

AMERICAN THOUGHT AND CULTURE AT THE DAWN OF THE ATOMIC AGE

# BOMBS BARLY LIGHT



## Paul Boyer

## by the Bomb's Early Light

American Thought and Culture at the Dawn of the Atomic Age



#### Copyright © 1985 by Paul Boyer

All rights reserved under International and Pan-American Copyright Conventions. Published in the United States by Pantheon Books, a division of Random House, Inc., New York, and simultaneously in Canada by Random House of Canada Limited, Toronto. Originally published in hardcover by Pantheon Books, a division of Random House, Inc., in 1985.

Since this page cannot legibly accommodate all acknowledgments, they appear on the following two pages.

Library of Congress Cataloging-in-Publication Data Boyer, Paul S.

By the bomb's early light.

Includes bibliographic notes and index.

1. United States—Civilization—

1945- . 2. Atomic bomb. 3. Atomic bomb— Moral and ethical aspects. I. Title.

E169.12.B684 1985 973.92 85-42844

ISBN 0-394-74767-4 (pbk.)

Manufactured in the United States of America

First Paperback Edition

# PROPERTY OF UGA WOMEN'S ATHLETICS

# by the **Bomb's Early Light**

#### Also by Paul Boyer

Urban Masses and Moral Order, 1820-1920

Salem Possessed: The Social Origins of Witchcraft (with Stephen Nissenbaum)

Purity in Print: Book Censorship in America

- Grateful acknowledgment is made to the copyright holders for their kind permission to reprint the following previously published material:
- Excerpt from William Rose Benét, "God's Fire." Reprinted by permission of Harold Ober Associates Incorporated. Copyright 1935, 1942, 1943, 1944, 1945, 1946, 1947 by William Rose Benét.
- Excerpt from John Berryman, "The Dispossessed," from *Short Poems* by John Berryman. Copyright 1948 by John Berryman. Reprinted by permission of Farrar, Straus, and Giroux. Inc.
- Robert Frost, "U.S. 1946 King's X," from *The Poetry of Robert Frost*, edited by Edward Connery Lathem. Copyright 1947, © 1969 by Holt, Rinehart and Winston. Copyright © 1975 by Lesley Frost Ballantine. Reprinted by permission of Holt, Rinehart and Winston, Publishers.
- Excerpt from Randall Jarrell, "1945: The Death of the Gods," from *The Complete Poems* by Randall Jarrell. Copyright 1946, renewed 1974 by Mary Von Schrader Jarrell. Reprinted by permission of Farrar, Straus, and Giroux, Inc.
- Excerpt from Milton Kaplan, "Atomic Bomb." Reprinted from Commentary, March 1948, by permission. All rights reserved.
- Excerpt from Karl and Harty, "When the Atomic Bomb Fell" (1945). Reprinted by permission from Rounder Records, Somerville, Massachusetts 02144.
- Excerpt from Aaron Kramer, "Night Shift, Detroit." Reprinted by permission of the author from *Thru our guns: a group of war poems* (Astoria, New York, January 1945), p. 10. Also published in Aaron Kramer, "Hiroshima: A 37-Year Failure to Respond," NER/BLQ [New England Review/Bread Loaf Quarterly], vol. 5 (Summer 1983).
- Excerpt from C. S. Lewis, "On the Atomic Bomb: Metrical Experiment," from *Poems* by C. S. Lewis. Copyright © 1964 by the executors of the estate of C. S. Lewis. Reprinted by permission of Harcourt Brace Jovanovich, Inc.
- Excerpt from Robert Lowell, "Where the Rainbow Ends," from Lord Weary's Castle. Copyright 1946, © 1974 by Robert Lowell. Reprinted by permission of Harcourt Brace Jovanovich, Inc.
- Excerpt from Robert Lowell, "Fall 1961," from For the Union Dead by Robert Lowell. Copyright © 1962, 1964 by Robert Lowell. Reprinted by permission of Farrar, Straus, and Giroux, Inc.
- Excerpt from Irene Orgel, "Sonnet: To Lise Meitner." Reprinted from *The American Scholar*, vol. 15, no. 2 (Spring 1946). Copyright 1946 by the United Chapters of Phi Beta Kappa. By permission of the publishers.
- Excerpt from Karl Shapiro, "The Progress of Faust," from Collected Poems, 1940-1978 by Karl Shapiro. © Random House, Inc. Reprinted by permission.
- Excerpt from Frank Zappa, "Be in My Video." © 1984 by Munchkin Music, ASCAP.
- Some of the material in the Epilogue originally appeared in different form in Paul Boyer, "From Activism to Apathy: The American People and Nuclear Weapons, 1963–1980," The Journal of American History, vol. 70, no. 4 (March 1984). © 1984 The Organization of American Historians.

Permission to reprint illustrative material was granted by the following:

The Des Moines Register. Front page, August 8, 1945.

The New Yorker Magazine. Drawing by Robt. Day. Copyright 1945, © 1973.

Herbert Block. Two cartoons, "Don't Mind Me—Just Go Right on Talking" and "How Did Atomic Energy Information Leak Out to the Damn Scientists in the First Place?"—from *The Herblock Book* (Beacon Press, 1952).

Life magazine. "The Anatomic Bomb," September 3, 1945; Peter Stackpole, Life magazine copyright 1945 Time Inc. "Let's Give Nebraska Atomic Ache," November 5, 1945; Myron Davis, Life magazine copyright 1945 Time Inc.

The San Francisco Chronicle. "Kin I Use Your Atomizer, Mom?" August 9, 1945. copyright The San Francisco Chronicle, 1945. Reprinted by permission.

Historical Picture Service, Chicago. Photograph of Admiral W. H. P. Blandy and wife.

The General Mills Corporation. Reproduction of Kix Cereal box.

MGM/UA Entertainment Co. Publicity photograph for The Beginning or the End.

Memphis Commercial Appeal. "But for the Grace of God-" cartoon, August 1945.

The London Standard. Sir David Low cartoon, "Baby Play with Nice Ball?" Reproduced by permission.

King Features Syndicate, Inc. Dagwood panel from Splitting the Atom: Starring Dagwood and Blondie (1948).

The author has been unable to locate the copyright proprietors of the following works reprinted in this book. The proprietors of these works should contact the Permissions Department of Pantheon Books, 201 East 50th Street, New York, N.Y. 10022.

Illustration from "The Thirty-Six-Hour War," Life magazine, November 19, 1945.

Illustration from John W. Campbell, Jr., The Atomic Story (N.Y., 1947).

Illustration from "The Coming Atomic Age," Science Illustrated, February 1949.

Illustration of atomic car and atomic airplane from Newsweek, August 20, 1945.

Photo montage of invalid rising from mushroom cloud, from Collier's, May 3, 1947.

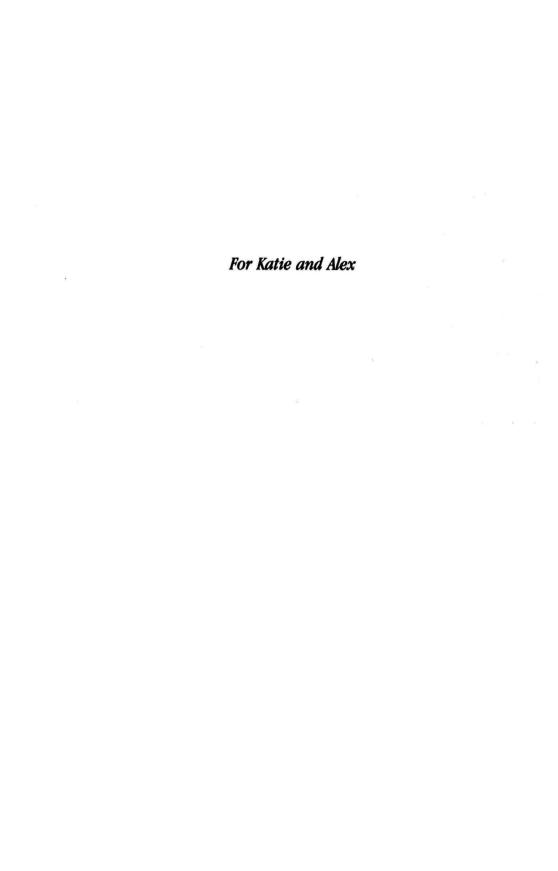
"Land of the Rising Sons," editorial cartoon from Atlanta Constitution, August 8, 1945.

"Do You Recognize Me Now?" editorial cartoon from St. Louis Star-Times, 1945.

Drawing of redesigned American city, from Life, December 18, 1945.

"The Chemical Dance Floor," illustration from Maxwell Leigh Eidinoff and Hyman Ruchlis, Atomics for the Millions (New York, 1947).

Photograph of atomic-bomb test over Los Angeles, reprinted in *Life* magazine, February 12, 1951.



## Acknowledgments

A great many people, including longtime friends and colleagues as well as others I have met through this project or in some cases know only through letters, have been generous in helping shape my understanding of this vast topic. At the beginning of the Notes section I have listed those participants in the events of 1945–1950 who granted interviews or graciously responded to written queries. I would like to thank them again here.

Here at Wisconsin I am particularly indebted to my colleagues James Baughman, John Dower, James Gustafson, J. Rogers Hollingsworth, Carl Kaestle, Stanley Kutler, Gerda Lerner, Thomas McCormick, Jr., Ronald Numbers, Dick Ringler, and Stephen Vaughn. Students in my graduate and undergraduate courses have contributed significantly to this work as well, both in their discussion comments and in steering me toward important source materials. Among them are Christopher Berkeley, Carolyn Brooks, JoAnne Brown, Maureen Fitzgerald, Joyce Follett, Stephen Kretzmann, Brian Ohm, Andrew Patner, Susan Rusch, Deborah Reilly, and Douglas Swiggim.

Thoughtful critiques of papers based on this study were offered by James Gilbert and Lawrence Wittner. Fellow researchers in the fields of nuclear-weapons history, civil defense, and peace studies have been most supportive, offering encouragement, ideas, and in some cases access to their unpublished work in progress. Thanks, then, to Barton Bernstein, Charles DeBenedetti, Lloyd Graybar, Martin Sherwin, William Vandercook, Spencer Weart, and Allan Winkler.

Stanley Katz was not only one of my early mentors in the study of history, but at a late stage in the writing of this book he supplied helpful information on his grandfather-in-law, John Haynes Holmes. Jean Toll, archivist of the General Mills Corporation, Minneapolis, Minnesota, and Nathan M. Kaganoff of the American Jewish Historical Society, Waltham, Massachusetts, provided valuable research assistance.

Others who commented on my initial prospectus or have otherwise shared their thinking and insights with me include the following, to all of whom I extend my gratitude: Loren Baritz, Robert Beisner, Leonard Berkman, Barry Childers, Alan Clive, Richard Elias, Joseph Ellis, James Farrell, Michael Fellman, Robert Griffith, Erwin Hiebert, David Hollinger, Robert Holsworth, Michael Howard, Michael Kazin, Robert Kelley, Edward Linenthal, Elaine Tyler May, Richard Minear, Lewis Perry, Kenneth Roseman, Howard Schoenberger, Ronald Sider, Kenneth Taylor, David Thelen, Robert Westbrook, R. Jackson Wilson, David Wyman, and Dorothy Zinberg. Thanks, as well, to those persons at a number of colleges and universities from Maine to Minnesota, as well as at the Woodrow Wilson Center of the Smithsonian Institution, who have made it possible for me over the past four years to meet a large number of people who share my interest in these matters.

Generous grants from the Rockefeller Foundation Humanities Fellowship program and the University of Wisconsin Research Committee provided invaluable freedom from teaching duties for the research and writing of this book. The University of Trondheim, the Nobel Institute of Norway, the Norwegian Foreign Policy Institute, and the Nordic Committee for International Studies in Stockholm jointly underwrote a Scandinavian lecture tour in the spring of 1983 that provided many opportunities to meet with scholars working in this area. My sincere thanks to Jarle Simensen of the University of Trondheim for initiating and coordinating this tour, and to Jarle and his gracious wife Aud Marit for their hospitality.

Tom Engelhardt, my editor at Pantheon, is keeping alive the great Maxwell Perkins tradition of editors who become genuinely engaged with the work their authors are struggling to bring to fruition. Tom richly deserves the praise one finds in the acknowledgment section of books he has been involved with; certainly this one is much improved for his ministrations. I also appreciate the cheerful assistance of Dan Cullen at Pantheon in the preparation of the manuscript.

Special thanks, also, to the fine secretarial staff of the Unversity of Wisconsin History Department, and particularly to the departmental secretary, Jane Mesler, and those who so efficiently and cheerfully typed successive drafts of this manuscript and related materials: Carla Jabs, Kathleen Kisselburgh, and Anita Olson.

I wish to express particular appreciation to my friend and admired senior colleague Merle Curti, a pioneer in two fields relevant to this study: intellectual history and peace studies. He has not only given unstinting encouragement, but also the benefit of his insight and experience.

Finally, my father, C. W. Boyer, shared with me his memories of a meeting with Albert Einstein in 1947, and my son Alex his extensive knowledge of science fiction. My entire family, including Katie and Alex, to whom this book is dedicated, and my wife Ann, have been most supportive and generous of spirit during my work on this book. This generosity is

doubly impressive because this particular project not only involved the familiar but never easily resolved stress between family life and writing a book, but also for four years kept a difficult and threatening subject closer to the center of their awareness than they sometimes might have preferred.

### Introduction

If a scholar a thousand years from now had no evidence about what had happened in the United States between 1945 and 1985 except the books produced by the cultural and intellectual historians of that era, he or she would hardly guess that such a thing as nuclear weapons had existed. We have studies of the evolution of nuclear strategy and some superb explorations of the political and diplomatic ramifications of the nuclear arms race, but few assessments of the bomb's effects on American culture and consciousness. We have somehow managed to avert our attention from the pervasive impact of the bomb on this dimension of our collective experience. As the journalist Robert Manoff recently observed: "Nuclear weapons have not and never will be an inert presence in American life. Merely by existing they have already set off chain reactions throughout American society and within every one of its institutions." <sup>1</sup>

Early in 1981, when I decided to attempt such a study, I was influenced, too, by what seemed a profound public apathy toward the threat of nuclear war. I hoped that the book I envisioned would help counteract that apathy. But almost immediately, the climate changed. The level of public attention and activist energy directed to the nuclear menace surged, and my own motivation shifted somewhat. I felt I might contribute a dimension of historical understanding to an issue whose origins often seemed as obscure as its present reality seemed inescapable. My students were clearly anxious about the nuclear threat, yet almost totally innocent of its history. In this respect, I sensed, they were not much different from the rest of society.

But no sooner did I begin to think about trying to fill in some of the gaps in our nuclear awareness than I found myself drawing back from the magnitude and amorphousness of the topic. How could one possibly define the nature and limits of such a study? The full dimensions of the challenge became vividly evident to me as I tried to sort out the ways that the nuclear reality had affected the consciousness of one individual: myself.

Of course, I had no delusions that I was Everyman. There were peculiarities in my background that might plausibly be seen as having particu-

larly "sensitized" me to the issues of war and peace. Reared in the pacifist beliefs of the Brethren in Christ Church, a small denomination in the German Anabaptist tradition, I had early heard stories from my father of the harassment and even physical abuse he had experienced as a war resister in 1917–1918; later, when my turn came, I took the same route, spending two years with the Mennonite Central Committee in Europe in the 1950s as a conscientious objector.

Yet, despite my background, the nuclear arms race had not been a particular focus of attention for me since the late 1950s and early 1960s, when like others of my generation I was drawn into the campaign to stop nuclear testing. Indeed, I suspect it is not my particular upbringing, but experiences I share with most Americans of the postwar generation, that are relevant here. Even a few random probes of my nuclear consciousness have made clear to me how significantly my life has been influenced by the ever-present reality of the bomb.

The most obvious of these influences are those having to do with everyday life: the hours spent reading about the nuclear threat in the newspapers, hearing about it on television, being confronted with it even at the most unexpected moments. On a family camping trip to the West Coast in 1977, for example, we found in some of the most isolated regions of the country vast tracts marked "Off Limits" on the map. These, we soon realized, were missile installations. Closer to home, radioactive waste is now regularly transported across Wisconsin, and the northern part of the state, an area of lakes and woods where French coureurs de bois once roamed and where Menominee and Chippewa still live, is a prospective nuclear waste dump site. In these same woods, work is well along on the quaintly named Project ELF, an extra-low-frequency communications system for nuclear submarines. The earth itself, even in its most remote reaches, is being transformed into a nuclear landscape. As E. B. White wrote at the time of the first postwar atomic test in 1946: "Bikini lagoon, although we have never seen it, begins to seem like the one place in all the world we cannot spare. . . . It all seems unspeakably precious, like a lovely child stricken with a fatal disease."2

Or take another example. A few years ago, my family and I went to a local outfitters to investigate canoes. The salesperson recommended one made of Du Pont's Kevlar, a remarkably strong new synthetic. We followed his advice and have since spent many hours paddling Madison's lakes and surrounding rivers. Soon after, in an article about the MX missile, I noticed that the second-stage motor casings will be made of—guess what—Kevlar, which turns out to be a strategic product highly useful in missile technology. The same material that makes our canoe so durable will assure the smooth functioning of the missiles as they streak toward Moscow.

But the bomb's corrosive impact on the externals of life pales in com-

parison to its effect on the interior realm of consciousness and memory. As I probed this level of my nuclear experience, I discovered a whole locked roomful of recollections, beginning with the afternoon of August 6, 1945, when I read aloud the ominous-looking newspaper headline, mispronouncing the new word as "a-tome" since I had never heard anyone say it before.

Once the door is unlocked, other memories tumble out: Standing in a darkened room early in 1947, squinting into my atomic-viewer ring, straining to see the "swirling atoms" the Kix Cereal people had assured me would be visible. . . . Coming out of a Times Square movie theater at midnight on New Year's Eve, 1959, having just seen the end of the world in On the Beach, overwhelmed by the sheer aliveness of the raucous celebrators. . . . Feeling the knot tighten in my stomach as President Kennedy, in that abrasive, staccato voice, tells us we must all build fallout shelters as quickly as possible. . . . Watching the clock in Emerson Hall creep up toward 11 A.M. on October 25, 1962—Kennedy's deadline to the Russians during the Cuban missile crisis—half expecting a cataclysmic flash when the hour struck. . . . Overhearing my daughter's friend recently telling how her little sister hid under the bed when searchlights probed the sky a few nights earlier (a supermarket was having its grand opening), convinced the missiles were about to fall. And on and on and on . . .

But one's "nuclear consciousness" is not just a matter of isolated memories set apart because of their particular intensity. It is also a matter of perceptions more gradually arrived at. I have, for example, come to realize that the home town of my memory, Dayton, Ohio, the city to which my grandparents moved in the 1890s, where my parents spent most of their lives, and where I grew up, no longer exists. This happens to everyone, of course, but in my case it came with a nuclear twist: Dayton has become another node on the vast R&D grid that propels the nuclear arms race to new levels of menace. As its old enterprises—refrigerators, tires, automotive parts, tool-and-die-making—declined, nearby Wright-Patterson Air Force Base emerged as a major center of nuclear weapons research. With thirty-two thousand workers, the Pentagon is now Dayton's biggest employer, pumping \$1.6 billion annually into the local economy.<sup>3</sup>

Even my sense of ancestral rootedness is now interwoven with images of nuclear menace and danger. In the summer of 1978, my brother Bill and I, finding ourselves together in Pennsylvania, took a little excursion to find the cemetery where some of our forebears who had migrated from Germany in the 1750s were buried. As we drove southward from Harrisburg along the Susquehanna, the looming concrete bulk of a nuclear power plant—Three Mile Island—suddenly hove into view. Almost literally in the shadows of those squat, hideous—and soon to be famous—towers, we found the small burial plot we were seeking.

Obviously more is involved in understanding one's nuclear experience

than compiling lists of memories. So fully does the nuclear reality pervade my consciousness that it is hard to imagine what existence would have been like without it. It is as though the Bomb has become one of those categories of Being, like Space and Time, that, according to Kant, are built into the very structure of our minds, giving shape and meaning to all our perceptions. Am I alone in this feeling? I think not.

If even a superficial exploration of a single nuclear consciousness led in so many unexpected directions, how could I possibly presume to discuss the impact of the bomb on an entire culture? Would not a history of "nuclear" thought and culture become indistinguishable from a history of all contemporary thought and culture? My mind buzzed with interpretive possibilities. The wave of UFO sightings in the 1950s, for example: surely they were a manifestation of the fear of nuclear attack that had gripped America since August 1945. And what of the theories of extraterrestrial cataclysm recently advanced by some paleobiologists to account for the sudden disappearance of dinosaurs and certain other mass extinctions? Would they have emerged without our cultural preoccupation with the possible extinction of our own species through nuclear holocaust?

On a different plane, I found myself wondering how the large-scale psychological changes of our day are related to nuclear fear. Psychiatrists report an increasing incidence of narcissism among their patients: total self-absorption coupled with the lack of a strong self-image and the inability to commit oneself to long-term relationships or goals. Cultural observers, generalizing from such clinical observations, begin to speak of a "narcissistic society." Surely such profound psychological changes, if they are indeed occurring, must be dealt with in any study of the cultural impact of nuclear weapons.

Increasingly, the project I had mapped out threatened to slip out of control and flow off in all directions. If, as the *New Boston Review* has recently put it, "contemporary culture grows in a dark place, beneath the shadow of the nuclear threat," how could one deal adequately with this topic without dealing with the whole of contemporary culture?<sup>4</sup>

I responded to these unsettling reflections by making some fairly radical decisions about the limits of my study. First, I would build my work on the kinds of evidence historians are trained to use: the vast literature in which Americans directly and explicitly discussed the atomic bomb and its meaning, the wealth of cultural material—from the most rarified to the most ubiquitous—clearly influenced by the bomb. Such a foundation, I hope, will provide a grounding for ventures into even more tantalizingly speculative realms. Second, rather than trying to survey forty years of nuclear culture, I would go back to the beginning, 1945 through 1950, the years when Americans first confronted the bomb, struggled against it, and absorbed it into the fabric of the culture.

But even when I placed these limits on my study, I soon found myself overwhelmed by the wealth of evidence. Wherever I dipped into the early postwar cultural record, from any big glossy picture magazine to scholarly conferences to country music to the black press, I encountered the bomb. The problem was not finding material, but deciding when to turn off the tap. The real challenge was how to organize and interpret this Niagara of evidence. This book is interpretive as well as descriptive, but I certainly do not see my interpretive schema as definitive. I hope what I have written will be viewed not as the last word, but as a point of departure for further work.

Another surprise as I narrowed my focus to 1945–1950 was the realization of how quickly contemporary observers understood that a profoundly unsettling new cultural factor had been introduced—that the bomb had transformed not only military strategy and international relations, but the fundamental ground of culture and consciousness. Anne O'Hare McCormick's comment in the *New York Times* on August 8, 1945, that the atomic bomb had caused "an explosion in men's minds as shattering as the obliteration of Hiroshima" was echoed by literally scores of observers in these earliest moments of the atomic age. The fallout from this "explosion in men's minds," then, became my subject.

I have been repeatedly struck, too, at how uncannily familiar much of the early response to the bomb seems: the visions of atomic devastation, the earnest efforts to rouse people to resist such a fate, the voices seeking to soothe or deflect these fears, the insistence that security lay in greater technical expertise and in more and bigger weaponry. I gradually realized that what I was uncovering was, in fact, the earliest versions of the themes that still dominate our nuclear discourse today. All the major elements of our contemporary engagement with the nuclear reality took shape literally within days of Hiroshima. (On August 26, 1945, for instance, the Washington Post was already vigorously discussing whether some type of Star-Warslike defense could be developed to destroy incoming nuclear missiles. A science writer felt sure such a defense was possible—he spoke of "rays" that would disrupt the missile's control system. The Post's editorial writers, however, were skeptical: "The possibility of discovering any defense against atom bomb rockets shot from thousands of miles away seems . . . out of the question. . . . As far as we can discover, there is no loophole or joker in this new contract with the devil." 6) This sense of déjà vu was both an unexpected and in some ways a profoundly discouraging discovery whose implications I shall return to at the end of this book.

By the Bomb's Early Light, then, is an effort to go back to the earliest stages of our long engagement with nuclear weapons. Unless we recover this lost segment of our cultural history, we cannot fully understand the world in which we live, nor be as well equipped as we might to change it. Again the New Boston Review editors put the matter well: The struggle to escape