

# Extinguishing the Flame: The Search for Peace in the Nuclear Age

Sean Howard, Peace Quest Cape Breton  
Adjunct Professor of Political Science, Cape Breton University  
Hiroshima Day, August 6, 2007

Sixty-two years ago today, at 8:15 on a cloudless morning, 12 men on a single aircraft dropped a bomb on the city of Hiroshima. The B-29 – named by the pilot, Paul Tibbets, after his mother, Enola Gay – banked sharply away as the ‘Little Boy’ weapon, holding an apple of explosive material, fell. Many people watched – curious rather than frightened – as, held by three white parachutes, it drifted slowly from 30,000 to 2,000 feet above ground. Then, one survivor recalled, “there came a brilliant flash, and everything turned bright blue”<sup>1</sup> – “as when,” another wrote, “a photographer lights a dish of magnesium”: “the sky split open,” then turned “pitch dark.”<sup>2</sup> Tibbets remembered: “We turned back to look... The city was hidden by that awful cloud... No one spoke for a moment; then everyone was...saying, ‘Look at that! Look at that! Look at that!’”<sup>3</sup>

“In the first billionth of a second,” writes historian Stephen Walker, “the temperature at the burst point reached 60 million degrees centigrade, 10,000 times hotter than the sun’s surface.” By the time Tibbets and his crew looked back, over 50,000 people had lost their lives, many “so completely incinerated that nothing remained but their shadows.”<sup>4</sup> Within 2 kilometers of the epicenter of the blast – the most densely populated part of the city, at the busiest time of day – nine out of every ten people were dead.

By the time the *Enola Gay* returned to base, 50,000 more people were gone, swept away by a 7,000-miles-per-hour ‘shockwave,’ or tsunami, of fire and air; and the ‘awful cloud’ had begun to drop a strange ‘black rain,’ a “flood,” as Walker says, “of gamma rays and neutrons” wreaking new, hidden, lethal havoc for “months and years” – indeed, generations – “to come.”<sup>5</sup> By the end of 1945, the death toll was, conservatively, 150,000 and climbing. In Nagasaki, three days after ‘Little Boy,’ the ‘Fat Man’ Bomb continued President Truman’s “rain of ruin from the sky”<sup>6</sup> – and left another ‘city of corpses’, 100,000, behind.

In *The Fate of the Earth*, his celebrated 1980s appeal for nuclear disarmament, the American scholar Jonathan Schell wrote: “Part of the horror of thinking about a holocaust lies in the fact that it leads us to supplant the human world with a statistical world; we seek a human truth and come up with a handful of figures. The only source that gives us a glimpse of the human truth is the testimony of the survivors of the Hiroshima and Nagasaki bombings.”<sup>7</sup>

How, though – as many of the survivors, or *hibakusha*, came to ask – can such unimaginable experiences be meaningfully conveyed? Here, for example, is the writer Hara Tamiki, recalling a ride, two days after the Bomb – in a cart serving as a makeshift ambulance – through a “silvery wilderness” of roads, rivers and “corpses, flesh swollen and raw.” “This was,” he knew, “without doubt a new hell, brought to pass by precision craftsmanship”:

Here everything human had been obliterated – for example, the expressions on the faces of the corpses had been replaced by something model-like, automaton-like. The limbs had a sort of bewitching rhythm, as if rigor mortis had frozen them even as they thrashed about in agony. ... [S]eeing the

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<sup>1</sup> Quoted in *A City of Corpses*, by Ōta Yōko, published in 1948; English translation by Richard H. Minear, in *Hiroshima: Three Witnesses*, Edited by Richard H. Minear, Princeton University Press, 1990, p. 246.

<sup>2</sup> Toyofumi Ogura, *Letters from the End of the World: A Firsthand Account of the Bombing of Hiroshima*, published in 1948; English translation by Kisaburo Murakami & Shigeru Fujii, Kodansha International, Tokyo, 1997; quotes from ‘Letter 1, *A Pageant of Clouds and Light*, p. 15.

<sup>3</sup> Quoted in Richard Rhodes, *The Making of the Atomic Bomb*, Simon & Schuster, 1986, p. 710.

<sup>4</sup> Stephen Walker, *Shockwave: the Countdown to Hiroshima*, John Murray, 2005, pp. 255.

<sup>5</sup> Walker, *Shockwave*, p. 256.

<sup>6</sup> ‘Statement by the President of the United States,’ The White House, Washington, D.C., August 6, 1945.

<sup>7</sup> Jonathan Schell, *The Fate of The Earth*, Alfred A. Knopf, 1982, p. 17.

streetcars, overturned and burned apparently in an instant, and the horses with enormous swollen bellies lying on their sides, one might have thought one was in the world of surrealistic paintings.<sup>8</sup>

Surreal, too, and supremely cruel, was the baffling ‘atomic disease’ that claimed so many, apparently spared, lives. “Forgive me,” wrote Toyofumi Ogura to his dead wife Fumiyo: “I didn’t realize how badly you were suffering. I don’t deny that it was because of my own ignorance... But I wasn’t the only one who was ignorant. Even medical specialists didn’t know the cause of the sickness...”<sup>9</sup>

Ever since the sky fell on Hiroshima, the first duty confronting humanity has been to convert the impossible situation faced by the *hibakusha* into a realistic programme for preventing any similar, or even worse, catastrophe: to prove that we are not as helpless or bewildered in the face of a *known* danger as they were in the grip of an unknown evil.

Well, 62 years after the gates of hell opened, how wide do they still stand?

Since 1947, the prestigious *Bulletin of the Atomic Scientists* has set the hands of a symbolic ‘Doomsday Clock’ at varying distances from ‘nuclear midnight,’ the effective end of time for human civilization.<sup>10</sup> The countdown started at 7 minutes to twelve, following the breakdown of negotiations – blamed by Washington on Moscow, and vice versa – to place all atomic material under international control and limit the new technology to exclusively peaceful uses. In 1949, the USSR broke the American atomic monopoly, paving the way (as the clock ticked on to 11:57) to the rapid development and mass production, by both superpowers, of thermonuclear hydrogen bombs, each hundreds or thousands of times more powerful than the suddenly ‘primitive’ weapons dropped on Japan. Through the next four decades – as the ‘nuclear club’ began to grow, over 2,000 test explosions rocked the planet, and strategists factored-in the new ‘variables’ of global overkill and nuclear winter – the clock moved fitfully, tied to the Cold War’s ebb and flow, from 2 to 12 minutes to twelve.

Understandably, then, when the Soviet ‘giant’ collapsed in 1991, the clock sprang back to its most optimistic setting – a whole 17 minutes to spare! – in strong expectation that the transformed landscape would, finally, allow swift progress, a ‘peace race’ toward the goal set by the United Nations in its very first resolution, and reaffirmed countless times since: a nuclear-weapon-free world. An international legal mechanism for moving to zero had, after all, long been in place: the 1970 Non-Proliferation Treaty, or NPT, widely referred to as the ‘grand bargain’ of the atomic age, capping membership of the nuclear club at five – the US, USSR, UK, France and China – *not* in perpetuity but for the duration of negotiations charting, via deep reductions, a path to abolition. The club, that is, could remain in existence *only while* it worked, as quickly as it could, to dissolve itself forever. With the Berlin Wall in place, this promise of a non-nuclear tomorrow could routinely be put off for another day, or year, or decade. *Now*, though, the bargain could only be honored or broken.

Just four years later, the *Bulletin*, moving the clock three minutes nearer midnight, was already seeing “hopes for a large post-Cold War peace dividend and a renouncing of nuclear weapons fade.” In 1998, India and Pakistan exploded twelve nuclear warheads, joining Israel as nuclear-weapon states outside the NPT: 9 minutes to twelve. In 2002, in the turbulent wake of September 11<sup>th</sup>, 9 became 7 over “concerns regarding a nuclear terrorist attack” and as “the United States expresses a desire to design new nuclear weapons” and “rejects a series of” existing and proposed “arms control treaties.”

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<sup>8</sup> Hara Tamiki, ‘Summer Flowers,’ published in 1949; quote from first English translation, by Richard H. Minear, in *Hiroshima: Three Witnesses*, 1990, pp. 57-58.

<sup>9</sup> Toyofumi Ogura, *Letters from the End of the World*; quote from ‘Letter 11,’ *Radiation Sickness*, p. 143. Fumiyo died on August 18.

<sup>10</sup> For further information on the Doomsday Clock see the website of the *Bulletin of the Atomic Scientists*, <http://www.thebulletin.org>.

And on January 17 this year, the clock moved again, again in the wrong direction: *five* minutes to midnight, less time to spare than through most of the Cold War, the most alarming setting for 23 years, and the only the fifth time in 60 years that five minutes or less have remained. Announcing the change, the *Bulletin* warned starkly:

We stand at the brink of a second nuclear age. Not since the first atomic bombs were dropped on Hiroshima and Nagasaki has the world faced such perilous choices.

“Nuclear weapons,” the statement continues, have always posed the gravest “challenge to humanity, enabling genocide with the press of a button.” In “the second nuclear era,” however, the world is “characterized” by “porous national borders, rapid communications that facilitate the spread of technical knowledge, and expanded commerce in potentially dangerous dual-use technologies.” It is, in short, very likely to become progressively easier for a state or terrorist group to clandestinely acquire the capacity to threaten or inflict mass destruction; a deadly convergence of supply and demand used in turn by all five NPT nuclear-weapon states as a justification not just for retaining but modernizing (at vast cost) arsenals now intended to remain in service for the next half century and beyond:- serving, in case you were wondering, either as a ‘deterrent’ – despite the inapplicability of the concept to terrorists determined to kill and eager to die – or as ‘insurance’ against uncertainty – despite the certain appeal of such a ‘policy’ to *other* states – or as an actual ‘weapon’ of war – despite the immorality, illegality and immeasurable consequences (environmental, economic and geostrategic) of any such use.

Logic, however, has never got in the way of good nuclear strategy, as can be seen most clearly in the continuing refusal of the US and Russia to take their forces off 24/7 ‘hair-trigger’ alert, “able,” as the *Bulletin* laments, “whether by accident or...unauthorized launch” to “initiate major strikes” in less than thirty minutes, with ‘major,’ incredibly, making Hiroshima seem ‘minor’:

In that relatively small nuclear explosion, [over] 100,000 people were killed and a city destroyed; 50 of today’s nuclear weapons could kill 200 million people.

And there are, today, over 26,000 nuclear weapons in the arsenals of – with the recent addition of North Korea – nine states. In addition, according to the International Atomic Energy Agency, some 30 states now stand within striking distance of the Bomb, able to cross the threshold from atomic power to atomic weapons in a matter of months. Iran, incidentally, so often described as the new nuclear menace, does *not* fall into that category, and is unlikely to do so for at least another five years. Concerns, however, about Iran’s long-term intentions are not without foundation, and – unless a phoenix of peace can somehow arise from the ashes of Middle East conflict and the Iraq conflagration – such fears are likely to generate irresistible pressures, in Saudi Arabia, Jordan, Egypt, Syria and elsewhere, to at least prepare to ‘go nuclear.’ In Asia, meanwhile, one nuclear arms race – between India and an increasingly unstable Pakistan – is already in full swing, while China’s nuclear build-up, combined with the shock of the North Korean test last October, is creating the conditions for a ‘perfect storm’ of proliferation in *that* region.

Under such massive assault, the current NPT regime – its once-grand ‘bargain’ in tatters – can hardly be expected to survive. And if, indeed, it falls, what then stands in the way of the second nuclear age ending the way the first began? The situation, in fact, is now so dire, and deteriorating so fast, it is leading some previously staunch supporters of the Bomb to the conclusion long drawn by the global peace movement: that complete disarmament is the only dependable ‘deterrent’ to disaster.

In an article entitled ‘A World Free of Nuclear Weapons,’ published in the *Wall Street Journal* on January 8 this year, four pillars of the US defence and foreign policy establishment – George Schulz, Secretary of State under President Reagan; William Perry, Secretary of Defense under President Clinton; Henry Kissinger, Secretary of State under Presidents Nixon and Ford; and Sam Nunn, former Democratic Chair of the Senate Armed Services Committee – argued that “the

world is now on the precipice of a new and dangerous nuclear era” in which America’s fundamental national security interest lies not just in preventing the spread but liquidating the existence of the Bomb. Unless “urgent new” steps towards disarmament “are taken, the US will be compelled to enter a new nuclear era that will be more precarious, psychologically disorienting, and economically even more costly” than the Cold War. “Will,” they wonder, “new nuclear nations and the world be as fortunate in the next 50 years as we were” in the last? Because the only prudent answer to this question is ‘probably not’ – because, in other words, the only realistic choice now left is between nuclear war and nuclear disarmament – the authors conclude by endorsing “the goal of a world free of nuclear weapons and working energetically on the actions required to reach that goal.”<sup>11</sup>

Sam Nunn, now the co-Chair of the non-partisan Nuclear Threat Initiative in Washington, developed this new *realpolitik* rationale for zero in a speech to the Council on Foreign Relations on June 14 this year.<sup>12</sup> “The reaction of many people,” he conceded, “to the vision and steps to eliminate the nuclear threat comes in two parts. On the one hand they say, ‘that would be great.’ And their second thought is: ‘we can never get there.’” “To me,” Nunn reflected, “the goal of a world free of nuclear weapons is like the top of a very tall mountain”:

It is tempting and easy to say: ‘We can’t get to there from here.’ It is true that today in our troubled world we can’t see the top of the mountain. But we can see that we are heading down – not up. We can see that we must turn around, that we must take paths leading to higher ground and that we must get others to move with us.

In fact, as Nunn and many other experts stress, the practical route ‘from here to there’ is easy enough to follow: take all weapons off alert and rapidly draw down from thousands to hundreds of warheads; commit never to use nuclear weapons first, or ever against non-nuclear states; secure ‘loose nuke’ materials, and ban the production of uranium and plutonium for military purposes; permanently ban all nuclear tests; establish as many nuclear-weapon-free zones as possible and denuclearize NATO, the only atomic alliance on Earth; four decades late, open NPT negotiations, further reducing warhead numbers from hundreds to dozens; and all the while, prepare the strict verification and confidence-building arrangements necessary for the final move from low to no levels of weapons.

It would, ironically, not only be infinitely wiser (and cheaper) but far more manageable (and popular) to take these steps to survival rather than continue on our present road to ruin. The first and most important step of all, however, is truly appreciating the extent of the danger we’re in. On the morning of August 6, 1945, thousands of Hiroshima residents were engaged, as had become the wartime routine, in clearing firebreaks, tearing down houses and widening streets to limit the damage from the air raid the city had so long dreaded. Some of the firebreak-clearers were soldiers; most, though, were civilians, including many schoolchildren, doing what they were told was their duty in the face of what they believed was the ‘worst’ that could happen. If they had known the truth, would they have continued, by their actions and in their minds, to support the measures being taken in their ‘defence’? How would they have used the few minutes left, to try and save themselves?

Though the world is in far graver peril now, we are – *or should be* – in a far better position to respond. *Because* of their fate, we know what ours, and the Earth’s, will be; we *know* the *Enola Gay* is on its way back in, right now, today... And yet, unless we demand new actions and outlooks from our leaders, and from ourselves – unless we demand that the plane be turned around, disarmed and scrapped, *never* to fly again – what are we doing with our precious time except wasting it?

Clearing firebreaks, instead of extinguishing the flame.

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<sup>11</sup> For the full text of the article, see Yale University, <http://yaleglobal.yale.edu/article.print?id=8592>.

<sup>12</sup> Former Senator Sam Nunn, ‘The Mountaintop: A World Free of Nuclear Weapons,’ Council of Foreign Relations, June 14, 2007; full text available on the website of the Nuclear Threat Initiative, <http://www.nti.org>.