FALLOUT

A Historian Reflects on America's Half-Century Encounter with Nuclear Weapons

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The Day America First Heard the News

August 6, 1985, the fortieth anniversary of the atomic bombing of Hiroshima, came at a moment of transition in Americans' perception of nuclear issues. The nuclear-freeze campaign, rhetorically checked by President Reagan's "Star Wars" address of March 1983, was clearly on the wane. But the dramatic changes in the Soviet Union launched by Premier Mikhail Gorbachev, who came to power in March 1985, had barely begun. U.S.-Soviet talks on bilateral nuclear-missile reductions in Europe, sidetracked during Reagan's first term, had at last resumed, but Reagan's November 1985 meeting with Gorbachev in Geneva still lay several months in the future.

Amid much uncertainty, nuclear jitters persisted. The fears roused by the rhetoric and the actions of Reagan's first term, and the resulting surge of antinuclear activism, remained potent cultural forces. In this context, the Hiroshima anniversary attracted much media attention, including a *Time* magazine cover featuring a mushroom cloud. In this setting, I wrote the following, which appeared as an op-ed piece in the *New York Times* on August 4, 1985.

WHERE WERE YOU when you first heard about the atomic bomb? My guess is that most Americans over the age of fifty can answer that question instantly.

August 6, 1945, was one of those days that stick in the brain. The most trivial details of such days can often be recalled decades later, simply

because they are associated with the moment one first hears a piece of shocking or frightening news.

I must confess that the radio newscasts of that distant August afternoon have blurred a bit in my mind. But the newspaper memory remains starkly vivid. I can visualize just where the afternoon edition of the *Dayton Daily News* was lying in our kitchen when my eye caught the riveting headline. I can recall reading it aloud to my parents, mispronouncing the strange new word "A-tome" because I had never heard anyone say it before.

Other people, older than I, were also deeply shocked by Truman's announcement. It was a moment that, even then, struck many as a radical turning point in human history, and a surprising number felt impelled to put pen to paper and record their feelings and reactions.

In New York City, Norman Cousins, editor of the *Saturday Review of Literature,* spent the night of August 6 composing an impassioned essay, "Modern Man Is Obsolete." The atomic bomb had made nationalism outmoded and dangerous, he argued, and only a world government could save mankind. In Charlotte, North Carolina, a country-music singer, Fred Kirby, also spent a sleepless night after hearing the news. The next day, he wrote "Atomic Power," a song evoking grim images of divine judgment and apocalyptic destruction. It caught on immediately and, for several weeks early in 1946, was on *Billboard*'s list of top country favorites.

At his summer cottage in Kennebunk, Maine, the Rev. John Haynes Holmes of New York City's Community Church was enjoying the ocean view when he heard the report. "Everything else seemed suddenly to become insignificant," he wrote a few days later. "I seemed to grow cold, as though I had been transported to the waste spaces of the moon. The summer beauty seemed to vanish, and the waves of the sea to be pounding upon the shores of an empty world. . . . For I knew that the final crisis in human history had come. What that atomic bomb had done to Japan, it could do to us."

In Pelham Manor, New York, Patricia E. Munk had just returned from the hospital, having given birth to her second son, when the word arrived. "Since then," she wrote in a letter six days later, "I have hardly been able to smile, the future seems so utterly grim for our two little

boys. Most of the time I have been in tears or near tears, and fleeting but torturing regrets that I have brought children into the world to face such a dreadful thing as this have shivered through me. It seems that it will be for them all their lives like living on a keg of dynamite which may go of at any moment."

The atomic bomb announcement elicited very little celebration. A few newspapers published gloating editorials and cartoons; a radio comedian joked about Japan's "atomic ache." Another said the bomb "made Hiroshima look like Ebbetts Field after a game between the Giants and the Dodgers." For most Americans, however, the news brought not joy but profound apprehension.

The *St. Louis Post-Dispatch* warned on August 7 that science may have "signed the mammalian world's death warrant, and deeded an earth in ruins to the ants." The next day, the *Milwaukee Journal* published a map of Milwaukee overlaid with concentric circles showing the pattern of destruction in Hiroshima.

The more highly placed the observer, it seemed, the deeper the uneasiness. Washington, a reporter wrote, was "pervaded by a sense of oppression." "For all we know," intoned the radio announcer H. V. Kaltenborn in his broadcast on the evening of August 6, "we have created a Frankenstein! We must assume that with the passage of only a little time, an improved form of the new weapon we used today can be turned against us."

This primal fear of extinction cut across all political and ideological lines, from the staunchly conservative *Chicago Tribune,* which wrote of an atomic war that would leave the earth "a barren waste, in which the survivors of the race will hide in caves or live among ruins," to the liberal *New Republic,* which on August 20 offered an almost identical vision of a conflict that would "obliterate all the great cities of the belligerents, bring industry and technology to a grinding halt," and leave only "scattered remnants of humanity living on the periphery of civilization."

From our contemporary perspective such cataclysmic imagery may seem so familiar as to be almost trite—if visions of universal destruction can ever become trite. But it is sobering to realize how quickly these dark visions surfaced. Within hours of Truman's announcement, and years before the world's nuclear arsenals made such a holocaust likely or even

possible, the prospect of global annihilation already filled the nation's consciousness. In the earliest moments of the nuclear era, the fear that would come to haunt millions of people not yet born in 1945 had already found urgent expression.

In most cases, our memories of even the highest moments of public drama are eventually filed away. They become a reassuring part of our general stock of recollections, to be brought out and nostalgically relived from time to time. But August 6, 1945, is different. After forty years, it still has not receded into that safe and static realm we call "the past."

Kaltenborn's Frankenstein still roams; the *Post-Dispatch*'s kingdom of the ants still waits in the wings. The stab of fear we felt when we read that first newspaper headline or heard that first radio bulletin may not occupy the center of our awareness, but it remains with us still.

As the 1940s ended, the raw shock of atomic menace that had burst on the scene in 1945 was wearing off. By the early 1950s, America's preoccupation with the bomb was less blatant, more subterranean. At the same time, however, nuclear weapons production and planning were burgeoning as the Cold War conflict between the United States and the Soviet Union moved into high gear. The Soviet A-bomb test in 1949; the superpowers' race to develop the H-bomb and an arsenal of nuclear weaponry; and the move toward new, highly sophisticated delivery systems—nuclear submarines, high-tech bombers, and intercontinental ballistic missiles—added new levels of complexity and menace to the arms race. Government civil-defense programs proliferated, drawing in educators, urban planners, media specialists, psychologists, physicians, medical researchers, and other professionals. Washington continued to hype the atom's peacetime uses, partly as a means of funding more weapons research and partly as a way of cultivating more positive public attitudes toward atomic energy. Much of the popular culture reflected the Cold War outlook. Such magazines as *Time, Life,* and *U.S. News & World Report* usually echoed official Washington's position on nuclear issues, as did radio commentators and patriotic movies like the stirring *Strategic Air Command* (1955), starring Jimmy Stewart.

But undercurrents of uneasiness persisted, especially as the hazards of radioactive fallout from nuclear testing gripped the public's awareness, and activist organizations campaigned for a test ban—

an idea supported by Democratic presidential candidate Adlai Stevenson in 1956. In the cultural realm, novels, poems, science-fiction stories, the parodies of songwriter Tom Lehrer, and the satirical *Mad Magazine* all in their various ways warned of possible cataclysm ahead.

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THE AMERICAN MEDICAL PROFESSION AN THE THREAT OF NUCLEAR WAR

Like chapters 1 and 2, this essay was written in 1985, as the fortieth anniversary of the atomic bombing of Japan focused the nation's renewed attention on the nuclear threat. In the spring of that year, the editor of the *Journal of the American Medical Association (JAMA)* asked me to prepare an article dealing historically with U.S. physicians' engagement with nuclear issues. In researching *By the Bomb's Early Light,* I had already observed the way many professional groups, from sociologists to city planners to high school social-studies teachers, had concluded that their particular expertise had become absolutely vital in the new atomic era. (In February 1947, the University of Maine's College of Agriculture published a pamphlet arguing eloquently that the college's agricultural extension workers could play a key role in the quest for peace in the atomic age.) The *JAMA* invitation led me to several weeks of intensive research on a specific professional group whose members became especially involved with the nuclear issue—as radiation specialists, civil-defense advisers, and ultimately as antinuclear activists. Chapter 5 is adapted from the article that resulted. It appeared in the August 1, 1985, issue of *JAMA.* Reprint requests flowed in from many countries, suggesting broad interest in the issues that arise when professional expertise, political involvement, and activist engagement intersect.

IN THE RESURGENCE of nuclear-weapons activism that swept the United States in the early 1980s, physicians figured prominently. The pediatrician Helen Caldicott gained national visibility as president of the thirty-thousand-member organization Physicians for Social Responsibility. Dean Howard Hiatt of the Harvard School of Public Health, psychiatrist John Mack of Harvard Medical School, H. Jack Geiger of the City College of New York School of Biomedical Education, and Yale University psychiatrist Robert Lifton were prominent in the antinuclear cause. In *The Final Epidemic: Physicians and Scientists on Nuclear War* (1981) and *Last Aid: The Medical Dimensions of Nuclear War* (1982), medical leaders spoke out on this issue. The *Journal of the American Medical Association* published articles on aspects of the subject, including the role of the medical profession in preventing nuclear holocaust. This, however, was only the latest chapter in a long and decidedly checkered history.

RADIATION STUDIES AND ISOTOPES: THE INITIAL MEDICAL RESPONSE TO THE BOMB

American medicine's involvement with nuclear weapons began with the establishment of the Manhattan Project in 1942. The project's medical-research division, based at the University of Rochester and directed by Stafford L. Warren, M.D., a professor of radiology, studied means of protecting workers from radiation, tried to establish radiation tolerance levels, and conducted blood studies of more than 100,000 irradiated laboratory animals and genetic studies involving 277,000 mice and 50 million fruit flies.

But this wartime research was secret, and for most physicians, as for other Americans, President Truman's atomic bomb announcement of August 6, 1945, came as a stunning surprise. The *Journal of the American Medical Association* first mentioned the bomb in a brief note on September 22, dismissing "Jap propaganda claims" that people were still dying in Hiroshima and Nagasaki from "delayed radioactivity." Quickly, however, awareness dawned that this new weapon had profound medical implications, not only because it produced blast and burn casualties on an unprecedented scale, but also because of its unique additional property—radioactivity. The biological and physiological hazards of radioactive substances had long been recognized, thanks to the turn-of-the-century studies of the Leipzig clinician Hermann Heineke, but until August 1945, this arcane byway of medical research had received relatively little attention.

All this soon changed. Within days of Japan's surrender, two American medical teams, one representing the military and the other the Manhattan Project, were in Hiroshima and Nagasaki studying the bomb's effects. For the military team, radiological studies were conducted by Dr. Shields Warren, professor of pathology at Harvard Medical School; the Manhattan Project team was led by Stafford Warren of Rochester. In March 1946, Shields Warren reported to the American Association for Cancer Research (of which he was president) on the delayed effects of radiation exposure on some fourteen thousand people in Hiroshima and Nagasaki, including hemorrhage, leukocyte destruction, bone marrow damage, anemia, sterility, and the suppression of menstruation. As for long-range somatic and genetic effects, he cautioned, "It will be necessary to follow the populations of Hiroshima and Nagasaki for many years." In June 1946, *JAMA* published a study of twenty-one Japanese radiation victims admitted to the Osaka University hospital. At the American Medical Association (AMA) convention that July, Dr. George V. LeRoy of Northwestern University Medical School read a detailed report, "The Medical Sequelae of the Atomic Bomb Explosion," which included extensive data on radiation disease. This report, copiously illustrated with clinical photographs, was later published in *JAMA*. The *American Journal of Surgery* published a report on "Trauma Resulting from Atomic Explosions" by the leader of the navy medical team that studied survivors in Nagasaki. (The author described prisoners of war in the city whose "names had been burned onto their chests or backs because the names had been stenciled in black on their white undershirts.")

In November 1946, the National Research Council of the National Academy of Sciences sent five radiologists to Japan to survey possibilities for a long-term research project. In 1947, authorized by a formal directive from President Truman, the council set up the Atomic Bomb Casualty Commission (ABCC) to be funded by and operated under contract with the AEC. Work began in Japan in 1948, with blood surveys and collection of pregnancy data. In the years that followed, the ABCC and

its successor, the Radiation Effects Research Foundation, proved an invaluable source of knowledge about the long-term effects of atomic bomb exposure.

In contrast to the medical profession's considerable interest in the clinical aspects of radiation disease in the immediate post-1945 period, one finds little initial attention to the larger medical implications of an atomic bomb attack or to the profession's capacity to cope with such an event. Shields Warren's 1946 report to his fellow cancer researchers noted the "total disorganization" of the Japanese medical service after the bombings, and George LeRoy's address to the 1946 AMA convention mentioned that the bombing of Hiroshima and Nagasaki had presented "the surviving members of the medical profession . . . with an extremely large relief and rescue problem." "From medical and surgical points of view," wrote one early postwar American medical visitor to Hiroshima and Nagasaki in the *American Journal of Surgery* in 1948, "the confusion immediately after the bombing is difficult to imagine." But these passing observations were not elaborated or pursued. LeRoy ended on a cautiously hopeful note, stating, "In the hospitals of the western world where plasma, electrolyte solutions, whole blood and penicillin are available in adequate amounts, a much lower mortality rate could be achieved than was observed in Japan."

The profession's capacity for political activism and engagement with broader social issues in these years seems to have been totally exhausted by its single-minded preoccupation with the evils of "socialized medicine." After the Truman administration proposed a national health insurance plan in 1948, medical attention focused obsessively on this issue. In resisting "the creeping paralysis that is socialism," said *New York Medicine* in 1950, "the medical profession has found it necessary to undertake civic and political action, which a few years ago was remote from the thoughts of most physicians." Even in dealing with the clinical aspects of radiation disease, the AMA's position was sometimes colored by its ideology. In 1947, for example, reporting that British atomic-energy workers were complaining of lassitude, skin eruptions, impotence, and other symptoms, *JAMA* observed: "It has to be remembered that, with a Labour government in control of the country, workers have every opportunity to exploit real or alleged grievances."

It was not the medical profession but a journalist who first brought home to the American public the way an atomic bomb could devastate a city's medical facilities. Two of the six atomic bomb survivors whose stories are told in John Hersey's 1946 best-seller *Hiroshima* are physicians. The first, Masakazu Fujii, regains consciousness after the bombing to find his small private clinic "all around him in a mad assortment of splintered lumber." The other, Terufumi Sasaki, was a surgeon at Hiroshima's large, modern Red Cross hospital. After the blast, glasses lost and vision blurred, he wanders among the maimed and dying who have inundated the partially demolished hospital, "moving aimlessly and dully up and down the stinking corridors with wads of bandage and bottles of mercurochrome, . . . binding up the worst cuts as he came to them. . . . Ceilings and partitions had fallen; plaster, dust, blood and vomit were everywhere. Patients were dying by the hundreds, but there was nobody to carry away the corpses." END

There are a few exceptions in these early post-Hiroshima years to the medical profession's general lack of attention to all but the narrowest clinical aspects of the atomic bomb's medical implications. In 1946, *JAMA* published a letter from Dr. Edwin J. Grace, a specialist on radium poisoning, urging the medical profession to launch an educational program "to awaken the public to full realization that they cannot view indifferently this colossal missile of destruction." And after the 1946 Bikini tests, Stafford Warren, the project's radiological safety chief, wrote an article for *Life Magazine* (August 11, 1947), later condensed in *Reader's Digest,* offering in laymen's language a somber and frightening assessment of the test's implications. The radioactive spray of Test Baker (the underwater explosion), he wrote, posed "an entirely new danger of atomic war." It had so penetrated the target ships that scientists and military personnel could visit them only on hurried forays, to avoid radiation sickness. Radioactive algae had been eaten by larger fish, which had died, their decaying bodies then passing the radioactivity back to the algae. Algae-encrusted hulls on the task-force ships had become so radioactive that crew members' bunks had to be shifted. If, under favorable meteorological conditions, a Bikini-type bomb were dropped in the harbor of a great city, he said, the radiological casualties would be ghastly. Warren concluded with a categorical political assertion of a kind exceedingly rare

the event an atomic bomb is detonated over a large industrial area in his vicinity." A number of medical writers recalled how the several hundred burn victims of the 1942 Coconut Grove nightclub fire had swamped the medical resources of Boston. In a 1949 report on AEC-funded research on the effects of flash burns on pigs, two medical researchers at Rochester digressed to reflect on the "staggering" resources necessary to treat the burn victims in an actual atomic attack on a medium-sized city: 170,000 medical professionals; 8,000 tons of oxygen, plasma, drugs, gauze; and so forth.

But such cautionary notes were rare. In the later 1940s, the organized medical profession wholeheartedly lent its prestige and organizational strength to the government's civil-defense program, including the systematic effort to downplay the radiation hazards of atomic war and persuade the public that with sufficient preparation, American society could absorb a large-scale atomic attack with a minimum of disruption. The demands on the medical profession would be enormous, so the litany went, but it would rise to the challenge. As Everett Evans, a professor of surgery at the Medical College of Virginia and consultant to the ABCC, put it in a *JAMA* article, the very fact that the medical situation in an atomic war could easily degenerate into "complete chaos and panic" made it all the more urgent that physicians gird themselves for the eventuality. "Only free men with strong hearts and wills can accomplish the gigantic task of providing by training and discipline the necessary workers." Civil-defense planning must begin at once, said Evans, "lest contemplation of the magnitude of the task only encourage despair." Atomic war would be the ultimate challenge for the American physician, and he must steel himself for it, whatever the odds. Any other response would be unworthy and unpatriotic. Such was the message of America's medical leadership as the 1950s began.

BEGIN

THE ROOTS OF ANTI–NUCLEAR WEAPONS ACTIVISM IN AMERICAN MEDICINE

Beginning in the mid-1950s and increasing through the early 1960s, a few influential medical voices broke the pattern of uncritical support for official government positions on nuclear issues. This development

reflected a larger cultural shift in these years—a shift triggered primarily by fear of fallout from the atmospheric testing of thermonuclear weapons. Although the first thermonuclear test was conducted by the United States in 1952, it was the U.S. Bravo test series at Bikini atoll in March 1954, which spread deadly radioactive ash over nearly eight thousand square miles of the Pacific and brought illness and death to the crew of a Japanese fishing vessel, that first alerted the world to the fallout danger.

As American, Russian, and British thermonuclear tests continued, fear of global atmospheric fallout and its possible link to cancer and long-term genetic damage increased, focusing especially on strontium 90, a deadly radioactive isotope with a half-life of twenty-eight years and calcium-like properties. Pumped into the atmosphere by thermonuclear explosions, strontium 90 returned to earth in rain, entered the food chain, and concentrated especially in the bone marrow of infants and children. Geneticists took the lead in sounding the alarm. The Nobel laureate Hermann J. Muller of Indiana University somberly warned of threats to the human gene pool, man's "most valuable irretrievable possession." In a 1956 National Academy of Sciences report, a committee of prominent geneticists concluded that in terms of long-term genetic damage, "the concept of a *safe* rate of radiation simply does not make sense." The University of Wisconsin geneticist James F. Crow declared unequivocally in 1957: "There is no such thing as a safe dose of radiation to the population." Radiologists (including some physicians with AEC ties, such as Shields Warren and Austin Brues) tended to disagree, suggesting that a safe threshold did exist. Warren called the genetic risk from radioactive fallout "so slight in relation to other risks as to be disregarded" and dismissed the entire controversy as "more important as a symbol than it is as an actual health hazard." A 1958 study of irradiated mice at the AEC's Argonne Laboratory in Illinois seemed to confirm the "safe threshold" conclusion, although geneticists sharply challenged its relevance to human beings.

While scientists debated, public alarm mounted. Under growing pressure, the Public Health Service began monitoring the nation's milk supply in 1958. A full-blown fallout scare gripped the nation early in 1959, when tests showed a sharp rise of strontium 90 in St. Louis and other cities. A study of strontium 90 in the bones of children under the age of four, conducted at Columbia University and published in *Science* in May 1959, showed that the level doubled in 1957. The *Saturday Evening Post* in 1959 ran a feature entitled "Fallout: The Silent Killer."

Across the cultural spectrum—from sermons, symposia, poems, and novels to movies, television series, and mass magazines—the fallout scare led to the articulation of more general nuclear fears submerged since the 1945–47 period. Politically, it spawned a campaign to stop nuclear testing. The idea of a test ban, advanced by the Democratic presidential candidate Adlai Stevenson in the 1956 presidential campaign, was broached again by Minnesota senator Hubert Humphrey in the 1960 Democratic primaries. Nearly two thousand scientists signed Linus Pauling's 1957 petition calling for an international test ban agreement. Of the many test ban organizations, the best known, founded in 1957, was SANE, the National Committee for a Sane Nuclear Policy.

Within this sharply altered cultural and political climate, some influential American physicians became politically active on the nuclear issue. Psychiatrist Jerome Frank of Johns Hopkins University, for example, in a November 1958 *Atlantic Monthly* article, drew parallels between society's responses to the nuclear threat and the behavior of mental patients: denial, compulsive repetition, paranoid suspicion, and so on. Frank became a SANE director in 1963 and in 1967 published *Sanity and Survival: Psychological Aspects of War and Peace.*

In St. Louis, meanwhile, Dr. Walter Bauer, a pathologist at the Washington University School of Medicine, joined with physiologist Barry Commoner and others in 1958 to found the Committee for Nuclear Information (CNI) to publicize the fallout danger. The committee's best-known publication, a fictionalized but scientifically accurate account of the effects of a nuclear attack on St. Louis, appeared in the CNI newsletter in 1959 and was reprinted in *Saturday Review* and elsewhere. Another CNI project was the "Baby Tooth Survey" to measure strontium 90 levels. The brainchild of Dr. Alfred Schwartz, a St. Louis pediatrician and CNI vice president, the study accumulated more than eighty thousand teeth by 1962. (Each contributor received a button proclaiming "I Gave My Tooth to Science.") The deans of the Washington University and St. Louis University dental schools sat on the project's scientific advisory board. The results, released in 1962, showed a fourteenfold increase

in the level of strontium 90 in the teeth of children born in 1957 compared with those born in 1949.

This first wave of medical involvement in the nuclear issue crested in 1962–63. In 1962, SANE's executive director, Homer Jack, recruited Benjamin Spock to the cause. In a full-page advertisement in the *New York Times,* the famed baby doctor gazed with furrowed brow at a little girl under the headline "Dr Spock Is Worried." In 1963, Spock became SANE's cochairman.

In 1962, an important series of articles in the *New England Journal of Medicine* (which in 1950 had published "Suggestions for First Aid Treatment of Casualties from Atomic Bombing") explored "The Medical Consequences of Thermonuclear War" and "The Physician's Role in the Post-Attack Period." Supplemented by essays by Gerard Piel, publisher of *Scientific American,* and Bentley Glass, professor of biology at Johns Hopkins University, these articles were published in 1963 in a work arrestingly entitled *The Fallen Sky.* In sharp contrast to the earlier exhortations to physicians to prepare for atomic war, these articles insisted that a thermonuclear attack would be a medical catastrophe so enormous and so devastating in its effects on the structure of medical service that physicians should focus their energies on preventing such an event, not preparing for it. "No modern society can survive a full-scale thermonuclear attack," the authors asserted unequivocally, and any civil-defense program that suggested otherwise was "a vast and scientifically unsupportable gamble with human life." A "limited" nuclear attack on metropolitan Boston, the authors concluded, would kill one million of the three million inhabitants outright and another million from injuries and delayed effects. Of the city's 6,560 physicians, 4,850 would die at once, and only 640 would escape unscathed. If each of these 640 worked a sixteen-hour day and spent only fifteen minutes with each casualty, they calculated, it would take about three weeks for all the victims to receive minimal attention.

This influential series, published in one of the nation's most prestigious medical journals, was one of the early projects of a new organization, Physicians for Social Responsibility (PSR). Founded in 1961 by Dr. Bernard Lown, professor of cardiology at the Harvard School of Public Health, PSR served as a rallying point for the growing number of physicians becoming active in the antinuclear cause. "There are situations in which prevention is the only effective therapy," declared PSR's statement of purpose. "The physician . . . must begin to explore a new area of preventive medicine, the prevention of thermonuclear war." Membership increased steadily in the succeeding months, drawing physicians from around the country.

In these years Jerome Frank was not the only psychiatrist to probe the psychological underpinnings of the nuclear arms race and the implications of the civil-defense movement. In the aforementioned 1962 special issue of the *New England Journal of Medicine,* two Harvard Medical School psychiatrists argued that "the psychological and social problems raised in planning a defense-shelter program are of a magnitude and complexity that make it advisable to concentrate massive efforts on *eliminating the need* for such a program." An article reporting the destructive psychological effects of prolonged fallout-shelter confinement appeared in the *Archives of General Psychiatry* in 1963. The following year, the Committee on Social Issues of the Group for the Advancement of Psychiatry (an association of socially engaged psychiatrists founded in 1946) published *Psychiatric Aspects of the Prevention of Nuclear War.*

In these years, too, Robert Jay Lifton discovered his subject—the psychological effects of living with nuclear weapons. Active in the test ban movement at Harvard in the late 1950s, Lifton in 1962, having conducted a two-year study of Japanese youth, spent six months in Hiroshima interviewing atomic-bomb survivors. The first product of this study, a 1963 *Daedalus* article entitled "Psychological Effects of the Atomic Bomb in Hiroshima—The Theme of Death," contained the germ of the ideas Lifton elaborated in numerous books and articles, most memorably in *Death in Life: Survivors of Hiroshima* (1967).

REORIENTATION

The American medical profession's surge of involvement with the issue of nuclear war was not sustained. In common with the rest of the culture, medicine's engagement with this issue diminished sharply after the ratification of the Limited Nuclear Test Ban Treaty in November 1963. This treaty did not stop all nuclear testing, but it did halt atmospheric testing,

the source of the dreaded radioactive fallout. This development, plus a series of arms-control agreements, such as the Strategic Arms Limitation Treaty of 1972 (SALT I), an apparent easing of Cold War tensions during the period of détente), and the emergence of the Vietnam War as an issue of compelling urgency all combined to diminish anti–nuclear weapons activism. Groups like SANE and the St. Louis Committee on Nuclear Information, in which physicians had played a prominent role, faded away or turned to other issues. PSR went into eclipse.

Nevertheless, a profound shift had occurred. The narrow clinical focus and uncritical identification with official policy that had characterized American medicine's initial response to the atomic bomb was fundamentally undermined during the period of fallout worry and test ban activism (1954–63). When the cultural and political climate shifted in the late 1970s and early 1980s, bringing the nuclear issue once more to the fore, men and women of the medical profession played a leading role. PSR revived with phoenixlike vitality; old themes were rediscovered; and leaders from the earlier period of activism, reinforced by articulate newcomers, again conveyed the grim tidings to a newly attentive public: If nuclear war comes, organized medicine will be of scant help, for it, too, will be sucked into the all-consuming maelstrom.