

AFTER ATOM

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a bluish white glare, which is quickly transformed into a huge fireball and a thick column of smoke beginning its climb into the sky. Heat rays from the initial flash blister roof tiles for a distance of several hundred yards, char telephone poles more than a mile away and burn exposed human flesh as far away as 2 1/2 miles. The heat rays are followed in an instant by a seemingly soundless blast wave that smashes everything standing for a considerable distance and fills the air with bits of debris. A period of relative calm follows as the day darkens under clouds of dust raised by the blast. And then a conflagration, a virtual whirlwind of fire, bursts into motion and rages out of control for the rest of the morning and afternoon. In the meantime minute particles of carbon and as well as fission fragments and other debris are sucked up into the colder air overhead, where they condense and return in the form of an oily black rain, slick and full of radioactive fallout....In a matter of hours, 9 square miles of Hiroshima and 5 square miles of Nagasaki — the latter somewhat protected between folds of hills — are reduced to dust and ashes.

As many as 140,000 people in Hiroshima (bombed August 6, 1945) and 70,000 in Nagasaki (bombed three days later, August 9) died on the day of the attack or in the weeks immediately following, and the death toll rose by another 130,000 in the next 5 years. Hundreds of thousands more were severely injured, many to never recover; 50 years later people continue to die from wounds or illnesses that can be traced to the effects of the two bombs.

The world's most accomplished experts on the consequences of nuclear weapons are the survivors of Hiroshima and Nagasaki. A dozen years later Max Born wrote in the Bulletin of Atomic Scientists (June, 1957), "Since the destruction of Nagasaki and Hiroshima, the atom has become a specter threatening us with annihilation."

"There is irony in the fact that it has taken the world so long to learn what it now knows about the Hiroshima and Nagasaki bombings, for it is hard to imagine many events in modern times that have attracted more attention or been the focus of more apprehension," Erickson wrote of what he called "one of the greatest horrors humanity has yet imposed upon itself." (The initial Japanese response was that use of the atomic bombs was "sufficient to brand the [U.S.] for ages to come as the destroyer of mankind and public enemy number one of social justice.")

Most people would rather not be reminded that they live in the age of plutonium, and that wherever they live they are an hour away from a missile that has their address despite current dismantling of arsenals: enough remain to obliterate the planet multiple times. To do something means to acknowledge what they prefer to not know as if ignorance is a form of protection, and the defense of personal helplessness is formidable. Yet if we go about with heads down and hands in pockets and plead that nothing can be done, then we have written our doom. Our troubles did not originate with the gods we invent nor from the cosmos we hardly understand: the nuclear devil is our own. It is not a bad joke played on us by a malevolent deity nor is it a divine instrument of hurrah for the faithful. For all its awesome power and despite the suspicion that it is wildly out of control, nuclear technology is a product of human beings and a problem of human scope that can only be resolved by human beings.

Everybody 50 and younger have lived their entire lives under the shadow of nuclear war. The abnormal is normal. We are shockproof; standing on the brink of nuclear atomization is our national/natural posture. Persons from earlier centuries, even the highly industrial 19th, would probably think this latter half of the 20th to be a terrifying place and go mad with fright. (If I were looking toward this century from an earlier one, perhaps the late 17th, I might wonder if for all the ferocity, wars and disease of that era that I was living in a safer time than in the late 20th. I might see the chain of violence grow monstrously mechanized, organized on a scale at the time inconceivable, using vast amounts of humanity and raw resources, conducting ever larger wars until they involved the entire earth and consequently obliterated the species. If I could see so far ahead, as Nostrodamus seemed able to do, I probably would consider myself safe in a century near the center of human civilization, advanced enough to enjoy and yet free from the dread of increasingly dangerous technologies we helplessly develop in our intellectual surge toward mastery and annihilation.)

The obsessive secrecy of the nuclear powers has not prevented the international proliferation of nuclear technology. Instead, the effect has been to remove the public from the issue and make it a process of the very few who, in the short term at least, profit immeasurably from nuclear armaments. Patriotism and claims of national defense and security have obscured the fact that immense fortunes have been made from a war economy fueled and made self-perpetuating with public money. There has been since their inception a disease about nuclear weapons — not radiation, but the belief that a nuclear war can be fought and won despite substantial evidence that mutual annihilation will be its only result. Now, with the Cold War over, the Soviet Union banished to history's dungheap, the nuclear arms race over and the great arsenals deconstructing, fear of using a few nukes seems not so absorbing. After half a century on the brink of possible oblivion, a city atomized here or there instead of the whole planet seems a much smaller threat.



SHAY WILLIAMS & JIM WEATHERS

The two nuclear bombs that ended World War 2, might have put an end to war for good. Instead a nuclear arms race between two conflicting and aggressive ideologies, the United States and the Soviet Union, allies and victors in the war against Nazism, divided the world. Each developed huge stockpiles of nuclear weapons that were capable of obliterating the planet several times over. The result was a balance of terror defended by arguments that only nuclear parity could prevent a third world war. The U.S. and the USSR spent hundreds of billions of dollars developing their nuclear arsenals, each government posing the threat of the other to continually escalate the race.

The two superpowers raced through generations of nuclear weapons, blackmailing each other into increasing their arsenals and making treaties that allowed for more and deadlier weapons. (One critic exasperatedly wrote after the superpowers' incessant dickering over nuclear arms control for almost 40 years that "not a single weapon has been removed by mutual agreement.") Every small war anywhere in the world was a threat of nuclear confrontation between the nuclear giants yet simultaneously these wars skirted oblivion by acting as pressure vents against the big bang.

Pat Frank wrote in his apocalyptic novel, *Alas Babylon*, that once the U.S. and USSR "possessed maximum capability" in thermonuclear weapons and efficient means of delivering them, "every maxim of war was archaic. War was no longer an instrument of national policy, only an instrument for international suicide. There was no sane alternative to peace."

The debate about entering World War 2 cut through all levels of American life, an extensive soul-searching discussion, argument and recrimination such as the nation has seldom experienced (which was ended by Pearl Harbor). Yet no such debate occurred around the use of atomic energy. Instead it was from the very beginning surrounded in secrecy. "Only a handful, of course, knew what they were creating," Dwight MacDonald said after Hiroshima and Nagasaki. "It hardly needs to be stressed that there is something askew with a society in which vast numbers of citizens can be organized to create a horror like *The Bomb* without ever knowing they are doing it."

The so-called national security state started with Hiroshima, Robert Jay Lifton and Greg Mitchell (authors of *Hiroshima in America: 50 Years of Denial*) write in *The Nation* — a small group of relatively isolated leaders making drastic decisions and then concealing from the public the nature and consequences of their decisions. "The American coverup has been apocalyptic in at least two ways," they write: "in the grotesque human dimension of what has been suppressed and in the relationship of that coverup to our continuous embrace of still more destructive nuclear devices." Hiroshima, Lifton and Mitchell say, was "the mother of all coverups, creating distortions, manipulative procedures and patterns of concealment that have affected all of American life. Secrecy has been linked with national security — and vice versa — ever since."

Nuclear alienation was the result: starting with Hiroshima, officials advised Americans to leave all problems about the bomb to political, scientific and military "experts" — the nuclear priesthood. Americans were requested to opt out

of the most critical issues of the age. Surrendering their right to know more about nuclear policies contributed to the gradual alienation from the political process. Despite mass collusion in official secrecy, and resentment at what has been concealed and falsified, Lifton and Mitchell ask, "To what extent do we feel ourselves a people who have been unforgivably deceived in the most fundamental of human areas—having to do with how, when and by whose hand, or lethal technology, are we to die?"

Within 40 years the U.S. and USSR built up arsenals which together contained more than 60,000 nuclear warheads. Soviet warheads alone numbered some 45,000 at their peak in 1986. "The USSR has enough multi-megaton nuclear warheads to bomb the USA every hour, every day for a year (or 175 bombs in each state) and use less than half of its supply," Shay Williams and Jim Weathers of Cannon Beach wrote in a statement that accompanied their 1983 design *Save The Human Being*. "The USA could bomb the USSR with half our supply for almost two years." ("Why have we allowed our governments to build over 50,000 warheads?" they ask)

Once the United States began to rely on nuclear weapons to counter the perceived Soviet threat, the issues that kept the arms race going with the USSR were, as Carl Kaysen wrote, the "profound ideological antipathy and demonization of the other side, the lag between the decision to build new weapons and their deployment, worst-case analyses, Soviet secrecy and successful Soviet bluffs about the size and capability of their forces, and American belief in the possibility of sustaining technological superiority."

"Spurred on by the mass media, the pressure exerted by the military, scientific and industrial complex played an enormous part in fashioning the nuclear ethos of the U.S., with the USSR inevitably following suit," Lord Zuckerman, who once headed the British nuclear establishment, wrote just before his death in 1993. The rational views of scientists, dissenting politicians and millions of common people who organized against U.S. nuclear policies "were powerless to prevent the waste of billions of dollars on unusable or unneeded systems," Zuckerman wrote.

An agreement reached by Soviet Premier Gorbachev and U.S. President Reagan in 1987 to regulate intermediate-range nuclear missiles not only marked the end of the era of East/West confrontation (the Cold War), Zuckerman wrote for *The New York Review of Books*; "it was also, even if unpredictably, the catalyst for the political, nationalist and economic upheavals of the old USSR and what used to be called *Mittel Europa*" (which has culminated in savage genocide in Bosnia).

Although bilateral agreements between the U.S. and four Russian republics that replaced the old USSR have not been fully ratified, high level technical discussions are taking place between the U.S. and Russia over security procedures and arrangements are being made for the safe storage of the enriched uranium and plutonium that will be coming out of the tens of thousands of warheads that are to be dismantled. Yet enough stockpiled weapons remain intact sufficient to blow up the planet. (At the present rate of reducing U.S. stocks by 5 warheads a day, it will be 10 to 15 years before the arsenal is empty; yet it is better that building 5 a day as before.)

"The nuclear shadow that now hangs over the international scene" is no longer a U.S./USSR nuclear confrontation "that could utterly devastate the contestants and pollute with radiation the whole of the northern hemisphere," Lord Zuckerman wrote. "What is urgent now is the issue of proliferation — the danger of nuclear weapons being made by a country unsophisticated enough to use them against a neighbor, and the possibility of nuclear weapons being acquired by a terrorist organization.... That there are now no secrets about how to make a nuclear weapon has in fact created a future more uncertain and possibly more menacing than it was in the days of the Cold War, when we had become accustomed to the knowledge that nuclear weapons exist without much thought of what the consequences would have been had they been used."

The development and use of atomic bombs on Japan will be disputed long after World War 2 diminishes to history as ancient as Caesar's campaigns in Gaul. The advent of the nuclear age might always be a topic of debate, although a thousand years from now the beginning of atomic power will be as misty as the discovery of fire or the first use of a hammer, two such useful essentials no one can conceive that humanity ever functioned without them, which future generations might think about splitting the atom.

Leo Szilard, described as "the man who has thought longer and harder than anyone else about the consequences of chain reaction" and without whom the U.S. might not have so readily developed an atomic bomb in time for its use against Japan, argued even before the first test of an atomic bomb in July 1945 ("Trinity") that the nation was "moving along a road leading to destruction of the strong position (it) hitherto occupied in the world." He was not referring to a moral advantage but that American military strength was due to the fact that the U.S. could outproduce every other country in the world in heavy armaments. By preparing to test and use atomic bombs, Szilard said the U.S. would lose that advantage "in just a few years" when other countries acquired nuclear weapons. He was prophetic: "Perhaps the greatest immediate danger which faces us is the probability that our 'demonstration' of atomic bombs will precipitate a race in the production of these devices between the United States and Russia."

PAPER CRANES

Radiated into the consciousness of thousands August 6 will be remembered. The atomic agony of Hiroshima staged in silent stillness of burned flesh and radiation puking and hairless nakedness. The incredible heat that burned friends into concrete walls, also photographed shirts onto backs, chests and stomachs. In quiet hunger and thirst the desperate survivors could not count their dead. And, yes, there were no apologies.

The United States sent scientists, engineers, to assess and measure the damage. American grandchildren have not forgotten that our government ended the war and saved thousands of lives. In our inherited guilt, we, too, have seen the arbitrary callousness. And our Japanese brothers cannot forget their opportunity for firsthand observation, the chance to study the atomic particle as it eats, still insidiously, into the bones and skin and hearts of the survivors as they fold paper cranes.

~KAY HILGENBERG



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