



Dangerous knowledge: Can nuclear weapons be abolished?

Jasjit Singh^{a,*}, Manpreet Sethi^a, Garry Jacobs^b

^a*Centre for Strategic and International Studies, No. 1, Vasant Enclave, New Delhi 110057, India*

^b*International Centre for Peace and Development, 2352 Stonehouse Drive, Napa, CA 94558, USA*

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Abstract

The end of the Cold War spurred significant and encouraging steps towards the abolition and eradication of nuclear weapons. After the breakthrough discussions between Gorbachev and Reagan at Reykjavik in 1986, the substantial cut-backs in Russian and American nuclear warheads agreed to under the Strategic Arms Reduction Treaty (START) negotiations, successive initiatives at the United Nations (UN) and the review conferences of the Non-Proliferation Treaty, the Canberra Commission's report in 1995, the 1996 advisory opinion of the World Court, the New Agenda Coalition, Middle Powers Initiative and other efforts by governments and non-governmental organizations (NGOs) raised hope that the world may soon be rid of this menace. After 1997 the momentum of progress slowed and then turned from optimism to increasing frustration, pessimism and despair. The possession of nuclear weapons serves not only military and political but economic and social functions, elevating the prestige of the select nuclear group to a special status in world affairs that none will be anxious to relinquish voluntarily. Yet in spite of the setbacks and the obstacles, there is ample scope for constructive action. Most promising is a renewed effort to establish international law prohibiting the use, threat of use or possession of nuclear weapons, along the lines of the Chemical Weapons Convention that has very effectively stopped the use of these weapons in all but one instance since 1925. At the root of the nuclear problem, a Cartesian dualism in our thinking about ourselves and the world fosters a sense of detachment, complacency and inactivity regarding an issue that holds our very lives in the balance. The finite zero-sum game of competitive international security needs to be replaced by an infinite win-win game of global cooperative security like that now unfolding on a model scale in Europe.

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*Corresponding author. Tel.: +91 11 25699130.

E-mail address: csis_india@yahoo.co.in (J. Singh).

1. Introduction

Nuclear War cannot be won and hence must never be fought

–Ronald Reagan and Mikhail Gorbachev, October 1986, Reykjavik

The world now has the best chance of achieving international peace and security since the foundation of the United Nations

–Summit Meeting of the United Nations Security Council (UNSC), January 1992

The early 21st century is characterized by deteriorating relations among major powers, the unravelling of the treaty-based security regimes, an increased sense of vulnerability to terrorist attack, and crises of legitimacy and credibility in national and international institutions of governance, including the United Nations. Such developments are important factors in creating a fear-filled security environment, and they are the avoidable consequence of policy choices by major governments, not least the United States.

–Report of UN Secretary-General, 2005

It will all be so easy to explain in retrospect, so logical and predictable, a mere succession of plausible steps motivated by clear intentions and self-interest. Historians will recount the inevitable chain of events as simply as a story-teller, filling in the missing links with inference and colouring the facts with drama. It will be as obvious as India's Independence, the collapse of the British Empire, and the rise of America to world supremacy after World War II or the rise of Japan to the No. 2 economic spot in the 1980s. It will seem as inevitable as the fall of the Berlin Wall, the break-up of the Soviet Union and the end of the Cold War do in retrospect, though no one had the faintest idea of what was coming just a few years before and even now no truly cogent answer has been given as to why it happened. The possession and use of nuclear weapons will be universally acknowledged as a crime against humanity and every known weapon will be destroyed. The only questions remaining are: When? and How? The historians will find obvious answers. Only the futurist has to struggle.

The threat of nuclear weapons has loomed large over the world for the past 60 years since the first two atomic bombs were dropped on Hiroshima and Nagasaki. Although these weapons have never again been used in actual warfare, since then there have been about 50 occasions on which their use has either been threatened or nearly resorted to, the most serious being the Cuban Missile Crisis in 1962. During the Cold War, the arms race between the superpowers spurred development and deployment of vast nuclear arsenals that grew rapidly and inexorably to include more than 70,000 weapons, fanning fears of a nuclear Armageddon.

The climate changed suddenly and dramatically in the mid-1980s after Soviet President Mikhail Gorbachev proposed the elimination of nuclear arsenals to President Reagan in 1986. The Third Special Session on Disarmament at the UN in June 1988 called for the complete elimination of nuclear weapons. In the changing dynamics of the international order, total nuclear disarmament appeared to be within grasp.

The first half of the decade of the 1990s was marked by a sense of euphoria and optimism. Serious negotiations commenced to abolish chemical weapons, one of the three categories of weapons of mass destruction, leading to the conclusion of a universal non-discriminatory treaty to eliminate chemical weapons in 1993. There was also increasing support for emergence of a world security system based on cooperation between nation-states to replace the traditional competitive security paradigm. The spirit of the times was

aptly captured by an international analyst in these words, “These are the days of hope, not despair... It is time to strip away the complex and arcane strategic theory of the Cold War and start from scratch” [1]. In this emerging worldview where the USA and Russia envisaged their relationship as a partnership, it almost became fashionable to dismiss any future role for nuclear weapons. Some analysts even opined, “*the existence of nuclear weapons themselves was now the threat. They were the detritus of the Cold War...*” [2]. The prospects for nuclear disarmament appeared to be on an upswing.

Some of this new thinking was propelled by proposals such as those put forth by President Bush Sr. In 1991, he announced an arms control package that included hastening the elimination of strategic nuclear weapons covered by START-I, de-alerting nuclear-laden bombers, removing ground-launched nuclear weapons from Europe and South Korea, and halting the development of mobile land-based and new air-launched missiles. Steps in this direction were further reinforced when Gorbachev responded a mere 8 days later by proposing the elimination of all non-strategic nuclear weapons and ending nuclear testing and fissionable materials production. Still more positive developments unfolded over the next few years. In 1993, the US extended by 15 months an already existing US moratorium on nuclear testing. In 1994 the US and Russia agreed on nuclear cut-backs under START-II. The nuclear Non-proliferation Treaty (NPT) was unconditionally extended in 1995 on the strength of the reaffirmation by the nuclear weapon states of their commitment to nuclear disarmament.

2. Gathering tide for nuclear abolition

Such initiatives were both caused by and resulted in the emergence of a new breed of nuclear abolitionists. Apart from the voices of influential individuals, particularly retired officials, who questioned the wisdom of retaining nuclear weapons, several countries and non-governmental organisations too rallied for a nuclear-weapons-free-world (NFWF). At the 1995 NPT Conference, a *Study Group of the International Network of Engineers and Scientists against Proliferation (INESAP)*, comprising 50 experts from 17 countries, presented a report that outlined the transformation of the traditional non-proliferation regime into an NFWF regime. At the same time, more than 200 NGOs signed a statement that then became the basis for the founding of Abolition 2000 Global Network in the Hague in November 1995.

The same month, the Australian government instituted the *Canberra Commission on the Elimination of Nuclear Weapons* to study the desirability and feasibility of nuclear disarmament and to propose practical steps towards an NFWF. The Commission's members included 17 former political leaders, military commanders and defence experts on nuclear weapons. Its 1996 report concluded that “the risks of retaining nuclear arsenals far outweigh any possible benefit imputed to nuclear deterrence,” and “the end of the Cold War has created a new climate for international action to eliminate nuclear weapons, a new opportunity. It must be exploited quickly or it will be lost.” The report proposed both legal measures and practical steps towards an NFWF, as well as ways to maintain stability and security during the transitional period and beyond.

Just a month before the submission of the report of the Canberra Commission, the International Court of Justice, in July 1996, in response to a request from the UN General Assembly, pronounced the use of nuclear weapons as unlawful and against the principles of humanitarian law, except possibly in extreme cases of self-defence where the survival of

state is at stake [3]. While the judgment did not unambiguously outlaw nuclear weapons or their use, it did reiterate the obligation of the nuclear weapon states (under Article VI of the NPT) to negotiate in good faith and conclude a treaty to eliminate nuclear weapons. Later the same year, on 4 December 1996, 60 retired generals and admirals from 17 countries released a joint statement urging governments of nuclear weapon states to move towards elimination of these weapons from their arsenals.

In 1997, in response to the call by the United Nations General Assembly for negotiations leading to the conclusion of a nuclear weapons convention, an international consortium of lawyers, scientists and disarmament experts led by the *Lawyers' Committee on Nuclear Policy*, drafted a Model Nuclear Weapons Convention. Convention called for a ban on the development, testing, production, stockpiling, transfer, use and threat of use of nuclear weapons and outlined measures for declaration, de-alerting, demobilisation, disabling and disassembling of existing weapons as well as effective means for monitoring these activities by a new agency to be established for this purpose.

In another very significant initiative, a coalition of eight international NGOs formed the *Middle Powers Initiative* in March 1998 to encourage influential non-nuclear States or “middle power” governments to engage more actively with nuclear weapon states in order to move them towards complete nuclear disarmament. Guided by an International Steering Committee, and chaired by Douglas Roche, former Canadian Disarmament Ambassador, this international civil society coalition worked to support fulfilment of the NPT disarmament obligation.

Frustrated at the inability of the second Preparatory Conference for the 2000 NPT Review to make any progress on important issues, in June 1998 the foreign ministers of New Zealand, Brazil, Egypt, Ireland, Mexico, Slovenia, South Africa and Sweden decided to pool their resources, ideas and capabilities to present workable solutions to issues deadlocking negotiations through the *New Agenda Coalition*. They released a joint declaration entitled “Towards a Nuclear-Weapon-Free World: The Need for a New Agenda” that called for renewed international efforts towards nuclear disarmament and outlined a programme to achieve this. The New Agenda countries actively promoted the agenda in international fora, including the UN, where they presented a detailed road map towards an NFWF. The General Assembly adopted their resolution with 114 in favour, 18 against and 38 abstentions.¹

In August 1998, a group of civil society leaders, including former US President Jimmy Carter, former Soviet President Mikhail Gorbachev, former President of Costa Rica Oscar Arias Sanchez, and former Manhattan Project member Joseph Rotblat, released a statement calling for the abolition of nuclear weapons. A similar statement by American civil and business leaders was released in October 2000.

The New Agenda Coalition was particularly influential in forging a successful outcome to the 2000 NPT Review Conference where it presented a working paper calling upon the five original nuclear weapon states to make an unequivocal commitment to give up their nuclear arsenals; suggesting measures such as the formulation of nuclear policies and postures to preclude the use of nuclear weapons; de-alerting and removing nuclear warheads from delivery vehicles; as well as reducing and progressively eliminating tactical

¹Of the 16 NATO states, only the US, UK, France and Turkey voted against the resolution. The others abstained. Canada was even prepared to vote in favour of the resolution if another NATO country did likewise. But Germany, the Netherlands, Norway, Belgium and Japan succumbed to domestic pressure and abstained.

nuclear weapons as an integral part of nuclear arms reductions. This was followed by another Coalition resolution of the UN General Assembly in 2004 identifying consensus-based steps to obtain the widest possible support for a resolution that could then be presented at the 2005 Review Conference. The 2004 resolution also identified areas in which the nuclear weapon states could begin action prior to the 2005 Conference, laying the foundation for a constructive outcome. This resolution was adopted by a vote of 151 to six (United States, Britain, and France, joined by Israel, Latvia, and Palau), with 24 abstentions. Significantly, key US allies Japan and South Korea voted affirmatively for the first time since 2000. In its operative paragraphs, the resolution called for full compliance with disarmament and non-proliferation commitments; universal adherence to the NPT and early entry into force of the Comprehensive Test Ban Treaty; accelerated implementation of the practical disarmament steps agreed at the 2000 NPT Review Conference; further steps to reduce non-strategic arsenals; non-development of new types of nuclear weapons; and establishment of a subsidiary body within the Conference on Disarmament to address nuclear disarmament.

3. Reversal of momentum on disarmament

In spite of these monumental and persistent efforts by nation-states, NGOs and international organisations, the momentum for disarmament began to slow in the late 1990s and gradually unwound over the last 5 years. The more these various groups pressed the nuclear weapon states for concrete action, the greater the resistance and behind-the-scenes pressure by nuclear weapon powers, especially the US Government, to halt the movement. The 2005 NPT Conference was singularly lacking in any major initiative in favour of nuclear disarmament, paying mere lip service to the New Agenda Coalition Resolution. The governments of nearly every UN member-country exhibited diminished will to work for nuclear disarmament. Some were motivated by expediency, while others reacted with frustration and cynicism to the lack of progress after years of effort.

The roots of nuclear deterrence that penetrated deep during the Cold War years are proving difficult to dislodge. All nuclear weapon states continue to rely on nuclear weapons as a cornerstone of their national security for the “indefinite future”. In fact, the US, UK, NATO (North Atlantic Treaty Organisation) and Russia have since updated their nuclear doctrines to assign newer roles and missions for their nuclear arsenals. The words of US Under Secretary Walter Slocombe in 1997 are representative of the current position of the nuclear weapon states: “Nuclear deterrence, far from being made wholly obsolete, remains an essential, ultimate assurance against the gravest of threats” [4].

If earlier, the Cold War had justified the existence of nuclear weapons, it is now the end of the Cold War and the “uncertainty” and emergence of “new threats” that appear to justify the continued existence of nuclear weapons. The new nuclear doctrine put forth by NATO in 1998, the US Nuclear Posture Review in 2000, and the periodic revisions of the Russian nuclear doctrine since 1999 have all added value to nuclear weapons and practically removed nuclear disarmament from the agenda.

During the Cold War, technological difficulties related to dismantling weapons and verifying the actions of other states were often cited as major obstacles to disarmament. Technology to safely dismantle, store and dispose off weapons grade material, as well as to monitor compliance has advanced significantly over the last several years. Technological developments in the fields of satellite surveillance, sensor technology, communication and

data processing, technical verification possibilities present a scientific-technological guarantee that there is a technical way out of the problem. And this should make it a lot easier to change mindsets in favour of taking steps towards nuclear weapons abolition.

The issue is complicated by the fact that the possession of nuclear weapons is not merely a question of national security or the right of a state to defend itself against overwhelming conventional attack. There are very few instances in which the use of nuclear weapons could conceivably be justified as an essential or optimal response on either of these grounds. Nor is it plausible that the retention of nuclear weapons by these states will provide them security in the event of nuclear threats from other countries that may acquire nuclear weapons in future, such as Iran, or from non-state actors. Rather, the retention of these weapons by the current nuclear powers is the greatest sanction and incentive for other nations to acquire them. Terrorists in possession of these weapons would not be restrained by the threat of retaliation against civilian populations. The large majority of military experts, even in the USA and Russia, would agree with former US Defence Secretary Robert McNamara when he said, “I have never seen a piece of paper that outlined a plan for the United States or NATO to initiate the use of nuclear weapons with any benefit for the United States or NATO” [5].

The most compelling motive for retention or possession of nuclear weapons is social and psychological rather than political or military. The possession of nuclear weapons endows nuclear weapon states, their governments and their citizens with a special, privileged status in the world that would be mitigated by their elimination. Prestige is the motive that makes eradication of these weapons so difficult. Nuclear weapons may not possess military value, but they do possess political and even economic value as the case of North Korea so clearly illustrates.

Meanwhile, some isolated attempts continue. On October 3, 2005, 28 states² launched the *Article VI Forum* at the UN to examine the legal, technical, and political requirements for a NFWF. The Forum, sponsored by the Middle Powers Initiative, is an effort to stimulate and shape effective responses to the crisis of the non-proliferation/disarmament regime manifested by the breakdown of the 2005 NPT Review Conference. It envisages high-level meetings of diplomats, decision-makers, and experts; regular briefings, consultations, and visits to relevant countries to advance international cooperation to prevent the spread of nuclear weapons and to encourage fulfilment of existing commitments on the reduction and elimination of nuclear arsenals. Taking its name from the article VI of the NPT that requires good faith negotiations to achieve nuclear disarmament, the programme hopes to revitalise the disarmament fora. It then envisages a dual track forum to work for the development and implementation of the legal, political and technical elements of a nuclear weapons convention or a framework of instruments for the abolition of nuclear weapons.

The lesson to be learned from past initiatives is that good ideas and proposals, even when combined with effective implementation strategies, may remain just on paper unless

²The participating states at the initial meeting were: Argentina, Austria, Belgium, Brazil, Canada, Chile, Costa Rica, Germany, Holy See, Hungary, Indonesia, Ireland, Japan, Jordan, Lithuania, Malaysia, Mexico, Mongolia, the Netherlands, New Zealand, Norway, Poland, Samoa, South Africa, South Korea, Sweden, Switzerland, and Turkey. A number of civil society representatives were also in attendance, as was Nobuyasu Abe, UN Under-Secretary-General for Disarmament Affairs, and Amb. Choi Young-jin, Chairman of the Disarmament and International Security (First) Committee of the 60th General Assembly, and Permanent Representative of the Republic of Korea to the United Nations.

they occur in the right political environment directed by visionary leadership. To make a real headway, attention needs to be paid to the symbolic, strategic and political factors, as to the physical materials and components. The fact that disarmament has never been “internalised” as a genuine policy imperative by the nuclear weapon states continues to complicate and thwart efforts to prevent proliferation. An integrated approach is needed to the goals of disarmament, non-proliferation, and human security, reinforced by international law and supported by practical controls and better monitoring tools. Nuclear disarmament is now feasible and more desirable than ever before.

Global abolition of nuclear weapons requires that we effectively address several major hurdles:

- The political prestige accruing to nations that possess these weapons.
- The belief that the possession of nuclear weapons enhances national security.
- Broad acceptance of the view that abolition of nuclear weapons, however desirable, is not feasible, especially without strong support from the United States, and is, therefore, a futile exercise to pursue.
- The absence of an imminent, pervasive threat emanating from nuclear weapons to galvanise NGOs and civil society across the world to press urgently for abolition of nuclear weapons.
- The view that ballistic missile defences (BMD) can provide security against limited nuclear attack, in spite of the fact that BMD at best would only deal with one type of nuclear delivery system and not weapons that could be delivered by other means.
- The sense of complacency arising from the fact that the first-tier nuclear states (USA and Russia) are in the process of reducing their stockpiles.
- The belief that the threat from emergence of new nuclear states, which would be of a much lower order than that between the five acknowledged weapon states, can be managed through the NPT, diplomacy and possible use of force, rather than by total abolition of this class of weapons from the face of the earth.

4. Outlawing nuclear weapons

The existence of these obstacles is no justification for abandoning efforts for nuclear disarmament. Even now, many practical steps can be initiated on the road to final abolition. One of the most important would be the measures to undermine the power and prestige associated with possession of nuclear weapons. This can most effectively be done by legal measures declaring the use of these weapons unequivocally illegal and immoral.

Spurred by the initiatives of non-governmental organisations such as the International Physicians for the Prevention of Nuclear War and the International Association of Lawyers Against Nuclear Arms, in 1994 the UN General Assembly approached the World Court for an advisory opinion on the legality of using nuclear weapons. While the World Court judgement does not go far enough for all those seeking elimination of nuclear weapons, it, nevertheless, contains far-reaching conclusions. It unanimously ruled that “*there is in neither customary nor conventional international law any specific authorization of the threat and use of nuclear weapons.*” In an 11:3 judgement, it also ruled that there is “*no comprehensive and universal prohibition of the threat and use of nuclear weapons as such*” in international law. The Court also ruled, in a 7:7 vote with the President casting the deciding vote, that “*the threat and use of nuclear weapons would generally be contrary to*

the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law.” At the same time, the Court ruled that in the absence of specific law, the Court “cannot conclude definitely whether the threat or use of nuclear weapons would be lawful or unlawful in an *extreme circumstance of self-defence*, in which the very survival of a State would be at stake”.

The World Court judgement, read in its totality, clearly emphasises the need for properly framed and instituted law to prohibit the use and threat of nuclear weapons. Nuclear weapon states and their allies relying on such weapons may be expected to oppose this as their submissions at the World Court also indicated. But they are increasingly being forced to accept through protocols, a prohibition on use or threat of use of nuclear weapons in an enlarging portion of the globe falling within nuclear weapon-free zones. It is necessary to recall that an overwhelming majority of states have been voting for a convention to outlaw the threat and use of nuclear weapons since 1978, though the active support for such a resolution has declined in recent years. The logical step required is to resurrect this resolution at the forthcoming session of the UN General Assembly and generate maximum support for it. Meanwhile, since most of the Asian countries have supported the concept so far, they should take the initiative for a nucleus convention banning the use and threat of use of nuclear weapons in Asia and the adjoining oceans. Other regions may follow suit.

The Court’s findings raise two other important issues: the principle of first-use of nuclear weapons and the principle of proportionality. Since there is no specific law either authorising or prohibiting the use and threat of nuclear weapons, until the issue of such a law is settled, the use or threatened use of nuclear weapons would continue to be generally inconsistent with law. This places an obligation on all countries to adapt nuclear doctrines in consonance with the World Court ruling. Since the very possession of nuclear weapon constitutes a threat of use to other nations, the implication is that nuclear weapons must be totally eliminated from national arsenals.

Although the Court has not specified the particular circumstances under which threat and use of nuclear weapons might be justifiable when the very survival of the State is in question, the *principle of proportionality* would require that even under these circumstances, nuclear weapons be considered legal only in extreme situations of last resort wherein the survival of the State is threatened by the nuclear weapons of other states and no lesser measures are available to it. Since the effects of nuclear weapons use may extend far beyond the territorial limits of a state, even their use under extreme circumstances could endanger other nations as well. The effort to justify the possession and use of nuclear weapons in defence against superior conventional forces, relied on by NATO for four decades and more recently by Pakistan, is inconsistent with the principle of proportionality. Final assurances for the survival of nation states can only be provided by the international community, in particular by the UN, whose primary responsibility it is to ensure international peace and security. At the same time, the World Court ruling has also made it clear that the definition, rights, and limits of action for self-defence require elaboration and acceptance by the international community. The Secretary General should ensure movement in this direction.

The threat or use of nuclear weapons should be brought under the ambit of international law, both legal and customary at the earliest. The time has come for concerted action to establish an international convention to ban the threat and use of nuclear weapons by declaring them a crime against humanity. The method adopted to ban the use of chemical

weapons provides a useful guideline for dealing with nuclear weapons. The use of poison was considered illegal for a long time before a specific prohibition against its use was instituted by the international community through the 1925 Geneva Convention on chemical weapons and poisonous gases. This convention did not require countries to physically give up chemical weapons, but it did create norms against their use and acquired the force of customary law over time. As a result, the only instance of use of chemical weapons after 1925 was by Iraq in 1988, which also led to the adoption of the Chemical Weapons Convention in 1993.

5. Leadership in thought and action

This is a moment in history that requires leadership—leadership in thought, hope and action—the kind of leadership exhibited by John F. Kennedy when he launched America’s space programme to put a man on the moon and by Mikhail Gorbachev when, at the height of the Cold War, he initiated discussions with Reagan on nuclear disarmament in spite of stiff opposition from the Soviet Presidium. The role of leaders is to make informed, idealistic, experienced people of action confirm and endorse pioneering initiatives and convert them into accomplished results. It is not the endorsement of others that creates the leader, but rather the leader’s ability to make others endorse the direction he projects. That is what is wanted now.

In today’s world of sophisticated institutions, that leadership need not and often does not come from a single individual. NGOs played a major role in garnering international support for the Landmines Convention, eventually compelling governments to support a global convention through the UN. They can play a similar role with regard to Nuclear Weapons as well.

The World Academy of Art and Science is among those that believe there is still scope for effective action on this issue. Established in 1960 at the instance of Albert Einstein, Bertrand Russell, Robert Oppenheimer, Joseph Rotblat and other leading scientists deeply concerned about the dangers arising from nuclear weapons, the Academy convened two meetings last year in Washington and Zagreb to explore potential initiatives and constituted a special task force, which includes two of the authors, to coordinate its activities. Foremost on the agenda is reviving efforts to establish international law prohibiting the possession, use and threat of use. This can be achieved by a fresh resolution of the UN General Assembly declaring the possession, use or threat of use of nuclear weapons as a crime against humanity and once again referring the matter to the World Court for consideration.

Many of those who have fought hard and long to achieve nuclear disarmament have been brought to the point of exasperation or even hopelessness by the reversal of momentum on this issue. A few persist in seeking new fields of battle. But the situation is far from hopeless and the war is far from over. At any given moment there is always scope for fresh positive initiative. There are always pragmatic next steps that can be taken. Hundreds of events have occurred during the past two centuries to demonstrate that even where prophets of doom and hopelessness reigned supreme, new possibilities and more positive actualities often follow closely in their wake. Winston Churchill’s courage and resolve during the Nazi Blitzkrieg of London, standing on the roof tops shaking his fists at the enemy planes, shouting at the top of his lungs for his people, the enemy and the whole world to hear, “We will never surrender!” Action is always possible. Where there is no scope to act, there is always scope for words of power and thoughts that will lead to future action.

The persistence of nuclear weapons long after there is any conceivable justification for their existence is symptomatic of a deeper human dilemma. The very fact that we as human beings can remain complacent and patient in the face of such a gross violation of common sense and human welfare, taken in by facile arguments, lured by assurances that nothing will ever happen, points to a more fundamental problem in the way we think and live. That problem can be traced back to the division between mind and matter conceptualised by Descartes in the 17th Century and embodied in notion of the scientist as a detached observer of the world around him. Somewhere along the way, we have all acquired the scientific outlook of regarding the world around us with impartial detachment, even when that world along with its people and institutions is actively taking steps to destroy itself and ourselves in the process. Reason has its limits, especially the reason arising from narrow perspectives and egoistic interests, which have no legitimate place in science. Here we sit discussing, analysing and debating an issue dispassionately when our very lives and those of our children are at stake. It is not a question of morality or idealism. It is a question of pragmatism. The nuclear issue touches upon the very roots of our thinking process. It is a result of the destructive power arising from infinite division, a symbol of the violence arising from the egoistic division of reality into self and not-self. Science has reached the point at which the undivided wholeness of life is revealed. We need to accept and respect that reality and learn to act on it.

Our concept of life as a finite or zero sum game consisting of winners and losers is hopelessly out-of-date and inconsistent with the fact that everywhere we see evidence that there is a way for everyone to win, as every member nation and citizen of the European Union stands to win from their growing association. It is time we shift from a finite to an infinite game in international affairs, a game in which the narrow, exclusive concept of competitive security is replaced with an inclusive concept of cooperative security. No longer should the security of each nation be based on enhancing its military capabilities so as to present an increasing threat or apparent threat to other nations. That is a game that generates at least one loser for every winner. It is a game that no nation can ever fully and finally win. The recent efforts to establish a unified European Army are evidence that a different kind of game is possible. The very battlefields which witnessed the most frequent, prolonged and horrible conflicts of the past 10 centuries have become a place where war against neighbouring states and even against other nations is becoming increasingly 'unthinkable'. That example should serve both as profound food for thought as well as an inspiring example for us to ponder and act upon.

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