

Breaking Free from Nuclear Deterrence

Commander Robert Green, Royal Navy (Retired)

When David Krieger invited me to give this lecture, I discovered the illustrious list of those who had gone before me – beginning with Frank King Kelly himself in 2002. I was privileged to meet him the previous year when my wife Kate Dewes and I last visited Santa Barbara. Then it occurred to me: not only is this lecture the tenth; it is the first since Frank died last June, one day before his 96th birthday. So I feel quite a weight on my shoulders. However, this is eased by an awareness of the uplifting qualities of the man in whose memory I have the huge honour of speaking to you this evening.

As I do so, I invite you to bear in mind the following points made by Frank in his inaugural lecture:

- “I believe that we human beings will triumph over all the horrible problems we may face and over the bloody history which tempts us to despair.”
- Some of the scientists who brought us into the Nuclear Age made us realize that we must find ways of living in peace or confront unparalleled catastrophes.
- A nun who taught him warned him he would be tested, that he would “go through trials and tribulations.”

As President Truman's speechwriter, Frank discussed the momentous decisions Truman had to make – including the one to drop the first nuclear weapons on Japan:

- “When I asked him about the decision to use atom bombs on Japan, I saw anguish in his eyes. He made it clear that he felt the weight of what he had done.”
- “My experience in the Truman era indicated to me that the American people were not well informed about what was really going on in other countries and in the United States.”

I have done my best to take all this wisdom to heart in what I now have to say about breaking free from nuclear deterrence.

I will begin by trying to answer two challenging personal questions. People often ask why I am the only former British Navy Commander with experience of nuclear weapons to have come out against them. Others in the peace movement ask why it took me so long.

A Child of the Nuclear Age

In some ways, I am a child of the Nuclear Age. I was five days past my first birthday when 24-year-old Theodore Van Kirk, navigator of the *Enola Gay*, helped conduct the first tactical nuclear strike, against Hiroshima. In 1968, I too was a 24-year-old bombardier-navigator when told that my Buccaneer strike jet pilot and I had been chosen as a nuclear crew in our squadron aboard the aircraft-carrier *HMS Eagle*. After being cleared to see top secret information, and indoctrinated about the honour and heavy responsibility of this role, we were given our target: a military airbase on the outskirts of Leningrad. We had to plan how to get there undetected from somewhere in the Norwegian Sea. This meant choosing the shortest route, over Sweden – a neutral country with very capable air defence. Our mission was to deliver a ten-kiloton WE177 tactical nuclear bomb, and then try to get back to our carrier, or at least bale out over Sweden or Norway. When I discovered there would not be enough fuel because the target was at the limit of our aircraft's range, my pilot shrugged and said: "Well, Rob, if we ever have to do this, by then there won't be anything to go back for." So we submitted our flight plan, and celebrated our initiation into the nuclear elite.

Thirty years later, I was shocked to land at my target, to attend an anti-nuclear conference on European security on the eve of the 21st century. During the taxi drive into St Petersburg, I understood how my bomb would have caused massive civilian casualties from collateral damage. On TV that evening, I apologized to the citizens of Russia's ancient capital. Then I told them I had learned that nuclear weapons would not save me – or them.

Back in 1972, after retraining in anti-submarine warfare, I was appointed as senior bombardier-navigator of a Sea King helicopter squadron aboard the aircraft-carrier *HMS Ark Royal*. Our task was to use variable-depth sonar, radar and other electronic sensors, plus a variety of weapons, to detect and destroy enemy submarines threatening our ships. However, our lightweight anti-submarine torpedoes were not fast enough and could not go deep enough to catch the latest Soviet nuclear-powered submarines. So we were given a nuclear depth-bomb, an underwater variant of the WE177 design.

The problem was that, if I had dropped one, it would have vaporized and irradiated one Soviet nuclear submarine, a large volume of ocean – and myself. This was because, unlike a strike jet, a helicopter was too slow to escape before detonation. So it would have been a suicide mission. Also, my leaders ignored the fact that there would have been heavy radioactive fallout from my bomb, plus the submarine's nuclear power plant and any nuclear-tipped torpedoes it carried. And

I might have escalated World War 3 to nuclear holocaust. All this, just to protect my aircraft-carrier.

This time I did complain. I was reassured there would almost certainly be no need to use nuclear depth-bombs; no civilians would be involved; and the Soviets might not even detect it. Besides, I had a glittering career ahead of me, and did not want to spoil my prospects, did I? As I was ambitious, and no-one else raised concerns, I fell silent. In due course, I was promoted.

However, the experience of such military incompetence and irresponsibility shocked me into a less trusting, more questioning frame of mind. That potent military tradition, carefully nurtured to carve out and hold down the British Empire, was immortalized in Tennyson's Crimean war poem *The Charge of the Light Brigade* about an earlier suicide mission: "Theirs not to reason why, theirs but to do and die." That attitude was alive and well, in an all-volunteer Royal Navy. This was when I realized the significance of the fact that, unlike most of my colleagues, I had no military pedigree. My father worked in the Ministry of Agriculture. His father was a priest and divinity teacher at Trinity College, Dublin; and my paternal great-grandfather was an engineer. On my mother's side, her father came from a line of professional gardeners and horticulturalists.

UK Polaris Replacement and Falklands War

In 1979, Margaret Thatcher swept into 10 Downing Street as Britain's first woman Prime Minister. I was working just across the street as a newly promoted Commander, in the Ministry of Defence. In my position as Personal Staff Officer to the Assistant Chief of Naval Staff (Policy), I watched my Admiral facilitate the internal debate on replacing the four British Polaris nuclear-armed ballistic missile submarines. The nuclear submarine lobby insisted upon a scaled down version of the massively expensive, over-capable US Trident system, despite threatening the future of the Navy as a balanced, useful force. Mrs Thatcher rammed the decision through without consulting her Cabinet; and the Chiefs of Staff, despite misgivings, were brought into line.

My final appointment was as Staff Officer (Intelligence) to Commander-in-Chief Fleet. It was a stimulating time to work in military intelligence in the command bunker in Northwood, just outside London, where operational control of the British Navy was coordinated. The Soviets had just invaded Afghanistan; the Polish trade union movement *Solidarnosc* was pioneering the East European challenge to them; and new Soviet warship designs were emerging almost every month. I ran the 40-strong team providing round-the-clock intelligence support to the Polaris submarine on so-called "deterrent" patrol, as well as the rest of the Fleet.

In 1981, the Thatcher government, desperate to find savings because of her determination to have Trident, announced a major defence review. With projected cuts to the Royal Navy's

aircraft carriers, destroyers and frigates, my chances of commanding a ship – the next step to higher rank – were slim. So I took the plunge and applied for redundancy.

Notification of my successful application came one week into the Falklands War. In 1982, Britain suddenly went to war with an erstwhile friend, Argentina; and the Royal Navy's role was pivotal. So the war was directed from Northwood by my boss, Admiral Sir John Fieldhouse. At one point the outcome was in the balance: our ships were being sunk, and some friends and colleagues killed. If Argentine strike aircraft or submarines had sunk an aircraft-carrier or troopship before the landing force got ashore, the British might have risked defeat. What would Mrs Thatcher have done? Until then, she had been the most unpopular Prime Minister in British history. Now she had become the 'Iron Lady', and needed a military victory to save her political career.

Polaris had not deterred Argentine President Galtieri from invading the Falkland Islands. With victory in his grasp, would he have believed, let alone been deterred by, a threat from Mrs Thatcher to use nuclear weapons against Argentina? Yet after I left the Navy I heard rumours of a very secret contingency plan to move the British Polaris submarine on patrol south within range of Buenos Aires. The submarine was fitted with 16 launch tubes, each housing an intercontinental ballistic missile equipped with three 200 kiloton warheads. Then came corroboration, from France. François Mitterrand was President in 1982. In 2005, his psychoanalyst's memoirs revealed that in his first counselling session Mitterrand had just come from an extremely stressful phonecall with Thatcher. A French-supplied Exocet missile fired from a French-supplied Argentine Navy Super Etendard strike jet had sunk a British destroyer. Mrs Thatcher had threatened to carry out a nuclear strike against Argentina unless Mitterrand ordered his brother, who ran the Exocet factory, to release the missile's acquisition system frequencies to enable the British to jam them. Mitterrand, convinced she was serious, had complied.

These nightmarish rumours led me to confront the realities of operating nuclear weapons for a leader in such a crisis. Defeat would have been unthinkable for the British military, and would have ended Mrs Thatcher's career. She was a true believer in nuclear deterrence. Yet if she had threatened Galtieri with a nuclear strike, he would have publicly called her bluff and relished watching President Reagan try to rein her in. The Polaris submarine's Commanding Officer, briefed by me before going on patrol, would have been faced with a shift of target. Had he obeyed the order, Britain would have become a pariah state, its case for retaining the Falklands lost in the international outrage from such a war crime, especially against a non-nuclear state. Nuclear deterrence failure would have compounded the ignominy of defeat.

Redundancy, Roof-thatching and Murder

Back in 1982, on terminal leave after the British retook the Falkland Islands, I was 38 years old, with no qualifications except my rank and experience. Tired of weekend commuting to high-pressure jobs in London, I decided to try my luck and find local work which allowed me to be home every night. So I became a roof thatcher, enduring many painful jokes with stunned former colleagues. For eight idyllic years, I loved working with my hands in the open air restoring fine old houses, with a bird's eye view of some of the most picturesque parts of southwest England.

Thatching proved vitally therapeutic in 1984, when my beloved aunt Hilda Murrell was murdered. My mother's unmarried elder sister, she had become my mentor and close friend after my mother died when I was a 19-year-old Midshipman. Hilda was a Cambridge University graduate, and a successful businesswoman who ran the family rose nurseries. In retirement she became a fearless environmentalist and opponent of nuclear energy and weapons. At the age of 78, she applied to testify at the first British public planning inquiry into a nuclear power plant. Mrs Thatcher was determined to introduce a programme of reactors of a design which failed at Three Mile Island. Hilda, who had a formidable network of establishment contacts, did her homework about the insoluble problems of nuclear waste. A true patriot, she was not prepared to let the nuclear industry ruin and poison her country – and potentially the rest of the planet with nuclear weapons.

Rumours of nuclear conspiracy swirled around an incompetent police investigation into her bizarre murder. Then in December 1984, a maverick member of parliament announced in the House of Commons that I had been suspected of leaking secret documents about the controversial sinking of the Argentine cruiser *General Belgrano* in the Falklands War, and hiding them with my aunt. I had done nothing so stupidly treasonable; yet several reliable sources agreed that State security agents had allegedly searched her house. A cold case review resulted in the 2005 trial and conviction of a petty thief, who was 16 years old in 1984. I have evidence that he was framed; and I am completing a book about this.

First Gulf War and Breakout

Implicating me in Hilda's murder radicalized me. Then after Chernobyl, I took up her anti-nuclear energy torch. I learned that the nuclear energy industry had begun as a cynical by-product of the race to provide plutonium for nuclear weapons. My case for supporting nuclear deterrence crumbled with the Berlin Wall. However, it took the 1991 first Gulf War to break me out of my indoctrination.

From the moment in November 1990 when the US doubled its original figure for ground forces to eject Iraqi forces from Kuwait, I realised this was to be a punitive expedition. My military intelligence training warned me that the US-led coalition's *blitzkrieg* strategy, targeting Iraq's infrastructure as well as the leadership and military, would give Saddam Hussein the pretext he

needed to attack Israel in order to split the coalition and become the Arabs' champion. If personally threatened, he could order the launch of Scud ballistic missiles with chemical or biological warheads. If such an attack caused heavy Israeli casualties, Prime Minister Shamir would come under massive pressure to retaliate with a nuclear strike on Baghdad. Even if Saddam Hussein did not survive (he had the best anti-nuclear bunkers Western technology could provide), the Arab world would erupt in fury against Israel and its allies, its security would be destroyed forever, and Russia would be sucked into the crisis...

In January 1991, I joined the growing anti-war movement in Britain and addressed a crowd of 20,000 in Trafalgar Square. A week later, the first Scud attack hit Tel Aviv two days after the Allied *blitzkrieg* began. For the first time, the second city of a *de facto* nuclear state was attacked and its capital threatened. Worse still for nuclear deterrence, Iraq did not have nuclear weapons. The Israeli people, cowering in gas masks in basements, learned that night that their so-called 'deterrent' had failed in its primary purpose. Thirty-eight more conventionally armed Scud attacks followed, causing miraculously few casualties. When US satellites detected Israeli nuclear armed missiles being readied for launch, President Bush rushed Patriot missiles and military aid to Israel, which was congratulated on its restraint.

Meanwhile, in Britain, the Irish Republican Army just missed wiping out the entire Gulf War Cabinet with a mortar-bomb attack from a van in central London. A more direct threat to the government could barely be imagined. What if instead they had threatened to use even a crude nuclear device? A counter-threat of nuclear retaliation would have had zero credibility.

Coming out against nuclear weapons was traumatic. My conversion was no sudden Damascene experience. I knew about indoctrination, the Official Secrets Act and top security clearances, linked to the carrots and sticks of a career requiring me uncritically to accept the nuclear policies of my government. My circumstances were unique. I went through a process of cumulative experiences, including the murder of my aunt and mentor in which British state security agents were allegedly involved. Nuclear weapons and power seem to make superficially democratic governments behave badly.

Belatedly forced to research the history of 'the Bomb', I learned that the British scientific-politico-military establishment initiated and spread the nuclear arms race. Having alerted the United States to the feasibility of making a nuclear weapon, Britain participated in the Manhattan Project. On being frozen out of further collaboration by the 1946 McMahon Act, it began to develop its own nuclear arsenal. Thus Britain became a role model for France, and later Iraq and India: the first medium-sized power with delusions of grandeur to threaten nuclear terrorism. Also, I learned that nuclear deterrence does not work; it is immoral and unlawful, and there are more credible and acceptable alternative strategies to deter aggression and achieve security.

Legal Challenge to Nuclear Deterrence

Having given up thatching as the 1991 Gulf War loomed, after my breakout I became Chair of the British affiliate of the World Court Project. This worldwide network of citizen groups helped persuade the United Nations General Assembly, despite desperate countermoves by the three NATO nuclear weapon states, to ask the International Court of Justice for its Advisory Opinion on the legal status of nuclear weapons. In 1996, the Court confirmed that the threat, let alone use, of nuclear weapons would generally be illegal. For the first time, the legality of nuclear deterrence had been implicitly challenged.

One aspect of the Court's decision was especially important. It confirmed that, as part of international humanitarian law, the Nuremberg Principles apply to nuclear weapons. This has serious implications for all those involved in operating nuclear weapons – particularly military professionals who, unlike a President or Prime Minister, really would have to “press the button”. What is at stake here is a crucial difference between military professionals and hired killers or terrorists: military professionals need to be seen to act within the law. Nuclear weapons should be stigmatized as chemical and biological weapons have been, so that no military professional is prepared to operate them.

Why Nuclear Deterrence is a Scam

It was the American writer H L Mencken who quipped: “There's always an easy solution to every problem: neat, plausible, and wrong.” Nuclear deterrence is one example. To make it acceptable to political leaders and those in the military who have to operate them, the appalling effects of even the smallest modern nuclear weapon have been played down, and that “there would almost certainly be no need to use them.” In fact, they are not weapons at all. They are utterly indiscriminate devices combining the poisoning horrors of chemical and biological weapons of mass destruction, plus inter-generational genetic effects unique to radioactivity, with almost unimaginable explosive violence. Yet nuclear deterrence is not credible without the will to use them. This is why *a state practising nuclear deterrence is actually conducting a deliberate policy of nuclear terrorism.*

My next fundamental objection relates to the fact that, if deterrence based on conventional weapons fails, the damage is confined to the belligerent states and the environment recovers. What is at stake from nuclear deterrence failure is the devastation and poisoning of not just the belligerents, but potentially most forms of life on Earth.

Closely related to this is a crazy reality: nuclear deterrence is a scheme for making nuclear war less probable by making it more probable. The danger of inadvertent nuclear war is greater than we think, when nuclear deterrence dogma demands that the United States and Russia persist with over 2,000 nuclear warheads between them poised for launch at each other inside half an hour. What are they playing at, over twenty years after the Cold War ended and when they are collaborating in the so-called “war on terror”?

I now suspect that nuclear deterrence is an outrageous scam, devised sixty years ago by the US military-industrial monster dominating US politics and foreign policy. President Barack Obama's vision for a nuclear weapon-free world, in his Prague speech in April 2009, was immediately contradicted by a caveat. He said: "...as long as these weapons exist, we will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies..." This is old, muddled thinking, because a rational leader cannot make a credible nuclear threat against a nuclear adversary capable of a retaliatory strike. And a second strike is pointless, because it would be no more than posthumous revenge. This is why enthusiasm for a nuclear weapon-free world is hypocrisy if some nuclear weapons will be kept "for deterrence as long as anyone else has them."

The deception deepens when the nuclear weapon states, aware that extremists armed with weapons of mass destruction cannot be deterred, plan pre-emptive nuclear attacks in "anticipatory self-defence" of their "vital interests" – not last-ditch defence of their homeland. Thereby, their unprovable claim that nuclear deterrence averts war is cynically stood on its head. Extremists would not only not be deterred by nuclear weapons. They could *provoke* nuclear retaliation in order to turn moral outrage against the retaliator and recruit more to their nightmarish causes.

Consequences of Nuclear Deterrence Failure

With such an irresponsible example, it is no surprise that India and Pakistan are trying to emulate it, locked toe to toe in hostile rivalry. Indian governments became convinced that the fetishistic power of nuclear deterrence held the key to guaranteed security and acceptance as a great power; whereupon Pakistan promptly followed suit. Apart from the mutual carnage and destruction across South Asia, recent analyses reveal that in a conflict where about only a hundred Hiroshima-size nuclear devices were detonated over cities, enough smoke from firestorms – let alone radioactive fallout – would be generated to cripple global agriculture. Plunging temperatures in the Northern Hemisphere would cause hundreds of millions of people to starve to death, even in countries far from the conflict.

In 1985, the Pentagon accepted the theory of 'nuclear winter' was valid. However, its response was reflected in this statement to Congress by US Assistant Secretary of Defense Richard Perle: "Rather than eliminating nuclear weapons, the most realistic method of preventing nuclear winter is to build enough weapons to make sure that the Soviets will be deterred from attacking." Redundant warhead numbers have been cut, but little has changed in such thinking.

In April 2005, a disturbing internal report for US Homeland Security appeared on the web. Titled *Economic Consequences of a Rad/Nuc Attack*, the report examined what it would take to recover from the detonation of just one nuclear device in various cities. The study covered a 0.7 kiloton, 13 kiloton (Hiroshima size), and 100 kiloton bomb, and a small radiological dispersal device, or

“dirty bomb”. Much depends on the level of decontamination, but the authors concluded the costs would be catastrophic.

I will never forget a public meeting in Islamabad in 2001. The nuclear physicist Pervez Hoodbhoy had persuaded General Aslam Beg, one of the "fathers" of Pakistan's Bomb, to join a panel with himself, Kate and me. Beg warned against raising awareness about the effects of a nuclear strike on a Pakistan city, "in case it scares the people." He had a simplistic faith in nuclear deterrence, ignoring all the added dangers of a nuclear standoff with India. He is not alone: my experience is that most believers in nuclear deterrence refuse to discuss the consequences of failure.

Nuclear Deterrence Does Not Work

In London in 2008, Kate and I attended one of the last public lectures by Sir Michael Quinlan. Known as the British high priest of nuclear deterrence, he advised successive governments on how to justify nuclear deterrence. Almost twenty years after the end of the Cold War, he asserted that rejecting any threat or use of nuclear weapons amounted to “full-blown pacifism”. Ignoring conventional deterrence options, Quinlan swept aside any objections that:

- Nuclear deterrence has a credibility problem;
- It incites nuclear arms racing and the spread of nuclear weapons;
- Nuclear weapons cannot be used discriminately or proportionately; and
- Nuclear weapon use would inevitably risk escalation.

He failed to take into account the environmental and health consequences of even a limited nuclear exchange, avoiding any mention of the word “radioactivity”; and he dismissed abolition as unrealistic. In light of the World Court Advisory Opinion, Kate asked him for a legal use of nuclear weapons. Revealing his disturbing Cold War mindset, he gave the Russian naval base at Murmansk.

The 2009 report *Eliminating Nuclear Threats* by the Australia-Japan International Commission on Nuclear Non-proliferation and Disarmament challenged the assumption that nuclear weapons have deterred major war. It acknowledged that avoidance of nuclear war has been due more to luck than deterrence. It agreed that nuclear weapons are worse than useless to deter terrorists. It correctly argued that, just because nuclear weapons cannot be uninvented, this does not mean they should not be outlawed and abolished as chemical and biological weapons have been.

Surprisingly, the report, chaired by former Foreign Ministers of Australia and Japan, also questioned the need for extended nuclear deterrence, arguing that conventional deterrence was adequate. Yet, having admitted that extended nuclear deterrence undermines progress towards a nuclear weapon-free world, it failed to follow the logic of its criticisms. No doubt this was

because, unlike New Zealand, Australia and Japan continue to fall for the hoax of nuclear deterrence.

The report should have concluded that extended nuclear deterrence does not make Japan or Australia secure, and is not credible. The misnamed “nuclear umbrella” has helped the US maintain its military alliances and bases in both countries for its own purposes. However, the “umbrella” is really a *lightning rod for insecurity*, because the US risks being pushed past the nuclear threshold when its own security is not directly threatened.

Why would any state attack Australia or Japan, let alone with nuclear weapons? If it did, the US would almost certainly not respond with nuclear weapons because it would risk inevitable, uncontrollable escalation to full-scale nuclear war. Instead, if the US decided it was in its national interest to come to their defence, it would rely on its formidable conventional firepower.

Nuclear deterrence has not prevented non-nuclear states from attacking allies of nuclear weapon states. Examples include China entering the Korean War when the US had a nuclear monopoly in 1950; Argentina invading the British Falkland Islands in 1982; and Iraq invading close US ally Kuwait in 1990, and attacking nuclear-armed Israel with Scud missiles in 1991. In all these cases nuclear deterrence failed. The US in Korea and Vietnam, and the USSR in Afghanistan, preferred withdrawal to the ultimate ignominy of resorting to nuclear weapons to secure victory or revenge against a non-nuclear state.

Safer Security Strategies

The main security threats in the 21st century include climate change, poverty, resource depletion and financial crises as well as terrorism. Nuclear deterrence, provoking hostility and mistrust, prevents rather than assists the global non-military cooperation required to solve them.

For all these reasons, the overwhelming majority of states feel more secure without depending on nuclear deterrence. After Japan and Australia’s admirable leadership through co-sponsoring their recent report, they, South Korea and NATO’s non-nuclear members should therefore join the 140 states now supporting negotiating a Nuclear Weapons Convention.

In Britain, a defence budget crisis has revived the debate about replacing Trident, and uncritical British support for US foreign policy. Indeed, the black hole in defence spending has been caused by desperate attempts to keep up with the Americans. Such poor decisions were driven by British nuclear dependence on the US.

Instead, making a virtue from necessity, the British government should reassert its sovereignty and announce that it will rescue the dysfunctional nuclear non-proliferation regime by becoming

the first of the recognized nuclear weapon states to rely on safer and more cost-effective security strategies than nuclear deterrence.

A new world role awaits the British. By far the best-placed candidate for 'breakout', Britain's nuclear arsenal is the smallest of the five recognized nuclear weapon states; and they are deployed in just one system, a scaled down version of Trident. Its government has to decide by 2016 whether to replace Trident with whatever the US decides. The minority Liberal Democrats, in coalition with the Conservatives, oppose Trident replacement. The alternative – nuclear-tipped Cruise missiles launched from attack submarines – has been ruled out, because the Obama Administration is scrapping its nuclear-armed Tomahawk missiles.

All Britain has to do is decide not to replace its four *Vanguard* class Trident-armed submarines. British 'breakout' would be sensational, transforming the nuclear disarmament debate overnight. In NATO, Britain would wield unprecedented influence leading the drive for a non-nuclear strategy. British leadership would create new openings for shifting the mindset in the US and France, the other two most zealous guardians of nuclear deterrence. This would heavily influence India, Israel, Pakistan and states intent on obtaining nuclear weapons. The way would then open for a major reassessment by Russia and China, for all nuclear forces to be stood down, and for negotiations to begin on a Nuclear Weapons Convention.

The key is to see nuclear disarmament as a security-building process, moving from an outdated adversarial mindset to a co-operative one where nuclear weapons are recognized as an irrelevant security liability. Mikhail Gorbachev was the first leader of a nuclear weapon state to understand this. In 1986, three years before the Berlin Wall was torn down, he briefly broke the grip of Cold War security thinking. Tragically, the opportunity to abandon Mutual Assured Destruction at the Reagan/Gorbachev summit in Iceland was defeated by the US military-industrial complex's vested interests over ballistic missile defence, and the spurious US need to extend nuclear deterrence to its allies. Here was an example of how nuclear deterrence undercuts the political stability its proponents claim it creates.

Conclusions

To conclude, I hope I have explained why I rejected nuclear deterrence, and why it is the last major obstacle to a nuclear weapon-free world. Finding our way back from the nuclear abyss, on the edge of which nuclear deterrence has held us hypnotised and terrorised for sixty-five years, will not be easy. As with all advances in human rights and justice, the engine for shifting the mindset has to come from civil society.

I recall what Mahatma Gandhi said in 1938, as he launched the final push towards evicting the British from India: "A small body of determined spirits fired by an unquenchable faith in their

mission can alter the course of history.” The American anthropologist Margaret Mead added: “Indeed, it’s the only thing that ever has.”

A surprisingly small network of individuals drove the campaign to abolish slavery. As with nuclear deterrence, slavery’s leading apologists were the power elites of the United States, Britain and France. They argued that slavery was a “necessary evil”, for which there was “no alternative”. They failed, because courageous ordinary British, American and French citizens mobilised unstoppable public and political support for their campaign to replace slavery with more humane, lawful and effective ways to create wealth. The analogy holds for nuclear deterrence, which can and must be discarded for more humane, lawful and safer security strategies if civilisation and the Earth’s ecosystems are to survive.