

## Brighter Than A Thousand Suns

The history of chemistry is a story of human endeavor and as erratic as human nature itself. Progress has been made in fits and starts, and it has come from all parts of the globe. Because the scope of this history is considerable (some 100,000 years), it is necessary to impose some order, and we have organized the text around three discernible--albeit gross--divisions of time: Part 1 (Chaps. 1-7) covers 100,000 B.C. (Before Common Era) to the late 1700s and presents the background of the Chemical Revolution; Part 2 (Chaps. 8-14) covers the late 1700s to World War I and presents the Chemical Revolution and its consequences; Part 3 (Chaps. 15-20) covers World War I to 1950 and presents the Quantum Revolution and its consequences and hints at revolutions to come. There have always been two tributaries to the chemical stream: experiment and theory. But systematic experimental methods were not routinely employed until the 1600s--and quantitative theories did not evolve until the 1700s--and it can be argued that modern chemistry as a science did not begin until the Chemical Revolution in the 1700s. xi xii PREFACE We argue however that the first experiments were performed by artisans and the first theories proposed by philosophers--and that a revolution can be understood only in terms of what is being revolted against.

## File Type PDF Brighter Than A Thousand Suns

An account of the discoveries and the dilemmas of those involved in the creation of the nuclear bomb. Their average age was twenty-five. They came from Berkeley, Cambridge, Paris, London and Chicago – and arrived in New Mexico ready for adventure or at least resigned to it. But hope quickly turned to hardship in the desolate military town where everything was a secret, including what their husbands were doing at the lab. They lived in barely finished houses with a P.O. Box for an address, in a town wreathed with barbed wire, all for the benefit of 'the project' that didn't exist as far as the greater world was concerned. They were constrained by the words they couldn't say out loud, the letters they couldn't send home, the freedom they didn't have. Though they were strangers, they joined together – babies were born, friendships were forged, children grew up. But then 'the project' was unleashed and even bigger challenges faced the women of Los Alamos, as they struggled with the burden of their contribution towards the creation of the most destructive force in mankind's history – the atomic bomb. Contentious, gripping and intimate, *The Wives of Los Alamos* is a personal tale of one of the most momentous events in our history.

(Guitar Recorded Versions). Our songbook matching the 2006 release from these metal legends features notes & tab for all 10 intense tracks: Brighter Than a Thousand Suns \* Different World \* For the Greater

Good of God \* The Legacy \* The Longest Day \* Lord of Light \* Out of the Shadows \* The Pilgrim \* The Reincarnation of Benjamin Breeg \* These Colours Don't Run.

Living on a damaged planet challenges who we are and where we live. This timely anthology calls on twenty eminent humanists and scientists to revitalize curiosity, observation, and transdisciplinary conversation about life on earth. As human-induced environmental change threatens multispecies livability, *Arts of Living on a Damaged Planet* puts forward a bold proposal: entangled histories, situated narratives, and thick descriptions offer urgent “arts of living.” Included are essays by scholars in anthropology, ecology, science studies, art, literature, and bioinformatics who posit critical and creative tools for collaborative survival in a more-than-human Anthropocene. The essays are organized around two key figures that also serve as the publication’s two openings: Ghosts, or landscapes haunted by the violences of modernity; and Monsters, or interspecies and intraspecies sociality. Ghosts and Monsters are tentacular, windy, and arboreal arts that invite readers to encounter ants, lichen, rocks, electrons, flying foxes, salmon, chestnut trees, mud volcanoes, border zones, graves, radioactive waste—in short, the wonders and terrors of an unintended epoch. Contributors: Karen Barad, U of California, Santa Cruz; Kate Brown, U of

Maryland, Baltimore; Carla Freccero, U of California, Santa Cruz; Peter Funch, Aarhus U; Scott F. Gilbert, Swarthmore College; Deborah M. Gordon, Stanford U; Donna J. Haraway, U of California, Santa Cruz; Andreas Hejnl, U of Bergen, Norway; Ursula K. Le Guin; Marianne Elisabeth Lien, U of Oslo; Andrew Mathews, U of California, Santa Cruz; Margaret McFall-Ngai, U of Hawaii, Manoa; Ingrid M. Parker, U of California, Santa Cruz; Mary Louise Pratt, NYU; Anne Pringle, U of Wisconsin, Madison; Deborah Bird Rose, U of New South Wales, Sydney; Dorion Sagan; Lesley Stern, U of California, San Diego; Jens-Christian Svenning, Aarhus U.

James B. Conant (1893-1978) was one of the titans of mid-20th-century American history, attaining prominence and power in multiple fields. Usually remembered as an educational leader, he was president of Harvard University for two tumultuous decades, from the Depression to World War II to the Cold War and McCarthyism. To take that job he gave up a scientific career as one of the country's top chemists, and he left it twenty years later to become Eisenhower's top diplomat in postwar Germany. Hershberg's prize-winning study, however, examines a critical aspect of Conant's life that was long obscured by government secrecy: his pivotal role in the birth of the nuclear age. During World War II, as an advisor to Roosevelt and then Truman (on the elite "Interim Committee" that

considered how to employ the bomb against Japan), Conant was intimately involved in the decisions to build and use the atomic bomb. During and after the Manhattan Project, he also led efforts to prevent a postwar nuclear arms race between the United States and the Soviet Union that, he feared, threatened the survival of civilization — an apocalyptic prospect he glimpsed in the first instant of the new age, when he witnessed the first test of the new weapon at Alamogordo on July 16, 1945. “... a vivid inquiry... a model of historiography; evocative reading...[Conant was] central to atomic policy and progress; the bomb would be as much Conant’s as it was anyone’s in Government. His inner response to that burden responsibility has long been obscured, but it is illumined here.” — Philip Morrison, *The New York Times Book Review* “In his splendid portrait of Conant, James Hershberg has illuminated the life of a pivotal figure in the making of U.S. nuclear, scientific, educational and foreign policy for almost a half-century. But the book is much more: It is not only an insightful narration of Conant’s life; it is also a brilliant and important account of the making of the nuclear age, a chronicle that contains much that is new... Hershberg’s superb study... is a chronicle of Conant’s moral journey and we are the wiser for his having charted Conant’s path.” — S.S. Schweber, *Washington Post Book World* “James G. Hershberg ably comes to

grips with Conant and his hazardous times... His book is vibrantly written and compelling, and it breaches Conant's shield of public discretion in masterly fashion, making extensive use of unpublished interviews, diaries, reports, and correspondence pried from private and governmental repositories. It is a huge, ambitious work — a history of the Cold War as Conant encountered it as well as a study of the man.” — Daniel J. Kevles, *The New Yorker* “... a well-written, comprehensive, nonjudgmental but sensitive biography... Conant was involved in so many and such critical events that students of almost any aspect of our public life over the past half-century will find useful the new material and helpful insights in this book... This fine biography of one of the most important and complicated of America's twentieth-century leaders immediately establishes James Hershberg as one of America's outstanding young historians.” — Stephen E. Ambrose, *Foreign Affairs* “... magnificent... Any reader interested in nuclear weapons, Cold War history or American politics from FDR to JFK will find this biography riveting.” — Priscilla McMillan, *Chicago Tribune* “... masterful... The prose is clear, the narrative forceful and the author's judgments are balanced and judicious. This is simply splendid biography... The highest praise one can give for a book of this sort is that the historian has not shrunk from speaking truth to

power. This book quietly but insistently does so. It should be read by the public at large as one of the definitive texts on the cold war and the nuclear age... Hershberg's triumph is that he has prevailed over all the official lies to give us one more layer of the historical truth." — Kai Bird, *The Nation* "... riveting... an impressive achievement... honest and comprehensive in its scholarship, the author has shown himself to be a historian of notable achievement and promise." — McGeorge Bundy, *Nature* "Hershberg's outstanding, balanced biography lifts the self-imposed secrecy surrounding a key architect of U.S. Cold War policy and of the nuclear age." —*Publisher's Weekly* "... [an] impressive and substantial achievement. [Hershberg] has used the life of one strategically placed individual to illuminate the most important issues surrounding America's role and conduct in the nuclear age. His book will be invaluable to scholars assessing the impact and legacy of the group who acquired the epithet 'wise men' now that the Cold War has receded." — Carol S. Gruber, *Science* "... definitive... a far more textured picture than one finds in Conant's own guarded and unrevealing autobiography... an important and rewarding book... illuminating... Conant led a remarkable and eventful life in remarkable and eventful times. James Hershberg has explored that life, and those times, in exhaustive and revealing

detail.” — Paul Boyer, *The New Republic* “James G. Hershberg has achieved the impossible. He has written a huge biography of a Harvard president that is fascinating, informative and as valuable a piece of American history as anything I have read in years... Mr. Hershberg has brought us back vividly to an age that seems remote, so long ago, but the questions about nuclear proliferation are the same, even while the answers are still ambiguous. As we watch men struggling with unanticipated post-Cold War problems and civil wars sprouting like Jason’s men at arms, it is good to read this story about a complex man who deserves an important place in our history because he helped make that history possible.” — Arnold Beichman, *The Washington Times* “... engrossing... A magisterial study of an awesome and intriguing public career.” —Kirkus Reviews “... entertaining... thought-provocative.” — Dick Teresi, *The Wall Street Journal* “Hershberg’s book helps us more clearly understand the postwar Establishment and offers a challenging appraisal of the role of elites, of universities and of the state.” — Gar Alperovitz, *In These Times* “Hershberg deserves great credit for cracking a tough New England walnut, analyzing this very important public figure, demonstrating how he fit into his own time and showing us what we can learn from the man.” — Daniel R. Mortensen, *The Friday Review of Defense Literature* “... a compelling account... an engaging



examination of one of the central figures of the nuclear age. It succeeds in showing ‘one man’s intersection with great events and issues’ and in the process illuminates those issues for us all.” — American Historical Review “... well-written... Conant’s participation in one of our country’s most dynamic periods is, thanks to Hershberg, now much better understood.” — Library Journal “A reader of the book will enter the realm of the greats, the shapers of worlds created by the atomic blasts at Hiroshima and Nagasaki... Conant was no bit player in Cold War history... [the book is] very successful in weaving Conant’s subsurface persona in with his ups and downs as a prominent and committed public figure. And it leaves out little detail in describing top-level decisions involving the Cold War geopolitics of nuclear weaponry. Conant was a participant in most of these decisions—with Presidents Roosevelt and Truman themselves, their Secretaries of War and State, and, of course, all the major scientific figures of the time.” — Chemical & Engineering News “A wonderfully rich portrait that emerges from a carefully documented account of Conant’s role in the development of the atomic bomb and post-war nuclear policy... An extraordinarily well written text... Hershberg lays bare the person behind the persona — warts, dimples and all.” — Stanley Goldberg, Bulletin of the Atomic Scientists

Werner Heisenberg's genius and his place at the

forefront of modern physics are unquestioned. His decision to remain in Germany throughout the Third Reich and his role in Hitler's atomic bomb project are still topics of heated debate. *UNCERTAINTY* is David Cassidy's compelling portrait of this brilliant, ambitious, and controversial scientist. It is the definitive Heisenberg biography, as well as a striking evocation of the development of quantum physics, the rise of Nazism, and the dawn of the atomic age.

This special book is a set of inspirational teachings in poetic verse and prose of the major spiritual knowledge of the Himalayan yoga meditation tradition. *The Light of Ten Thousand Suns* is also the autobiography of Swami Veda Bharati, who allows us an intimate look into his own path of learning, teaching, and commitment to his Master.

Probes the complex military and diplomatic factors which ultimately led to the American decision to use the atomic bomb on Japan

In 2003, Russian physicists Andre Geim and Konstantin Novoselov found a way to produce graphene – the thinnest substance in the world – by using sticky tape to separate an atom-thick layer from a block of graphite. Their efforts would win the 2010 Nobel Prize for Physics, and now the applications of graphene and other ‘two-dimensional’ substances form a worldwide industry. Graphene is far stronger than steel, a far better conductor than any metal, and able to act as a molecular sieve to purify water. Electronic components made from graphene are a fraction of the size of silicon microchips and can be both flexible and transparent, making it

possible to build electronics into clothing, produce solar cells to fit any surface, or even create invisible temporary tattoos that monitor your health. Ultra-thin materials give us the next big step forward since the transistor revolutionised electronics. Get ready for the graphene revolution.

From April through December of 1945, ten of Nazi Germany's greatest nuclear physicists were detained by Allied military and intelligence services in a kind of gilded cage at Farm Hall, an English country manor near Cambridge. The physicists knew the Reich had failed to develop an atomic bomb, and they soon learned, from a BBC radio report on August 6, that the Allies had succeeded in their own efforts to create such a weapon. But what they did not know was that many of their meetings and private conversations were being monitored and recorded by British agents. This book contains the complete collection of transcripts that were made from these secret recordings, providing an unprecedented view of how the German scientists, including two Nobel Laureates, thought and spoke about their roles during the war.

The physicist Friedrich Houtermans (1903-1966) was an essential promoter and proponent of the development of physics in Berne. He introduced a number of activities in the field of elementary particles, with a special focus on the physics of cosmic rays, and important contributions in applied physics. This biography of Houtermans was written by Edoardo Amaldi and was almost finished just before his unexpected death in 1989. The editors have only corrected typographical errors and have introduced

## File Type PDF Brighter Than A Thousand Suns

only minimal text changes in order to preserve the original content. Additionally they have collected and included unpublished pictures and memories from Houtermans' students and collaborators. The text is the result of a thorough and intensive study on Houtermans' life and character carried out by Edoardo Amaldi. It is more than a biography, since the figure of Houtermans is set in a historical perspective of Europe between the two world wars. This book will be of great interest to historians and historians of science.

Brighter Than a Thousand Suns  
A Personal History of the Atomic Scientists  
Houghton Mifflin Harcourt

'Anybody who loves the printed word will be bowled over by this amusing, erudite, beautiful book about books. It is in every way a triumph. One of the loveliest books to have been published for many, many years.' Alexander McCall Smith

'An utterly joyous journey into the deepest eccentricities of the human mind... The most cheering, fascinating book I've read for ages.' Guardian

'Brooke-Hitching's prose is elegant and witty [and] the images...make the book a real joy.' Spectator

'The most beautiful objects in literature. You're going to love this. Extraordinary.' Dan Snow

From the author of the critically acclaimed and globally successful *The Phantom Atlas*, *The Golden Atlas* and *The Sky Atlas* comes a stunning new work. *The Madman's Library* is a unique, beautifully illustrated journey through the entire history of literature, delving into its darkest

## File Type PDF Brighter Than A Thousand Suns

territories to hunt down the very strangest books ever written, and uncover the fascinating stories behind their creation. This is a madman's library of eccentric and extraordinary volumes from around the world, many of which have been completely forgotten. Books written in blood and books that kill, books of the insane and books that hoaxed the globe, books invisible to the naked eye and books so long they could destroy the Universe, books worn into battle, books of code and cypher whose secrets remain undiscovered... and a few others that are just plain weird. From the 605-page Qur'an written in the blood of Saddam Hussein, through the gorgeously decorated 15th-century lawsuit filed by the Devil against Jesus, to the lost art of binding books with human skin, every strand of strangeness imaginable (and many inconceivable) has been unearthed and bound together for a unique and richly illustrated collection ideal for every book-lover.

Features songs from the album, A Matter Of Life And Death, which are arranged for guitar TAB. These songs include: Brighter Than A Thousand Suns; A Different World; For the Greater Good of God; The Legacy; The Longest Day; Lord Of Light; Out Of The Shadows; The Pilgrim; and, These Colour's Don't Run.

Presents an epic history that covers the period from the end of World War I through the 1970s, chronicling the decades-long migration of African

Americans from the South to the North and West through the stories of three individuals and their families.

A searing indictment of the suspension of democracy

In June 1975, a state of Emergency was declared, where civil liberties were suspended and the press muzzled. In the dark days that followed, Coomi Kapoor, then a young journalist, personally experienced the full fury of the establishment.

Meanwhile, Indira Gandhi, her son Sanjay and his coterie unleashed a reign of terror that saw forced sterilizations, brutal evictions in the thousands, and wanton imprisonment of many, including Opposition leaders. This gripping eyewitness account vividly recreates the drama, the horror, as well as the heroism of a few during those nineteen months when democracy was derailed.

Between July 1945 and November 1962 the United States is known to have conducted 216 atmospheric and underwater nuclear tests. After the Limited Test Ban Treaty between the United States and the Soviet Union in 1963, nuclear testing went underground. It became literally invisible—but more frequent: the United States conducted a further 723 underground tests, the last in 1992. 100 Suns documents the era of visible nuclear testing, the atmospheric era, with one hundred photographs drawn by Michael Light from the archives at Los Alamos National Laboratory and the U.S. National

Archives in Maryland. It includes previously classified material from the clandestine Lookout Mountain Air Force Station based in Hollywood, whose film directors, cameramen and still photographers were sworn to secrecy. The title, 100 Suns, refers to the response by J. Robert Oppenheimer to the world's first nuclear explosion in New Mexico when he quoted a passage from the Bhagavad Gita, the classic Vedic text: "If the radiance of a thousand suns were to burst forth at once in the sky, that would be like the splendor of the Mighty One . . . I am become Death, the destroyer of worlds." This was Oppenheimer's attempt to describe the otherwise indescribable. 100 Suns likewise confronts the indescribable by presenting without embellishment the stark evidence of the tests at the moment of detonation. Since the tests were conducted either in Nevada or the Pacific the book is simply divided between the desert and the ocean. Each photograph is presented with the name of the test, its explosive yield in kilotons or megatons, the date and the location. The enormity of the events recorded is contrasted with the understated neutrality of bare data. Interspersed within the sequence of explosions are pictures of the awestruck witnesses. The evidence of these photographs is terrifying in its implication while at same time profoundly disconcerting as a spectacle. The visual grandeur of such imagery is balanced by

the chilling facts provided at the end of the book in the detailed captions, a chronology of the development of nuclear weaponry and an extensive bibliography. A dramatic sequel to Michael Light's *Full Moon*, *100 Suns* forms an unprecedented historical document.

Twenty-five years after its initial publication, *The Making of the Atomic Bomb* remains the definitive history of nuclear weapons and the Manhattan Project. From the turn-of-the-century discovery of nuclear energy to the dropping of the first bombs on Japan, Richard Rhodes's Pulitzer Prize-winning book details the science, the people, and the socio-political realities that led to the development of the atomic bomb. This sweeping account begins in the 19th century, with the discovery of nuclear fission, and continues to World War Two and the Americans' race to beat Hitler's Nazis. That competition launched the Manhattan Project and the nearly overnight construction of a vast military-industrial complex that culminated in the fateful dropping of the first bombs on Hiroshima and Nagasaki. Reading like a character-driven suspense novel, the book introduces the players in this saga of physics, politics, and human psychology—from FDR and Einstein to the visionary scientists who pioneered quantum theory and the application of thermonuclear fission, including Planck, Szilard, Bohr, Oppenheimer, Fermi, Teller, Meitner, von Neumann, and Lawrence. From nuclear power's earliest foreshadowing in the work of H.G. Wells to the bright glare of Trinity at Alamogordo and the arms race of the Cold War, this



dread invention forever changed the course of human history, and *The Making of The Atomic Bomb* provides a panoramic backdrop for that story. Richard Rhodes's ability to craft compelling biographical portraits is matched only by his rigorous scholarship. Told in rich human, political, and scientific detail that any reader can follow, *The Making of the Atomic Bomb* is a thought-provoking and masterful work.

Martin Gardner's *Mathematical Games* columns in *Scientific American* inspired and entertained several generations of mathematicians and scientists. Gardner in his crystal-clear prose illuminated corners of mathematics, especially recreational mathematics, that most people had no idea existed. His playful spirit and inquisitive nature invite the reader into an exploration of beautiful mathematical ideas along with him. These columns were both a revelation and a gift when he wrote them; no one--before Gardner--had written about mathematics like this. They continue to be a marvel. This volume, first published in 1975, contains columns published in the magazine from 1965-1967. This 1989 MAA edition contains a foreword by John H. Conway and a postscript and extended bibliography added by Gardner for this edition.

On December 26, 1898, Marie Curie announced the discovery of radium and observed that "radioactivity seems to be an atomic property." A mere 47 years later, "Little Boy" exploded over Hiroshima. Before the Fallout is the epic story of the intervening half century, during which an exhilarating quest to unravel the secrets of the material world revealed how to destroy it, and an open,

international, scientific adventure transmuted overnight into a wartime sprint for the bomb. Weaving together history, science, and biography, Diana Preston chronicles a human chain reaction of scientists and leaders whose discoveries and decisions forever changed our lives. The early decades of the 20th century brought Einstein's relativity theory, Rutherford's discovery of the atomic nucleus, and Heisenberg's quantum mechanics, and scientists of many nations worked together to tease out the secrets of the atom. Only 12 years before Hiroshima, one leading physicist dismissed the idea of harnessing energy from atoms as "moonshine." Then, on the eve of World War II, the power of atomic fission was revealed, alliances were broken, friendships sundered, and science co-opted by world events. Preston interviewed the surviving scientists, and she offers new insight into the fateful wartime meeting between Heisenberg and Bohr, along with a fascinating conclusion examining what might have happened had any number of events occurred differently. She also provides a rare portrait of Hiroshima before the blast. As Hiroshima's 60th anniversary approaches, *Before the Fallout* compels us to consider the threats and moral dilemmas we face in our still dangerous world.

"A witty, romantic, deeply insightful debut." —Emma Lord, author of *Tweet Cute* In this sparkling and romantic YA debut, a reserved Bangladeshi teenager has twenty-eight days to make the biggest decision of her life after agreeing to fake date her school's resident bad boy. How do you make one month last a lifetime? Karina

Ahmed has a plan. Keep her head down, get through high school without a fuss, and follow her parents' rules—even if it means sacrificing her dreams. When her parents go abroad to Bangladesh for four weeks, Karina expects some peace and quiet. Instead, one simple lie unravels everything. Karina is my girlfriend. Tutoring the school's resident bad boy was already crossing a line. Pretending to date him? Out of the question. But Ace Clyde does everything right—he brings her coffee in the mornings, impresses her friends without trying, and even promises to buy her a dozen books (a week) if she goes along with his fake-dating facade. Though Karina agrees, she can't help but start counting down the days until her parents come back. T-minus twenty-eight days until everything returns to normal—but what if Karina no longer wants it to? "I. Love. This. Book." —Mark Oshiro, award-winning author of *Anger Is a Gift* and *Each of Us a Desert* "A must-have addition to any YA bookshelf." —Sabina Khan, author of *Zara Hossain Is Here* and *The Love and Lies of Rukhsana Ali* "Hand to fans of Netflix hit *Never Have I Ever*." —Booklist

This work has been selected by scholars as being culturally important and is part of the knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a

quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

An explosive re-imagining of the mysterious wartime meeting between two Nobel laureates to discuss the atomic bomb.

Gordon Simms' poetry has appeared in *Envoi*, *The Interpreter's House*, *Other Poetry* and *The New Writer*. He has won several competitions and an Arvon prize, and was a finalist in *Aesthetica Creative Works Annual 2011*. He is thrilled to have won the *Biscuit Poetry Challenge 2011* and to have this prizewinner's collection published.

'Michael Frayn's tremendous play is a piece of history, an intellectual thriller, a psychological investigation and a moral tribunal in full session' *Sunday Times* 'A profound and haunting meditation on the mysteries of human motivation' *Independent* 'Frayn has seized on a real-life historical and scientific mystery. In 1941 the physicist Werner Heisenberg, who formulated the famous Uncertainty Principle about the movement of particles, and was at that time leading the Nazi's nuclear programme, went to visit his old boss and mentor, Niels Bohr, in Copenhagen. What was the purpose of his visit to

Nazi-occupied Denmark? What did the two old friends say to each other, particularly bearing in mind that Bohr was both half-Jewish and a Danish patriot?... Frayn argues that just as it is impossible to be certain of the precise location of an electron, so it is impossible to be certain about the workings of the human mind... What is certain is that Frayn makes ideas zing and sing in this play' Daily Telegraph

A riveting and powerful story of an unforgiving time, an unlikely friendship and an indestructible love (Bass Recorded Versions). This book of note-for-note Steve Harris bass transcriptions is a must-have for any rock bassist. 20 classics, including: Aces High \* Can I Play with Madness \* Evil That Men Do \* Fear of the Dark \* Iron Maiden \* No Prayer for the Dying \* The Number of the Beast \* Run to the Hills \* Running Free \* The Trooper \* Wrathchild \* and more.

No one better represents the plight and the conduct of German intellectuals under Hitler than Werner Heisenberg, whose task it was to build an atomic bomb for Nazi Germany. The controversy surrounding Heisenberg still rages, because of the nature of his work and the regime for which it was undertaken. What precisely did Heisenberg know about the physics of the atomic bomb? How deep was his loyalty to the German government during the Third Reich? Assuming that he had been able to build a bomb, would he have been willing? These

questions, the moral and the scientific, are answered by Paul Lawrence Rose with greater accuracy and breadth of documentation than any other historian has yet achieved. Digging deep into the archival record among formerly secret technical reports, Rose establishes that Heisenberg never overcame certain misconceptions about nuclear fission, and as a result the German leaders never pushed for atomic weapons. In fact, Heisenberg never had to face the moral problem of whether he should design a bomb for the Nazi regime. Only when he and his colleagues were interned in England and heard about Hiroshima did Heisenberg realize that his calculations were wrong. He began at once to construct an image of himself as a "pure" scientist who could have built a bomb but chose to work on reactor design instead. This was fiction, as Rose demonstrates: in reality, Heisenberg blindly supported and justified the cause of German victory. The question of why he did, and why he misrepresented himself afterwards, is answered through Rose's subtle analysis of German mentality and the scientists' problems of delusion and self-delusion. This fascinating study is a profound effort to understand one of the twentieth century's great enigmas.

[Copyright: 538207e387ba4cee29aa7dee727480a5](#)