElBaradei and Ambassador Amano make their way to the podium in the Oslo City Hall. From his lectern, Dr. ElBaradei made an impassioned call for peace (Read his lecture on page 22).

# FROM OSLO

of anti-nuclear activists to the toe-tapping tunes of Gladys Knight — it was a salute to peace. But above all, it was a celebration of high hopes and of great expectations.



Under the watchful gaze of previous Nobel winners such as the Dalai Lama (1989), Nelson Mandela (1993), Aung San Suu Kyi (1991) and Jimmy Carter (2002), Dr. ElBaradei inscribes the Nobel Peace Book. It reads: “...**We need to change our mindset, we need to understand the common values we share, we need to understand that war and force will not resolve our differences or move us forward to peace. Only through dialogue and mutual respect, can we move forward as one human family.**”



In a relaxed behind-the-scenes moment, Dr. ElBaradei enjoys a coffee with CNN anchor Jonathan Mann before an hour-long live interview. The IAEA Chief responded to questions about North Korea, Iran, US relations and the threat of terrorism. (Read the transcript starting on page 32).



Cellist Yo-Yo Ma dazzles the 800-plus guests at the Oslo City Hall.



Dr. ElBaradei faces the future as he answers questions posed by Norwegian schoolchildren. “What does it feel like to win the Peace Prize?” a girl from Oslo asks the Director General. “It’s a delightful feeling. If you do the right thing sooner or later you will be recognized,” he replies. The concept of peace is taught early to Norwegian children. Students took to the stage to express what peace meant to them through drama, song and dance.

Kwaku Aning, IAEA Secretary of Policy Making Organs, pauses a moment before entering the Nobel Hall to read about his boss. “Can he save the world?” is the question posed by the magazine’s headline, to which Dr. ElBaradei has responded, “If you help me.”



Egyptian Ambassador Ramzy Ezzeldin Ramzy attends a photo exhibit honouring Dr. ElBaradei and the IAEA. The exhibit themed **Make Power – Not War** illustrates the many and varied facets of IAEA life in photographs, text and cartoons: from the anti-nuclear protests sometimes staged outside the Agency’s Vienna headquarters, to the work of its safeguards inspectors, its role in nuclear safety and promoting the peaceful uses of nuclear technology. It is the Nobel Peace Center’s first major exhibition on a laureate since the museum opened earlier in the year in the heart of Oslo. The exhibition will also be shown in Stockholm and Vienna in 2006.

With torchlights in hand, and banners declaring 'No to Nuclear Weapons', families pay tribute to the Agency. The torchlight procession is held every year to honour the Nobel Peace Prize winner. Like most years, the 2005 award was not without controversy. The reactions that the IAEA won were overwhelmingly positive, but there were some dissenters — who chose to express themselves in eye-catching missile costumes.



American singer Gladys Knight was among the legendary artists to sing the praises of laureate Mohamed ElBaradei and the IAEA at a star-studded concert. The concert was broadcast in more than 150 countries and to 300 million households around the world. Hollywood stars Salma Hayek and Julianne Moore were joint masters of ceremony for the Peace concert that attracted over 6,000 concert-goers and featured performances from artists from around the world, including Duran Duran, Sugababes, Katie Melua, Yo-Yo Ma, Katherine Jenkins, Damien Rice and Westlife.



Photos: Dean Calma/IAEA

At a time when the threat of nuclear arms is again increasing, the Norwegian Nobel Committee wishes to underline that this threat must be met through the broadest possible international cooperation. This principle finds its clearest expression today in the work of the IAEA and its Director General. In the nuclear non-proliferation regime, it is the IAEA which controls that nuclear energy is not misused for military purposes, and the Director General has stood out as an unafraid advocate of new measures to strengthen that regime. At a time when disarmament efforts appear deadlocked, when there is a danger that nuclear arms will spread both to states and to terrorist groups, and when nuclear power again appears to be playing an increasingly significant role, IAEA's work is of incalculable importance.

In his will, Alfred Nobel wrote that the Peace Prize should, among other criteria, be awarded to whoever had done most for the "abolition or reduction of standing armies". In its application of this criterion in recent decades, the Norwegian Nobel Committee has concentrated on the struggle to diminish the significance of nuclear arms in international politics, with a view to their abolition. That the world has achieved little in this respect makes active opposition to nuclear arms all the more important today.