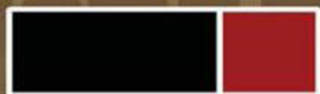


GREENWOOD ICONS



DONALD LANGMEAD

ICONS



AMERICAN ARCHITECTURE

FROM THE ALAMO
TO THE WORLD
TRADE CENTER



ICONS OF AMERICAN ARCHITECTURE

**Recent Titles in
Greenwood Icons**

Icons of Horror and the Supernatural: An Encyclopedia of Our Worst Nightmares

Edited by S.T. Joshi

Icons of Business: An Encyclopedia of Mavericks, Movers, and Shakers

Edited by Kateri Drexler

Icons of Hip Hop: An Encyclopedia of the Movement, Music, and Culture

Edited by Mickey Hess

Icons of Evolution: An Encyclopedia of People, Evidence, and Controversies

Edited by Brian Regal

Icons of Rock: An Encyclopedia of the Legends Who Changed Music Forever

Scott Schinder and Andy Schwartz

Icons of R&B and Soul: An Encyclopedia of the Artists Who Revolutionized Rhythm

Bob Gulla

African American Icons of Sport: Triumph, Courage, and Excellence

Matthew C. Whitaker

Icons of the American West: From Cowgirls to Silicon Valley

Edited by Gordon Morris Bakken

Icons of Latino America: Latino Contributions to American Culture

Roger Brunson

Icons of Crime Fighting: Relentless Pursuers of Justice

Edited by Jeffrey Bumgarner

Icons of Unbelief: Atheists, Agnostics, and Secularists

Edited by S.T. Joshi

Women Icons of Popular Music: The Rebels, Rockers, and Renegades

Carrie Havranek

Icons of Talk: The Media Mouths That Changed America

Donna L. Halper

ICONS OF AMERICAN ARCHITECTURE

From the Alamo to the
World Trade Center

Donald Langmead

Greenwood Icons



GREENWOOD PRESS
Westport, Connecticut • London

Library of Congress Cataloging-in-Publication Data

Langmead, Donald.

Icons of American architecture : from the Alamo to the World Trade Center / Donald Langmead.

v. cm. — (Greenwood icons)

Includes bibliographical references and index.

ISBN 978-0-313-34207-3 (set : alk. paper) — ISBN 978-0-313-34209-7

(vol. 1 : alk. paper) — ISBN 978-0-313-34211-0 (vol. 2 : alk. paper)

1. Architecture—United States. 2. Architecture and society—United States. I. Title.

NA705.L35 2009

720.973—dc22 2008040909

British Library Cataloguing in Publication Data is available.

Copyright © 2009 by Donald Langmead

All rights reserved. No portion of this book may be reproduced, by any process or technique, without the express written consent of the publisher.

Library of Congress Catalog Card Number: 2008040909

ISBN: 978-0-313-34207-3 (set)

978-0-313-34209-7 (vol. 1)

978-0-313-34211-0 (vol. 2)

First published in 2009

Greenwood Press, 88 Post Road West, Westport, CT 06881

An imprint of Greenwood Publishing Group, Inc.

www.greenwood.com

Printed in the United States of America



The paper used in this book complies with the Permanent Paper Standard issued by the National Information Standards Organization (Z39.48-1984).

10 9 8 7 6 5 4 3 2 1

This book is dedicated to Robert Scarborough, a true professional

Contents

List of Photos	ix
Series Foreword	xiii
Preface and Acknowledgments	xv
The Alamo, San Antonio, Texas	1
Alcatraz, San Francisco, California	25
Brooklyn Bridge, New York City	49
Empire State Building, New York City	71
Fallingwater, Bear Run, Pennsylvania	93
Golden Gate Bridge, San Francisco, California	115
Graceland Mansion, Memphis, Tennessee	139
Grand Central Terminal, New York City	163
Hearst Castle, San Simeon, California	185
Hoover Dam, Colorado River, Nevada/Arizona	209
Hotel del Coronado, San Diego, California	233
Independence Hall, Philadelphia, Pennsylvania	257

Lincoln Memorial, Washington, D.C.	281
Monticello, Charlottesville, Virginia	305
Pentagon, Arlington, Virginia	327
Sears Tower, Chicago, Illinois	351
Statue of Liberty, New York City	375
United Nations Headquarters, New York City	395
United States Capitol, Washington, D.C.	421
USS <i>Arizona</i> Memorial, Pearl Harbor, Honolulu, Hawaii	447
Vietnam Veterans Memorial, Washington, D.C.	471
Washington Monument, Washington, D.C.	497
White House, Washington, D.C.	519
World Trade Center, New York City	541
Glossary	567
Selected Bibliography	575
Index	577

List of Photos

The Alamo, Texas (page 1). Ruins of the church of San Antonio de Bexar. Lithograph by C.B. Graham, from a drawing by Edward Everett, n.d. Courtesy Library of Congress.

Alcatraz Island, San Francisco Bay (page 25). The main prison building was designed by U.S. Army Major Reuben B. Turner, 1909–1912 and converted to a civilian penitentiary under the direction of Robert Burge, 1934. Photograph ca. 1934–1950. Courtesy Library of Congress.

Brooklyn Bridge, New York City, 1867–1873 (page 49). Engineers: John Augustus Roebling, Washington Roebling, and Emily Warren Roebling. Pedestrians on the promenade, ca. 1899. Photograph by Strohmeyer and Wyman. Courtesy Library of Congress.

Empire State Building (far left), New York City, 1930–1931 (page 71). Architects: Shreve, Lamb, and Harmon. 1937 photograph. Courtesy Library of Congress.

Edgar J. Kaufmann Sr. residence, “Fallingwater.” Bear Run, Pennsylvania, 1936–1939 (page 93). Architect: Frank Lloyd Wright. General view from downstream. Courtesy Library of Congress.

Golden Gate Bridge, San Francisco, 1930–1937 (page 115). Chief engineer: Joseph Baermann Strauss; designer: Charles Alton Ellis; architects: Irving Foster Morrow and Gertrude Comfort Morrow. Aerial view across the Golden Gate toward Marin County during construction. 1934 photograph. Courtesy Library of Congress.

Graceland Mansion, Memphis, Tennessee, 1938–1939 (page 139). Original architects: Max Furbringer and Merrill G. Ehrman. Principal (east) front. There were extensive additions and interior alterations to the house after it was acquired by Elvis Presley in 1957. Photograph by Chris Walter. Courtesy Getty Images.

- Grand Central Terminal, New York City, 1901–1913 (page 163). Architects: Reed & Stem; Warren & Wetmore. A major restoration/renovation of the interior was carried out in 1996–1998. Exterior view from southwest, ca. 1927. Courtesy Library of Congress.
- Hearst Castle (*La Cuesta Encantada*), San Simeon, California, 1922–1947 (page 185). Architect: Julia Morgan. Aerial view, ca. 1947. Courtesy Library of Congress.
- Hoover Dam, Nevada/Arizona, 1930–1938 (page 209). Engineers: U.S. Bureau of Reclamation; architectural work: Gordon B. Kaufmann; sculptural ornament: Oskar J.W. Hansen. Overview of entire dam during construction, ca. 1933. Courtesy Library of Congress.
- Hotel del Coronado, San Diego, California, 1886–1888 (page 233). Architects: James William, Merritt J. and Watson Reid. General view toward main entrance, ca. 1892. Courtesy Library of Congress.
- Independence Hall, Philadelphia (originally Pennsylvania State House), 1729–1748; tower and belfry, 1749–ca. 1756) (page 257). Original architects: Edmund Woolley and Ebenezer Tomlinson. The steeple and bell tower were replaced by William Strickland and completed in 1828. South façade. Undated photograph. Courtesy Library of Congress.
- Lincoln Memorial, Washington, D.C., 1911–1922 (page 281). Architect: Henry Bacon. View from north-east. Undated photograph by Theodor Horydczak. Courtesy Library of Congress.
- Monticello, Charlottesville, Virginia, 1768–1809 (page 305). Architect: Thomas Jefferson. Photograph by John Collier, 1943. Courtesy Library of Congress.
- The Pentagon, Arlington, Virginia, 1941–1943 (page 327). Principal architects: George Edwin Bergstrom and David Julius Witmer; Engineer: Frederick H. Fowler. Aerial view, ca. 1947. Courtesy Library of Congress.
- Sears Tower, Chicago, Illinois, 1971–1973 (page 351). Architects: Skidmore, Owings, & Merrill (Bruce Graham and Fazlur Rahman Khan). Renovations to lower levels: Skidmore, Owings, & Merrill (1983); James De Stefano and John Albright (1992). Courtesy Associated Press.
- Statue of Liberty, New York City, 1869–1886 (page 375). Sculptor: Frédéric Auguste Bartholdi; architect of base: Richard Morris Hunt. Courtesy Library of Congress.
- United Nations Headquarters, New York City, 1947–1951 (page 395). Architect: Wallace Kirkman Harrison, as head of an international panel. 1952 photograph. Courtesy Library of Congress.

- United States Capitol, Washington, D.C., 1783–1892 (page 421). Various architects. Dome over the central rotunda, seen from the National Mall; architect: Thomas Ustick Walter, 1854–1865. 1937 photograph. Courtesy Library of Congress.
- U.S.S. *Arizona* Memorial, Pearl Harbor, Hawaii, 1958–1962 (page 447). Architect: Alfred Preis. The ship in the background is the decommissioned U.S.S. *Missouri*. Photograph by J. Scott Applewhite, 2003. Courtesy Associated Press.
- Vietnam Veterans Memorial, National Mall, Washington, D.C.; “The Wall,” 1980–1982. Architect: Maya Ying Lin (page 471). Photograph by J. Scott Applewhite, 1984. Courtesy Associated Press.
- Washington Monument, National Mall, Washington, D.C., 1836–1885. Architect: Robert Mills (page 497). Aerial photograph, 1943. Courtesy Library of Congress.
- The White House (Executive Mansion), Washington, D.C., 1792– (frequent rebuilding and alterations) (page 519). Original architect: James Hoban. North front; portico by Benjamin Latrobe, 1805–1817. 1941 photograph. Courtesy Library of Congress.
- World Trade Center, New York City, 1962–1973 (page 541). Architect: Minoru Yamasaki and Associates; architects in association: Antonio Britti and Emery Roth and Sons; engineers: Worthington, Skilling, Helle and Jackson. World Trade Center One (right) and World Trade Center Two (the “Twin Towers”) were destroyed by terrorist attack on September 11, 2001; the remaining buildings in the complex, damaged by the collapse, had to be demolished.

Series Foreword

Worshipped and cursed. Loved and loathed. Obsessed about the world over. What does it take to become an icon? Regardless of subject, culture, or era, the requisite qualifications are the same: (1) challenge the status quo, (2) influence millions, and (3) affect history.

Using these criteria, Greenwood Press introduces a new reference format and approach to popular culture. Spanning a wide range of subjects, volumes in the Greenwood Icons series provide students and general readers a port of entry into the most fascinating and influential topics of the day. Every title offers an in-depth look at twenty-four iconic figures, each of which captures the essence of a broad subject. These icons typically embody a group of values, elicit strong reactions, reflect the essence of a particular time and place, and link different traditions and periods. Among those featured are artists and activists, superheroes and spies, inventors and athletes, the legends and mythmakers of entire generations. Yet icons can also come from unexpected places: as the heroine who transcends the pages of a novel or as the revolutionary idea that shatters our previously held beliefs. Whether people, places, or things, such icons serve as a bridge between the past and the present, the canonical and the contemporary. By focusing on icons central to popular culture, this series encourages students to appreciate cultural diversity and critically analyze issues of enduring significance.

Most important, these books are as entertaining as they are provocative. Is Disneyland a more influential icon of the American West than Las Vegas? How do ghosts and ghouls reflect our collective psyche? Is Barry Bonds an inspiring or deplorable icon of baseball?

Designed to foster debate, the series serves as a unique resource that is ideal for paper writing or report purposes. Insightful, in-depth entries provide far more information than conventional reference articles but are less intimidating and more accessible than a book-length biography. The most revered and reviled icons of American and world history are brought to life with related

sidebars, timelines, fact boxes, and quotations. Authoritative entries are accompanied by bibliographies, making these titles an ideal starting point for further research. Spanning a wide range of popular topics, including business, literature, civil rights, politics, music, and more, books in the series provide fresh insights for the student and popular reader into the power and influence of icons, a topic of as vital interest today as in any previous era.

Preface and Acknowledgments

ON THE MEANING OF ICONS

The state of South Australia, where I have always lived, is 1½ times the area of Texas. It was settled by Europeans in 1836 and its population, most of which is concentrated in the capital, Adelaide, is now just over 1.5 million. In 2001, perhaps to establish consequence in that sparse newness, the National Trust (sponsored by a parochial bank), began to compile the BankSA Heritage Icons List, to “record, recognise and protect items that have made a significant contribution to the State’s cultural identity.” The initial list of “icons” included the “Balfour’s frog cake”—as its name might suggest, the confection made by a local bakery is a frog-shaped cupcake covered with sticky pale green frosting and filled with apricot jelly and pink artificial cream. But an *icon*? Really?

The list now has been augmented by another fifty or so “contributors to the State’s cultural identity”—too many to enumerate, but one bears special mention, if only to emphasize the point: the “pie floater” became an icon in 2003. Claimed to be uniquely South Australian, and boasting a 130-year history this evening delicacy is consumed at curbside “piecarts” and comprises a minced meat pie floating in a bowl of viscous green pea soup; it is garnished with tomato ketchup (for the pie) and vinegar (for the soup). But an *icon*?

At the beginning of the twenty-first century *iconic* has become one of the most overemployed, overrated, and misused words in the English language. A mid-2008 search for it on Google yielded 16.1 million hits. There is an international epidemic of iconitis. David Marsh, the editor charged with ensuring the use of good English in Britain’s *Guardian*, observed in August 2007 that in the preceding year the newspaper had used the adjective *iconic*

493 times, and the nouns *icon* or *icons* 670 times, in relation to such diverse things as the Countdown TV theme; a Rossini opera; hawks; wolves; the Los Angeles stormwater system; and “the cut above the eye David Beckham sustained after being hit by a flying boot.” He also noted that hairdressers, celebrities, managers, and management consultants had “iconic” jobs. The word has been devalued to become a modish way of saying “famous,” “memorable” or in fact anything other than mundane. The real idea of iconic is very different.

In its original use, *icon*, derived from the Greek word for an image, described the religious pictures characteristic of Eastern Orthodox Christianity. Orthodox iconography allowed no room for virtuosity or artistic creativity but insisted (as it still does) upon conformity to standards prescribed by Church tradition. That is because it was directed toward a higher purpose and the communication of higher ideas. So everything within the image—colors, facial appearances, poses—had an explicit and consistent symbolic aspect that made its meaning instantly recognizable within its cultural context. No icon existed for its own sake, that is, merely as a work of art; it always pointed to something else of greater significance. In Russia, icons were described, not as being “painted,” but as being “written.” No words (except, occasionally, for traditional calligraphic titles and abbreviations) were needed to convey the meaning. That symbolic meaning was already established and reinforced in the minds and hearts of those who saw it.

Symbols, by definition, speak for themselves. Isn’t that what *makes* them symbols? In Alice Springs in Central Australia there is a church built as a memorial to a twentieth-century pioneer, Dr. John Flynn, the founder of the Flying Doctor Service. According to the Northern Territory’s Department of Natural Resources Environment and the Arts, the building is “rich in symbolism,” reflecting Flynn’s life and achievements. Yet soon after the building was completed its architect found it necessary to publish a sixteen-page pamphlet *explaining* the symbolism. Why? Should not icons have evident meanings?

The icons of Eastern Orthodoxy have been able to hold their meaning because of orthodoxy across ethnicity, language, and generations. When such boundaries are crossed or even blurred, meanings change. In our world—the global village—universality of meaning has become impossible to maintain. For example, to the Westerner the color *red* is an icon of danger, whereas to the Chinese it is an icon of good luck; to the modern nation of Israel, the Star of David is an icon of national pride; to millions of Jews in Hitler’s Germany it was an icon of death. The meanings of icons change; they become different things to different people, metamorphosed by experiences and generational change. In America, that often has proven true in responses to the iconic meaning of architecture. The true icons of American architecture are not necessarily buildings that would be chosen by architects as the “best” or even those chosen by other people under the cajoling of architects.

WHAT IS AN ICON OF ARCHITECTURE? OR AN ARCHITECTURAL ICON? OR . . .

After discussion with the editors at Greenwood and much reflection, the twenty-four structures presented here as icons of American architecture were selected not because they are necessarily great (or even good) architecture, but solely because they point to unique aspects of American culture—for the most part, but not always, lofty values—beyond themselves. That is, they are icons of America first, and pieces of architecture second. In many cases, their sheer size has fixed them in the public consciousness. The final choice of just twenty-four was difficult; of course, not everyone will agree with the selection. But then, I am an architect and a foreigner to boot; it's uncertain which makes me more alien.

An architect's approach to buildings is different from that of other people. In his *An Outline of European Architecture* published in 1942 the erstwhile high priest of British architectural historians, Sir Nicholas Pevsner, pronounced that "a bicycle shed is a building; Lincoln Cathedral is architecture" and asserted that the term *architecture* applies only to buildings "designed with a view to aesthetic appeal." There was a degree of arrogance in that. And it simplistically begs the question: "What happens when a building like a stable is embellished with a distinctive color scheme or pattern (merely painted on) or a horseshoe is nailed to the door?" Does it then become architecture? After all, an aesthetic choice has been made.

Happily, since Pevsner made his black-and-white categorization there has been much more careful thought about the nature of architecture. Critics and historians now see shades of gray. Two early seminal books were Amos Rapoport's *House Form and Culture*, of 1969 and Bruce Allsopp's *A Modern Theory of Architecture*, of 1977. Each differentiates, with various intermediate nuances, between folk or vernacular architecture—the home-grown product, as it were, of "nonarchitects"—and high-style or composed architecture, made by professionals and adhering to a formal aesthetic. This is not the place to expand further on the differences; suffice it to say that as general rule the former is architecture that is *loved*, because it signifies the heart values of its builders; the latter is architecture that is *admired*.

Architects tend to be attracted to the kind of architecture that is admired. That predilection was confirmed by a poll conducted by the American Institute of Architects (AIA) in 2007. The Institute engaged the Rochester, NY-based market research company, Harris Interactive, to identify "America's favorite works of architecture." The devil was in the manipulative detail of the methodology. For about a month in late 2006 a random sample of about twenty-five hundred AIA members—that is, architects—were interviewed online and asked to name up to twenty of *their* favorite buildings in fifteen preselected categories. That yielded 247 buildings that were then selectively presented to just over eighteen-hundred people in a public survey that took only a week;

each participant was asked to evaluate photographs of seventy-eight structures chosen from the full architect-compiled list. Standard statistical analysis then was applied to calculate “America’s Favorite Architecture.” One is reminded of the remark attributed to Henry Ford about his Model-T: “Any customer can have a car painted any color that he wants so long as it is black.”

Sadly, none of the buildings in this book can be classed as vernacular architecture. That was an editorial decision. It was not my choice to exclude iconic indigenous structures like Mesa Verde Cliff Palace in Colorado, the Cahokia mounds in Illinois, or such architectural types as the tipis of the Plains Nations, the hogans of the Navajo, the Inuit igloos, or (after European settlement) the log cabins, covered wooden bridges, and red barns of rural America.

Apart from that, the parameters of choice were established largely by the seven defining properties of icons set down by Dennis Hall and Susan Grove Hall in *American Icons: An Encyclopedia of the People, Places, and Things that Have Shaped Our Culture* (Greenwood, 2006); the reader is referred to their fascinating work. To repeat the Halls’ hypothesis would be of little point; of course, not every one of the twenty-four structures dealt with in the following pages possesses *all* the properties of an icon. An attempt has been made to identify the respective claim of each to American “icon-ness.” Although all twenty-four structures have an architectural element, there may be some debate over whether some—for example, the Statue of Liberty, Hoover Dam, or Brooklyn Bridge—are strictly *architecture*.

It would be remiss to ignore the emerging idea of what has been dubbed—albeit inaccurately and undeservedly—“iconic architecture”—another misused expression in architectural discourse. In December 2004, reviewing the year’s architectural “achievements” in Britain’s *Telegraph* newspaper, the late Giles Worsley accused, “Architects around the world have been creating flashy ‘look-at-me’ buildings in an attempt to make their mark.” He asked, “Do we want icons? Or rather, do we want [so-called] iconic architecture, big blowzy buildings that grab you by the throat and say ‘look at me’? Buildings with curves, jagged edges, blobs, bulges, flashy materials and bright colours? Buildings that create an instant, unforgettable image for a city or an institution?”

Such buildings are not icons. To reiterate, true icons point, not to themselves, but to ideas beyond and bigger than themselves.

ACKNOWLEDGMENTS

My deepest thanks are due to Coby, my wife of 46 years, who (as always) has patiently borne with my preoccupation, tolerated continual interruptions to her own routine to act as a sounding board, and done much, much more. Over the many months taken to prepare the manuscript, she has supported and encouraged me, and nursed me through periods of failing health—in short, done all that she could.

I also sincerely thank the editorial staff at Greenwood, especially Debra Adams, who recalled my earlier importunate emails about a quite different book and had the courage to ask a foreigner to write about American architecture. She was approachable, encouraging, and helpful, answering my awkward questions, allaying my apprehensions, and offering sound advice. Special thanks, too, to Elizabeth Kincaid, who provided a true smorgasbord of images from which I made my sometimes eccentric choices of illustrations for the book; in that, she reprised a role that she played so well once before. I am grateful to Kim Hoag for such careful editing of the manuscript.

The University of South Australia, at which I now hold an Adjunct Professorship, continues to provide valuable logistical support, which is gratefully acknowledged.

Donald Langmead
Paradise, South Australia
August 2008



Courtesy Library of Congress

The Alamo, San Antonio, Texas

“Remember the Alamo!”

In any contest between myth and history, myth mostly wins. Setting aside the conscious (or unconscious) biases of the historian, interpreting evidence to decide what *probably* happened in the past may reveal the truth, but often it does not stir the soul. Myth, on the other hand, can be turned on the lathe of what we wish was so; the action may be our own, fashioning what will comfort us, or others', creating what will control us. "Remember the Alamo!" is an enduring battle cry, used first by the Texans at the Battle of San Jacinto on April 21, 1836. People now more often remember what has become fixed in American—and especially Texan—*mythos* about the Alamo. Kevin R. Young, president of the Alamo Battlefield Association, wrote in 1999 that there are *two* Alamos: that of the historical event and that of popular culture. Pointing out that "the significance of the historical event is often overshadowed by the popular culture event," he continued,

The historical Alamo is a dramatic example of time and place. In a short span of time, several key personalities came together . . . to interact in what we remember as the Alamo siege and battle. . . . The dramatic forces of a small band of colonists, some native Texans and American volunteers fighting for what they considered their "higher rights" against an nationalized Army attempting to quell a revolt and protect their nation, with a largely neutral local population caught in the middle, is compelling enough. But then add the strong personalities of [the] opposing commanders and the siege of the Alamo takes on its own importance.¹

He further observed, "In many ways the significance of the Alamo [as an event] is not what happened there historically but how the passing and future generations tend to remember it."

WHAT IS THE ALAMO?

Historian Stephen L. Hardin explains that there are difficulties in identifying the exact site of the Battle of the Alamo because of "semantic ambiguity" in descriptions of the site; some accounts use "Alamo" for only the church building, and others for the whole mission compound. He wryly comments early historians "were forced to rely on oral tradition and outright speculation," giving rise to misconceptions now fixed in the popular image of the Alamo. Certainly for most people in Texas, America, and beyond the name conjures the west façade of the church. And the site has changed much since 1836. After the battle the church was little more than rubble. Following years of debate over annexation by the United States, Texas became the twenty-eighth state at the very end of 1845. In the 1850s the U.S. government roofed the Alamo church, which it had leased in 1848 for use as an army commissary and storage depot. The now well known gable was added to the distinctive but unfinished west façade—little more was recognizable as architecture.

The Catholic Church sold the building to the State of Texas, with the remainder of the Alamo property except the conventual building, in 1883.

In 1847 the U.S. Quartermaster Department repaired the dilapidated convent (aka the Long Barrack) for army use; when the military relocated, businessman Honoré Grenet bought it from the Catholic Church in 1877 and, adding a wooden second story, converted it to a general store. He died in 1886, and his heirs sold it, and it passed through several hands until a potential buyer proposed to demolish it to make way for a hotel. But in 1903 Texan Clara Driscoll “put up the thousands of dollars necessary to prevent the sale.” Two years later the Texas Legislature appropriated \$65,000 for the purchase of the convent property and placed it, together with the Alamo church, in the “custody and care” of the De Zavala Chapter of the Daughters of the Republic of Texas (DRT). In 1913 the post-1836 accretions were removed, leaving only the convent walls standing. As part of general renovations, they were repaired and the building roofed in 1968. The Alamo is now a state historic site under the stewardship of the DRT. With some surrounding lands, the other San Antonio River missions constitute San Antonio Missions National Historical Park; their churches are still places of worship.

So the Alamo was already a ruin—repaired, rebuilt, and redefined, but a ruin for all that—long before it became an icon of American architecture. So intense is the emotional quality of the place, whether spontaneous or induced, that there is a sense in which the architecture is irrelevant. The buildings, especially the church, are merely the focus of powerful ideas that continue to be fed by myth and history. San Antonio is America’s seventeenth most popular tourist destination, with twenty million visitors a year; the city’s Convention and Visitors Bureau boasts that the church at the Alamo is “one of the most photographed facades in the nation.” An official Texas tourism report of January 2008 named the Alamo as one of the two “top spots” for out-of-state visitors and Texans alike.

THE MAKING OF AN ICON

Young, questioning how “a Mexican civil war turned into a war of independence. . . . on the frontier borderlands, lasting less than six months [could become] such a pivotal event in the nineteenth-century development of the United States and Mexico,” remarked, “What also stands out [is] that one battle . . . actually dominates the period.” He suggested that the Alamo became “part of the creation myth story of Texas” because though after their defeat in the Civil War many Southern States “fell back on their heroes of the Revolutionary War, Texas fell back on its own revolutionary experience.” That, he concluded, was the moment when the Alamo of history merged with the Alamo of popular culture. As Stephanie Matyszczyk cautions:

History teaches us that when we look to the past, we must look at it from all possible points of view in order to understand the entire story that [it] is trying to tell. Most accounts of the Alamo tell the story from the Texan point of view and more often than not, the Mexican side . . . is barely touched upon. . . . It is the mythologization of the Battle of the Alamo which has greatly contributed to what the Alamo has come to symbolize for many people today. The Battle of the Alamo has come to symbolize American freedom and liberty and “Remember the Alamo” has become not only a national slogan, but a pop culture phenomenon. The problem with this is that when the time comes to remember the Alamo, what people remember is incorrect.²

As noted, in 1905 the Texas State Legislature, under a bill titled Providing for the Purchase, Care, and Preservation of the Alamo, formally charged the DRT with the responsibility of maintaining the site “in good order and repair, without charge to the State, as a sacred memorial to the heroes who immolated themselves upon that hallowed ground.” But the Alamo had caught the popular imagination, at least in Texas, much earlier.

King Solomon’s observation, “there is no end to the writing of books,” resonates when confronted by the amount of literature about the Alamo. A glance at the DRT Library catalogue reveals 1,450 books; although many are serious studies—autobiographies, biographies, eyewitness accounts, collections of historical documents, and historical studies, some intended for adults, some for children—the list also includes sixty-two fictional titles, directed to both readership groups; there are even ghost stories. The library also holds collections of no fewer than seventeen journals devoted to the Alamo. Although new evidence helps recent historians approach the truth, “traditional popular depictions, including novels, stage plays, and motion pictures,” as Hardin observes, “emphasize legendary aspects that often obscure the historical event.”

The first substantial work of fiction appears to be Augusta J. Evans’ *Inez: A Tale of the Alamo*, published in 1855. The earliest play—written in verse—was Francis Nona’s *The Fall of the Alamo* of 1879. It was followed in 1886 by Hiram H. McLane’s *The Capture of the Alamo*, “a historical tragedy, in four acts” intended to raise funds for a never-realized monument. A citation from its prologue reveals why it never found a place in great American literature: “And this our purpose too we have,/ Besides to honor those so brave;/ By in this form to you to tell,/ How Travis and his comrades fell;/ To see if Shakspeare [*sic*] has a fame/ To which no others may lay claim.” Clearly, other works are too numerous to list here. Suffice it to say that well over two hundred new titles have appeared in the twenty-first century. At the time of writing (2008) the Library of Congress lists a dozen more about to be released.

In 1911 moviemakers discovered the Alamo; William F. Haddock directed the now lost one-reeler, *The Immortal Alamo* (aka *The Fall of the Alamo*), whose story “plays fast and loose with the actual incidents,” filmed on a ranch south of San Antonio. *The Siege and Fall of the Alamo*, the only movie known to have been shot at the actual location, was released in 1914.

The following year the great D.W. Griffith produced the 50-minute big-budget epic, *Martyrs of the Alamo*, directed by William “Christy” Cabanne; it is the earliest surviving Alamo film. Robert N. Bradbury’s “jingoistic and simplistic” *With Davy Crockett at the Fall of the Alamo* was released in 1926.

Sound was added to the famous battle in the “uneven” *Heroes of the Alamo*, produced and distributed by Anthony J. Xydias as a Sunset Production in 1937; Columbia Pictures bought it in 1938, and changing everything except the story, rebadged, and rereleased it as their own production. In the same year Stuart Paton filmed the insightful 20-minute documentary, *The Alamo: Shrine of Texas Liberty* (aka *The Fall of the Alamo*). Shot entirely on location at Mission San Jose, the educational film was produced on an extremely low budget; many extras were taken from the local unemployment line, paid \$2 a day and asked to provide their own costumes. The soundtrack was a “lame” narration and an organ score.

Black and white turned to color with Universal Pictures’ *The Man from the Alamo* (1953), called by one critic “despite historical inaccuracies . . . an imaginative application of the Alamo story.” Two years later Frank Lloyd directed *The Last Command* (with the esoteric alternative title *San Antonio de Béxar*); also in color, it purported to be a biography of James “Jim” Bowie, of Bowie knife fame.

But all previous movies were eclipsed in 1960 when John Wayne directed (and starred as Davy Crockett) in Todd-AO technicolor blockbuster *The Alamo* (1960), complete with stereophonic sound. The film, writes one historian, was as “immensely popular as it was laughably inaccurate.” But Bruce Winders, curator at the Alamo, remarks that Wayne’s movie introduced the story to an international audience in a way that historians never could. Every year, visitors to the Alamo from across the world tell how they learned about the Alamo from John Wayne. Many cinema buffs continue to hold the film in as much awe as the Alamo itself. But in the next 40 years both moviemakers and cinemagoers became more sophisticated.

So when a new version of the old story was announced in March 2002, Texas journalist David McLemore warned in the *Dallas Morning News* that any depiction of the “heady mix of fact and legend entwined around the 1836 battle [would strike] close to the bone” in Texas, and noted the widely divergent opinions among historians, novelists, and just plain Alamo buffs about the value of another movie. Citing some of those views, he exposed inherent problems in making a successful movie about the event: “It’s a siege, which is inherently boring. And instead of one hero, you have three. An honest version will have to consider the bravery showed by the Mexican side. It is an immensely complicated human story. . . . You can’t tell the Alamo story without looking at the myth. The problem is when the lines get blurred.”

According to most critics, the film missed the mark. In the event, after extensive disputes the \$140 million heavily edited, 2-hour epic was directed, not by Ron Howard as originally planned, but by John Lee Hancock.

Produced by Touchstone Pictures and Imagine Entertainment, it was released in 2004. *The Boston Globe* reviewer, lamenting that “what was once to be an R-rated mega-budget extravaganza, [ended as] a PG-13-rated over-budget extravaganza,” a “deeply compromised film, if not a broken one.” *The New York Times* agreed: “In re-enacting, with a heavy heart and a heavy hand, the actual events surrounding the storied 1836 battle . . . the [oppressively solemn] movie is both elegiac and trivial. This is an accomplishment . . . of the sort that no one plans.” Most reviews followed the same pattern. David Sterritt, *The Christian Science Monitor*’s film critic, titled his piece, “Forget the Alamo, please,” and complained, “Moviemakers have been telling the story . . . since the days of silent film, and this week’s version probably won’t be the last. But here’s hoping I’m wrong—at least until someone comes up with a truly accurate account.”

As noted, only one of these big-screen movies was filmed at the Alamo. The DRT “do not permit commercial activity on the grounds.” But neither do they have any say about content and approach in the movies. Republic Studios’ *The Last Command* was the first Alamo film shot on a “back lot” at James T. “Happy” Shahan’s ranch at Brackettville, 120 miles west of San Antonio. A replica of the Alamo compound was built there for Wayne’s 1960 epic; since then it has been the location for films made for cinema and television.

Of course, several television programs, factual and fictional, have been made about the Alamo. ABC screened a black-and-white documentary, *Spirit of the Alamo* in 1960, hosted by John Wayne as a promotion for his movie. Critic John Corry called NBC’s 1987 miniseries, *The Alamo: Thirteen Days to Glory* “a very decent production” and “a respectable addition to Alamo repertory”—a reflection upon its fictional nature. The Alamo inevitably formed a part of ABC’s three-part *Texas*, broadcast in 1995. The miniseries didn’t attract the same critical acclaim; *Variety* wittily dismissed it as a “docudrama, boiled down . . . from James Michener’s massive novel *Texas*, [centered] on a fictional romantic triangle, with soapsuds bubbling along the Brazos River.” In 1996 Discovery Channel produced a well-received documentary, *The Battle of the Alamo*; its director Nina Seavey “negotiated the right to shoot [the special] inside the walls of the Alamo, the only film crew ever allowed to do so.” In 2000 Scholastic Productions made an episode of its *Dear America* TV series, based on Sherry Garland’s 1998 children’s novel, *A Line in the Sand: The Alamo Diary of Lucinda Lawrence, Gonzales, Texas, 1835*. PBS’s *Remember the Alamo—American Experience*, that “investigates the history, myth and popular culture of the Alamo” and *The Alamo Documentary: A True Story of Courage* and were both shown in 2004—not coincidentally, just as the blockbuster movie appeared on the big screen.

In the light of their jealous and zealous protection of the Alamo, it seems inconsistent that the DRT do not object to the mostly trivial and trashy souvenirs that are peddled in San Antonio. Many such things are on sale in their own gift shop, right on the Alamo grounds; because they operate without

municipal, state, or federal support, perhaps the end is thought to justify the means. One vendor in downtown San Antonio categorizes items to make online selection easier for the discerning buyer; it may be assumed that one can obtain Alamo memorabilia from the comfort of home—“remember the Alamo” without actually going there! Anyway, all categories are prefaced with the magical words “The Alamo”: T-shirts, gifts, baby gifts, birthday gifts, hats, presents, hoodies, gift ideas, mouse pads, magnets, tees, coasters, stickers. Another souvenir shop promises, “We can customize any gift in our store for you. . . . We can add names, phrases, dates to any image for no additional cost.” It has Alamo boxer shorts and even thongs! But the kitsch to end all kitsch is the Alamo Dirt Bottle, bearing the label “dirt from the San Antonio area.”

THE ALAMO: TO START AT THE BEGINNING . . .

The Alamo, and events before and after the famous battle, must be seen in the context of the emergence of an independent Mexico. Immediately after the conquest of Central America the Spanish moved north, seeking riches and converts to Christianity, probably in that order. Sailing from Jamaica in 1519, Alonso Álvarez de Pineda explored the Texas coastline, although he seems not to have charted his discoveries. About a decade later, shipwrecked on what is now Galveston Island, Alvar Núñez Cabeza de Vaca for 8 years lived among Native Americans as a slave, a trader, and eventually “a great spiritual leader.” He was the first European explorer of what is now Texas and the southwestern United States. In 1540–1542 Francisco Vázquez de Coronado, in a futile search for the fabled, nonexistent Seven Cities of Cibola, explored the region further. Then the Spanish turned their backs on it for almost 150 years.

Their interest was revived after 1685, when a French expedition from Canada, under Rene-Robert Cavelier, explored the Mississippi River to its embouchure in the Gulf of Mexico. The newcomers built Fort St. Louis at Matagorda Bay, providing a beachhead for France’s claim to Texas. According to one writer, Spain, threatened by the French expansion, “responded by extending its settlements into what is now Texas, thereby creating a buffer between the wealth of Mexico and French Louisiana.” In April 1689, setting out to establish Spanish claims, Alonso de León, the governor of Coahuila state, found Fort St. Louis abandoned. The crisis had passed.

As a matter of policy, the Spanish established themselves in their northern provinces of California and Texas by founding missions to convert the indigenous people to Christianity and to Hispanic culture. Close to most missions, they built a *presidio*—a fortified garrison—to protect the missionaries and the Indian community. It was “hoped that with the help of these now-loyal Indians a relatively small number of [soldiers] would be needed to defend the empire’s frontier.” In March 1690 de León led another expedition, to

establish the Mission San Francisco de los Tejas in East Texas; it was completed in late May. Visiting it a year or so later, General Domingo Terán de los Ríos, the first governor of Texas, discovered that the friars had founded another mission, Santísimo Nombre de María, 5 miles to the east. For a number of reasons both were abandoned in 1693, and for two more decades the Spanish again ignored Texas.

In 1715, the Viceroy Marqués de Valero, alarmed by renewed French incursions, appointed Domingo Ramón to lead an expedition to reestablish the Texas missions. Ramón set out in February 1716 with twenty-five soldiers, forty civilians—men, women, and children—as well as eight priests and three lay brothers from the Franciscan colleges at Querétaro and Zacatecas. The new missions would be more than 400 miles from the nearest Spanish settlement of San Juan Bautista. Early in July the party established Nuestro Padre San Francisco de los Tejas, and by the end of the year, Nuestra Señora de la Purísima Concepción, Nuestra Señora de Guadalupe, and San José de los Nazonis. Two more, Nuestra Señora de los Dolores and San Miguel de Linares de los Adaes, followed in early 1717.

In April 1718 Martín de Alarcón, the new governor of Texas, undertook another expedition of seventy souls, including ten families and more Franciscans from Querétaro. On May 1 he and Father Antonio San Buenaventura y Olivares founded the San Antonio de Valero Mission on San Pedro Creek, west of the San Antonio River. Four days later Alarcón established the Presidio San Antonio de Béxar, and within a week, the settler families, clustered around the presidio and mission, chartered the Villa de Béxar (now the city of San Antonio). A year later the mission was moved to the east side of the river, and when a fierce storm destroyed buildings there in 1724, it was again relocated, a “distance of two gun shots” to the north of the Villa. What was built there would become famous as the Alamo.

In 1720 San José y San Miguel de Aguayo had been established south of San Antonio de Valero. In 1731 three more East Texas missions—Nuestra Señora Purísima Concepción de Acuña, San Juan Capistrano, and San Francisco de la Espada—all of which had failed because of drought, malaria, or French attacks, were relocated along the San Antonio River, creating the largest concentration of missions in North America. All were officially under the protection of the Presidio San Antonio de Béxar.

National Parks Service (NPS) historians James Ivey and Marlys Thurber explain that the missions trained Native Americans as artisans and workers in farming and ranching sheep, goats, and cattle, blacksmithing, masonry, and weaving—industries essential for maintaining the political and military structure of the eastern Spanish-American frontier, “a region at the far end of a long and expensive supply line.”

Because the Presidio San Antonio de Béxar was never completed (or for that matter, never adequately manned) the monks of the San Antonio missions built their own defenses against attack from such warlike Southern

Plains tribes as the Apache and the Comanche. Consequently, despite its principally religious purpose, San Antonio de Valero also “manifested clear military overtones.” Eight-foot high, two-foot thick stone and adobe walls enclosed a rectangular main plaza, around 480 feet long by 160 wide; access was through a turreted fortified gate in the south wall. The converted Indians were safe in this compound; most of their houses, flanked by a loggia, were built along the western wall. Others lined the northern and part of the eastern walls; still others stood in the center of the quadrangle. According to Hardin, around the middle of the 1800s the Indian pueblo included thirty finished adobe houses and a number of brush huts.

The church and convent building stood in a separate courtyard to the east. Church building had begun as soon as the mission’s final site was fixed in 1724. Located immediately north of the church, the convent, housing the monks’ quarters, administrative functions, and guest rooms, took 20 years to complete. By the time that the mission was secularized in 1793, it consisted of two-story wings forming an L along the west and south edges of a cloister garth.

Construction of a stone church began in 1744, but by 1756 the unfinished building was in such a parlous condition—parts had even collapsed—that a more ambitious replacement was started. It too was discontinued when the mission began to decline in the late 1780s. What remains, and the record of surviving documents, indicates that the plan was a traditional Latin cross with an aisleless nave, short transepts, and a shallow sanctuary. The rough-dressed limestone walls were 3 to 4 feet thick and reinforced by buttresses, probably to support a vaulted ceiling; it seems that it was planned to crown the crossing with a dome. The vaults and dome, and a second-story choir loft at the west end, probably were never built. The neighboring missions, some of which are intact (but incomplete) provide a clue to unrealized intentions at San Antonio de Valero: all had domes and all had towers symmetrically flanking the west door. Thus, although the west front facing the mission plaza was never finished, the design of the church of San Antonio de Valero may be imagined; according to a 1793 description, it was “a showy and impressive piece of Tuscan architecture,” with arched doors surrounded by elaborate floral carvings, twisting columns, and shell-topped niches for statuary. The central façade and front corners of the church had quoins of ashlar. At least some of that is evident in the surviving fabric.

Father Juan Morfi had described the unfinished mission buildings in 1778, as containing a small two-story convent 50 *varas* square—*vara* was anything between 32 and 43 inches—with an arched gallery giving access to rooms—the missionaries’ cells, a porter’s lodge, a refectory, kitchen, and “domestic offices.” Off a second patio to the north there was a workshop with spinning wheels and four looms and a store room. Morfi wrote that the church had been “ruined through the ignorance of the builder” but a replacement was being built on the same site. Services were temporarily being conducted in a small sacristy between the church and the convent.

As Spain's military-economic interests in Texas diminished, so did its interest in the missions. In November 1792 the colonial government instructed that the San Antonio missions were to be "secularized"—that is, that the settlements should become civilian rather than religious communities—and that their assets should be distributed to the surviving converted Indians; laid waste by European diseases, their numbers had drastically declined. Many continued to farm and assimilated with the immigrants; others themselves emigrated to other parts of Mexico. In fact, only the Mission San Antonio de Valero was fully secularized immediately and the Franciscans left; the others followed in 1824 after Mexico won its independence.

After the monks departed, the disused Mission San Antonio de Valero's architectural fabric soon decayed. Under new management, so to speak, in the beginning of the nineteenth century it became known as the Alamo. Former B exar County Archivist John O. Leal asserts that there was never a "deciding moment in history" when that happened; rather, it evolved through usage. Official documents between 1803 and 1807 often used "El Alamo" in reference to the cavalry contingent sent to protect the San Antonio settlements—*La Segunda Compa ia Volante de San Carlos del pueblo del Alamo* came from Alamo De Parras. Leal explains that "among the Mexican military in San Antonio, 'Valero' fell from usage altogether . . . From the Anglos' corruption of Spanish we get . . . Alamo, from 'El Alamo' shortened from the name of the squad." A popular alternative theory is that the name derives from the Spanish * lamo* (cottonwood or poplar) and refers to a nearby grove of those trees. But, warns Leal, "the 1807 references may well have been before the planting of the [grove], possibly killing any hopes by the legend lovers that the name came from the nearby row of cottonwoods."

MEXICAN INDEPENDENCE AND THE RISE OF ANTONIO SANTA ANNA

As one historian has written, the Spanish lost the colony of New Spain—from what is now Panama in the south to modern Oregon in the north—"by losing the support of colonial elites." In 1808, when Napol on Bonaparte's brother Joseph replaced Ferdinand VII on the Spanish throne, Mexico's *criollos* (locally-born Spaniards) saw a chance to secure sovereignty. They had been planning to seize power from the *gachupines* (Spanish-born Mexicans) who enjoyed privileges simply because of where they were born. But the *criollos* were preempted by Miguel Hidalgo y Costilla, "the father of his country," a 57-year-old Catholic priest in the village of Dolores. Before dawn on September 16, 1810, he had the village's *gachupines* arrested and called upon the "exploited and embittered" lowest caste—indigenous and mixed-race people—to rise against their oppressors and "recover the land that was stolen from their forefathers." An anonymous writer explains, "Hidalgo's passionate declaration, 'Mexicanos, viva M xico!' was a swift, unpremeditated decision that he was calling these people to revolution was a radical change in

the original . . . plot devised by the *criollos*.” In summer 1811 the turbulent priest would be executed in Chihuahua.

A key figure in subsequent developments was Antonio López de Santa Anna Pérez de Lebrón, the notorious Santa Anna, born into a middle-class *criollo* family in Jalapa in Veracruz. After rudimentary schooling he was apprenticed to a Veracruz merchant, but he was diffident about education and commerce. Rather, as Donald J. Mabry points out, “a man of action, he loved soldiering. It was exciting, decisive, and rewarding.” Young Santa Anna was loyal to the crown—well, for as long as it suited him—and therefore opposed to the incipient movement for independence. At the age of 16, in 1810 he enlisted as a cadet in the Fijo de Veracruz infantry regiment; by 1812 he was made first lieutenant and 4 years later promoted to brevet captain. According to his biographer Wilfred Callcott, he “spent the next five years battling insurgents and policing the Indian tribes of the *Provincias Internas*,” distinguishing himself in several campaigns.

In March 1821, declining an invitation from José Miranda to join the rebels, Santa Anna broke the siege of Orizaba and was rewarded with the rank of brevet lieutenant-colonel. A few days later a large revolutionary force arrived in the region; it was loyal to the former Royalist officer Agustín de Iturbide, a *criollo* who had deserted. Historian Jim Tuck writes, “Seeing which way the wind was blowing, Santa Anna made the first of many betrayals that would characterize his career.” He joined Iturbide on the condition that he could retain his new rank. Within about a month he was commanding the rebel army’s 11th Division. After more than a decade of fighting, Mexico became an independent nation. But that hardly diminished conflicts, and for the next decade or more the country was ravaged by civil wars and intrigues. Santa Anna was involved in them all. Here, an overview must suffice.

Iturbide became emperor in May 1822. Moving to Mexico City, the sycophantic Santa Anna “exploited his situation for personal gain,” even courting the Emperor’s 60-year-old sister (he was 28). In October Iturbide promoted the “quarrelsome and opportunistic young colonel” to brigadier general and sent him to Veracruz, first as military commander of the city and then as civilian commander of the whole province. But relying as it did upon the force of arms, the unpopular emperor’s reign was brief. In December Santa Anna and Iturbide fell out. Tuck states that “an angry Santa Anna . . . proclaimed himself a champion of liberty and ‘declared’ against [the emperor].” He defected to the republicans, led by Guadalupe Victoria, and took with him “the custom houses revenues and the support of the wealthy Veracruz merchants.” In March 1823 Iturbide was forced to abdicate and he left the country.

The new republican government first sent Santa Anna to San Luis Potosí. But when he “openly supported the federalist faction,” he was recalled to Mexico City and placed under house arrest. Through the influence of powerful friends he was reinstated as brigadier general and made military governor of Yucatán. Within a few months he unilaterally declared war on Spain and tried to invade Cuba; again ordered back to the capital, he was given charge

of army engineers. So he resigned in 1825 and returned to civilian life on his estate near Jalapa, where he acquired more land and became a prosperous gentleman farmer. In 1825 he married 14-year-old Inés García; they would have four children.

In Mexico, Freemasonry formed “the organizational basis of the political factions.” The York Rite lodges supported the liberals, the Scottish Rite lodges the conservatives. Santa Anna first joined a York Rite body, but when the balance of political power shifted, he shifted too, joining a Scottish Rite lodge. Tuck observes that his “immediate concern was to be on the winning side [and] switching allegiance never troubled him.” In 1827–1828, when he helped President Victoria suppress a rebellion led by the Vice President Nicolás Bravo and the Scottish lodges, Santa Anna was rewarded with the governorship of Veracruz. In 1828 the conservative Manuel Gómez Pedraza won the presidential election; but, under threat from Santa Anna and others, he soon relinquished his victory and fled Mexico. Vicente Guerrero, the vice president, took his place and Santa Anna again was rewarded for his help, this time by promotion to the highest military rank. The following year Spain attempted to reconquer Mexico, and in September Guerrero despatched Santa Anna to Tampico to repel the invaders. Originally 2,700-strong, the Spanish had lost many men to tropical diseases; the rest quickly surrendered. But Santa Anna, the egotistical “hero of Tampico,” claimed a famous victory.

The conservative, Anastasio Bustamante, overthrew Guerrero in 1830. Making himself dictator, he expelled his adversaries, persecuted the liberals, and established a secret police force. But in the following year he organized Guerrero’s abduction and execution, and the popular outrage showed Santa Anna which way the wind was blowing. Declaring himself a liberal, in 1832 he raised an army in Veracruz to depose Bustamante; the ensuing civil war ended in December when Pedraza, Bustamante, and Santa Anna agreed that Pedraza would assume the presidency temporarily and Bustamante would go into exile. Pleading illness, the Machiavellian Santa Anna went home to Jalapa to await the 1833 presidential election; he was confident of the outcome, convinced that he was the “most popular and powerful man in the country.” He was elected as a liberal, but finding the mundane tasks of governing “boring and irksome,” he delegated them to his vice president, Valentín Gómez Farías. Then, again using the pretext of poor health, he withdrew to a hedonistic lifestyle at his hacienda. Conservatives revolted when Farías, through the so-called Laws of ’33, tried to “dismantle the vestiges of the colonial past” and ended special privileges. Santa Anna was obliged to return and suppress the rebellion.

TROUBLE IN TEXAS

Texas had been a thorn in the Mexican government’s side for some time. Separated from Mexico City by hundreds of miles of virtual desert, it was

hard to govern. Through the 1820s U.S. citizens were acquiring cheap land in Mexico, whose remote frontiers were impossible to secure. Attempting to preempt the “Americanization” of Texas, the Mexican government made land grants to a group led by the Austin family on condition that the members become Mexican and Roman Catholic. The effort failed, for both legal and illegal immigrants violated the law.

Hostilities soon developed. A month after the Battle of Velasco of June 26, 1832—“an armed prelude to the Texas Revolution”—José de las Piedras, the Mexican commander at Nacogdoches, had attempted to settle disturbances there and at Anahuac on Galveston Bay; the Texans rejected his demand that all citizens surrender their weapons. On August 1 their 300-strong force besieged de las Piedras’ garrison; after a battle the Mexicans were put to flight. By 1835, the Anglo immigrants greatly outnumbered Mexicans, and many wanted Texas to be part of the United States.

Santa Anna had taken up the presidency again in 1834, albeit briefly—altogether, he was president eleven times! Declaring that Mexico was unready for democracy, he established a Centralist autocracy. In January 1835 he once more feigned illness and returned to Jalapa, but in May “when the liberals of Zacatecas defied his authority . . . [he] moved to crush them,” then launched a nationwide repressive campaign. He abolished the 1824 Constitution, replacing it with an ultraconservative instrument. In May 1835 he abolished state governments, making them into military departments. It was clear that dissent would not be countenanced. Although many states protested, only the people of distant Coahuila y Texas took action.

Santa Anna ordered the apprehension of any Anglo-American citizens of the state who were conducting business in the capital, Monclova. Historian W. R. Williamson writes that by July, Texans in San Felipe and Nacogdoches were “beating the drum for war.” The Battle of Concepción took place at the end of October. Early in December Texan volunteers under Stephen Austin besieged the San Antonio headquarters of General Martín Perfecto de Cós, the Mexican commander in the north. After five days of skirmishing the Centralists surrendered; the Texans occupied the Alamo and strengthened the fortifications already carried out by Cós. Santa Anna marched on Texas. Two forts, each “ready to alert the Texas settlements of an enemy advance,” blocked his way: the Alamo and the Nuestra Señora de Loreto Presidio at Goliad.

THE PANTHEON OF FRONTIER GALLANTS

History and myth have established three men as “the pantheon of frontier gallants,” larger-than-life combatants in the Battle of the Alamo: David (Davy) Crockett arrived from Tennessee to join Colonel James Rezin Bowie and Colonel William Barret Travis. Comparatively little has been written about the

latter two. Bowie was a fortune hunter, known for his fraudulent land dealings and Travis an unprincipled lawyer; “youngest of the three, [he had] brought little but potential with him to Texas.” Crockett, on the other hand, was already a legend—“a bona fide folk hero”—surrounded by tall tales, largely of his own creation. What happened at the Alamo provided the raw material from which writers and moviemakers could build each of them into an icon of Texas and American history.

James “Jim” Bowie was born in 1796, probably in Logan County, Kentucky. The Bowie family moved first to Missouri, and then in around 1809 to southeastern Louisiana, where James’ father bought a plantation. In January 1815 Jim and his older sibling Rezin (pronounced “reason”) were about to join Andrew Jackson’s forces to fight the British when the War of 1812 ended. For three years from 1818, with another brother John, they formed a partnership with the New Orleans smuggler and pirate Jean Lafitte to smuggle slaves into Louisiana from Texas. According to historian Jeff Bailey, Bowie used the profits from that trade to speculate in Louisiana property, but because many of his land claims were bogus, he and John moved to Arkansas “under a cloud of suspicion,” where they started over. It remains uncertain exactly when Bowie, who spoke Spanish, first went to Texas; some sources say that it was in 1828, after recovering from the Sandbar brawl—now notorious for its myths about the Bowie knife—near Natchez, Mississippi. What *is* clear is that on February 20, 1830, he took the oath of allegiance to Mexico and the following October became a Mexican citizen. In April 1831 he married Ursula Maria de Veramendi, the daughter of the vice governor, and they settled in San Antonio. Ursula, her parents, and her two children died in a cholera epidemic in 1833.

William Barret Travis was born in South Carolina in 1809. Eight years later his father moved the family of eleven children to Alabama, where Travis was educated. He was articled to James Dellet, a Claiborne lawyer, later becoming his partner and running a branch office at nearby Gosport. In October 1828 he married Rosanna Cato and settled down—for a while. He founded and edited the Claiborne *Herald* (it seems to have failed by 1829) and was appointed adjutant in the Alabama Militia. But his marriage was already in trouble, each partner accusing the other of infidelity. Travis soon left his wife, son, and unborn daughter to move to Texas, arriving as an illegal immigrant early in 1831. He established a law office in Anahuac. As he made business trips through Texas Travis formed links with opponents of the anti-immigration legislation. As tension mounted between the Mexican government and Anglo settlers, this group—the “War Party”—sought a confrontation. In the aftermath of a political disturbance at Anahuac, Travis moved his practice to San Felipe, where in 1834 he was elected secretary to the *ayuntamiento*, the principal governing body. Late in June 1835 he led a successful assault on Anahuac’s military garrison. He later commanded a unit and advised on the organization of cavalry; declining a commission as a major of artillery in the

Texas army, he was later made lieutenant colonel. He met Rebecca Cummings, whom he agreed to marry as soon as he was free from Rosanna. But when they divorced in fall 1835 he had become so “embroiled in the rapidly moving events of the Texas Revolution” that the second marriage never took place.

Crockett was born in August 1786 in Greene County, East Tennessee. When a flood washed away their house and mill, his father moved the family to Jefferson County, where he opened a tavern. In 1798 Davy started school; a persistent truant, he spent only 4 days there before running away from home—a “strategic withdrawal” prompted by fear of being punished by his father for brawling—and stayed away until 1802, taking various jobs to sustain himself. On his return, he worked for about a year to pay off his father’s debts, before returning to school 4 days a week (for 6 months) and working for John Kennedy, his father’s former creditor, on the other two.

In October 1805 he was about to marry Margaret Elder, but she jilted him; 8 months later he married Mary (Polly) Finley. He moved his family—he had two sons, John Wesley and William—to Lincoln County in 1811 and again to Franklin County in 1813. Crockett’s military career began in September as a scout in the militia: on August 30 Creek Indians massacred hundreds of settlers and soldiers at Fort Mims, Alabama. Crockett fought in the ensuing Creek war. He again signed up as a scout, to fight the British in the War of 1812 and in May 1815 he was made lieutenant in the Franklin County Militia. Soon after his return home Polly, having given birth to a daughter, Margaret, died of malaria.

Before the year’s end the penurious Crockett married Elizabeth Patton, a well-to-do widow with two children. The following year they moved to what became Lawrence County. In November 1817 he was appointed Justice of the Peace, an office that he retained until 1819. He also was elected colonel in the Fifty-Seventh Regiment of the County Militia in 1818, the year in which he became Lawrenceburg’s town commissioner. Three years later he stood for the state House of Representatives and after the 1821–1822 session the family moved to West Tennessee and he was reelected for another term. In August 1825 he unsuccessfully nominated for the U.S. House of Representatives in the Nineteenth Congress; but he won a seat as a Jacksonian in the Twentieth, and was reelected to the Twenty-First (1827–1831) and the Twenty-Third Congress (1833–1835), by then having become an anti-Jacksonian Whig.

Meanwhile, the Crockett *mythos* had begun to grow—a phenomenon that he did not discourage, as it helped his political ambitions. *The Life and Adventures of Colonel David Crockett of West Tennessee*, published in 1833, was a collection of hyperbolic tales about the adventures of the legendary Davy rather than the historical David Crockett. Nevertheless, the real Crockett had achieved much, but when he lost his 1835 congressional campaign he turned his back on federal politics. He set out for San Antonio, where he signed an oath of allegiance to the “Provisional Government of Texas or any future

republican—a word insisted upon by Crockett—government that may be hereafter declared.” Crockett would soon extol Texas as “the garden spot of the world. The best land and the best prospects for health I ever saw, and I do believe it is a fortune to any man to come here.” On January 9, 1836 he wrote to his daughter, “I have but little doubt of being elected a member to form a constitution for this province. . . . I had rather be in my present situation than to be elected to a seat in Congress for life.” He hoped to become the new territory’s land agent.

But hostilities had begun between Texas and the Mexican Centralist government. The Anglo-Texans were politically split between Whig supporters—the War party, already mentioned—and those standing for President Jackson—the Peace party. At first, Crockett had no intention of joining the fight for independence, but rather than join Sam Houston (a Jacksonite), he chose to team up with Travis, who had disregarded Houston’s orders to withdraw from the Alamo. Michael Lofaro wryly remarks, “What was more, he loved a good fight.”

THE BATTLE OF THE ALAMO

In January 1836, ordered by Governor Henry Smith to recruit a “legion of cavalry”—one hundred men to reinforce the contingent of seventy-eight at San Antonio—Travis was able to muster only twenty-nine; he asked to be relieved. Smith refused. When Bowie arrived at the Alamo on January 19 he and Travis quarreled over authority. They had known each other since 1833, when property law matters brought them together in San Felipe and “they were able to effect an uneasy truce of joint command.” Travis took command of the regulars, Bowie of the volunteers, and they shared authority over garrison orders and correspondence.

General Sam Houston wanted Bowie (since 1832 a colonel in the Citizen Rangers, a volunteer force) to abandon and destroy the Alamo. Williamson writes that as far as Houston knew, “the situation was grim.” Colonel James Clinton Neill, the Alamo’s former commander, complained that his men “lacked clothing and pay, and [he] talked of leaving. Mexican families were leaving Béxar. Texas volunteers had carried off most of the munitions and supplies.” But Bowie and Travis decided to defend the Alamo instead. As Hardin puts it, “on 2 February Bowie wrote Smith that he and Neill had resolved to ‘die in these ditches’ before they would surrender the post”; Neill had convinced him that the outpost was all that protected the Texan settlements from the Mexicans. The garrison had some 150 men; Travis arrived with his thirty on February 3, and 5 days later Crockett rode in with twelve more. Thirty-five men of the Gonzales Ranging Company were to increase the number of defenders to about 190.

The Mexican Centralist army—its strength has been variously put between eighteen hundred and an unlikely six thousand—crossed the Rio Grande and

laid siege to the Alamo on February 23, about 3 weeks before the Texans expected it. But prepared for Santa Anna's imminent assault, Travis had "strengthened the walls, constructed palisades to fill gaps, mounted cannons, and stored provisions inside the fortress." When the Mexican general sent a demand for surrender, Travis "answered the demand with a cannon shot." The enemy artillery began pounding the perimeter walls. On February 24 Bowie was confined to his bed, suffering from a serious respiratory illness, and Travis found himself in sole command. His force held on for 12 days, while he continued to plead with his superiors for the promised reinforcements. His February 24 letter "To the People of Texas and All Americans in the World" read in part,

I call on you in the name of Liberty, of patriotism and everything dear to the American character, to come to our aid, with all dispatch. . . . I am besieged by a thousand or more of the Mexicans under Santa Anna. I have sustained a continual bombardment and cannonade for twenty-four hours and have not lost a man. The enemy has demanded surrender at discretion, otherwise, the garrison are to be put to the sword, if the fort is taken. . . . Our flag still waves proudly from the walls. I shall never surrender or retreat. Victory or death.

The last words were underscored three times. In fact, his call was not unheeded; one writer says that "more than 200 volunteers had gathered at Gonzales to march to the Alamo's relief, when news of its fall reached the town." The response was too late.

On Saturday March 5 Santa Anna announced his intention to storm the defenses the next morning. Convinced that the Texans would soon be worn into submission, his alarmed officers objected that there was "no valid military justification for the costly attack on a stronghold bristling with cannons." The self-styled "Napoleon of the West" ignored their advice and at around five o'clock on Sunday morning "he hurled his columns at the battered walls" of the Alamo. Mexican Lieutenant José Enrique de la Peña, an eyewitness of the battle, recalled,

Santa Anna made the decision to use four columns of troops for the attack. . . . The first, under command of General Cos and made up of a battalion from Aldama and three companies from the San Luis contingent, was to move against the western front which faced the city. The second, under Colonel Duque and made up of the battalion under his command and three other companies from San Luis was entrusted with a like mission against the front facing the north. . . . These two columns had a total strength of 700 men. The third, under command of Colonel Romero and made up of two companies of fusiliers from Matamoros and Jiménez battalions . . . came up to 300 or more men; it was to attack the east front. . . . The fourth column, under command of Colonel Morales and made up of over 100 chasseurs, was entrusted with taking the entrance to the fort and the entrenchments defending it. The Sapper Battalion and five grenadier companies made up the reserve of 400 men.

When the assault on the Alamo began . . . all the columns were able to reach the walls of the Alamo, except for the third. [It] was held back by cannon fire and forced to find another entrance. It was then, upon seeing the difficulties that the third column was having, that Santa Anna gave the order for Colonel Amat to move in with the reserves. It was also at this time that Santa Anna also ordered into battle his general staff and everyone who was at his side.³

By eight o'clock every Alamo fighting man lay dead. Santa Anna had ordered that no prisoners be taken. The Texan losses were 189, although recent evidence suggests that the actual number could have been almost 260. In the afternoon, the Mexicans piled up all but one of the bodies—a Mexican—and burned them. Santa Anna's official report claimed that six hundred rebel corpses were found; then, truth is always the first casualty in war. About fifteen women and children and some slaves were spared; each of the women and children was given \$2 (almost \$50 at today's values) and a blanket, and guaranteed safe passage through Santa Anna's lines. Most historians place the number of Mexican casualties at two hundred dead and four hundred wounded; a few prefer the rather improbable combined number of perhaps sixteen hundred; Santa Anna reported seventy dead and three hundred wounded.

Travis died early in the battle from a single bullet in the head. Bowie was shot several times in the head as he lay helpless and breathless on his bunk. For a long time, tradition held that Crockett fell early in the conflict, but the eyewitness account by de la Peña (published in English in 1997) has it differently. He wrote that Crockett was among seven survivors who were paraded before Santa Anna. When an officer told the general that this was "the naturalist David Crockett" the indignant *presidente* ordered Davy and the others killed. Some soldiers, "hoping that once the fury of the moment had blown over these men would be spared," refused to do it but others "fell upon these unfortunate, defenseless men just as a tiger leaps upon his prey," and tortured them to death with swords and bayonets. Their bodies were burned. But what did they achieve?

Some fictional sources still perpetuate the idea that the defenders of the Alamo gave Sam Houston time to mobilize his forces. However, as historian Henry W. Barton pointed out in 1959, Houston's authority was limited to the regular army, and he had no legal right to give orders to the volunteers already in the field. The general "dispatched recruiters to raise the regular army as well as agents to acquire arms, uniforms and other supplies." As a general temporarily without an army, he took leave from the end of January 1836, during which he negotiated a treaty with the Cherokees. During much of the siege of the Alamo he was a delegate to the constitutional convention at Washington-on-the-Brazos, where the Texas Declaration of Independence was signed on March 2. The new government confirmed him as commanding general of the Texas Army. As noted, by the time that he reached Gonzales on March 11 to lead reinforcements to the Alamo, it had already fallen.

Hardin believes that though the men of the Alamo were valiant soldiers, there is no evidence (in words attributed to John Wayne) that they “joined together in an immortal pact to give their lives that the spark of freedom might blaze into a roaring flame.” He asserts, “Despite all the ‘victory or death’ hyperbole, they were not suicidal. [They] willingly placed themselves in harm’s way to protect their country. Death was a risk they accepted, but it was never their aim. Yet, even stripped of chauvinistic exaggeration . . . the battle of the Alamo remains an inspiring moment in Texas history. . . . [People] worldwide continue to remember the Alamo as a heroic struggle against overwhelming odds—a place where men made the ultimate sacrifice for freedom.”

THE FALL AND FALL OF SANTA ANNA

On April 21 Santa Anna’s army was defeated by Houston at the Battle of San Jacinto. In *Papers of the Texas Revolution* John H. Jenkins stirringly claimed, “There was a general cry which pervaded the ranks—‘Remember the Alamo!’ . . . These words electrified all. The unerring aim and irresistible energy of the Texan army could not be withstood. It was freemen fighting against the minions of tyranny, and the results proved the inequity of such a contest.” The Texans lost nine men and eighteen were wounded; six hundred fifty Mexicans died, and six hundred prisoners were taken. In an attempt to escape, Santa Anna discarded his gold braid-encrusted scarlet-and-blue uniform and disguised himself in a private’s tunic. But he was apprehended the next day.

Clarence Wharton described the negotiations between the *ad interim* government of Texas and the captive president. Santa Anna advised his second-in-command, General Vicente Filisola, “I have agreed with General Houston for an armistice until matters can be so regulated that the war will cease forever.” The two Treaties of Velasco were “speedily concluded.” The first simply provided that “all hostilities would cease, and that Santa Anna would not exercise his influence to cause arms to be taken up against the people of Texas during the present war for independence.” The second provided that he would be immediately returned to Mexico, “and that he would prepare things in the Mexican cabinet so that a commission sent by the Texas government should be received, and that by means of negotiations all differences between Texas and Mexico should be settled and independence of Texas acknowledged. The Rio Grande was agreed upon as the boundary.” Wharton added, “These bargains struck, El Presidente embarked on a schooner . . . on June 3, 1836. . . . He was quite happy at having traded these treaties for his life.” Returning in disgrace to Mexico, he lost the presidency and retired to his hacienda at Manga de Clavo. Later, true to form, he claimed that “the treaties meant nothing because he had signed under duress and only as a private citizen.” Mexico rebutted them but in 1837 the United States recognized Texas independence.⁴

But Santa Anna's career was not yet over, and it is worth briefly reviewing his further dealings with the United States. In the 1838 so-called Pastry War his left leg was hit by French grapeshot during a bombardment of Veracruz and had to be amputated. He became the "hero of Veracruz." Right then, Mexico needed a hero. The national government was ineffective, frustrated by local political bosses; so in 1839 President Bustamante named Santa Anna acting president. He waited until 1841 before ousting Bustamante and assuming dictatorial power. On October 6 he arrived in Mexico City in a carriage drawn by white horses to rule in person, "with his greed equaled only by his extravagance." He incensed the elite, the Church, and the army; he raised taxes and sold fake mining shares to foreign investors. But the increased revenues were spent on ostentatious extravagances. When the treasury was bare in 1842 the army, demanding to be paid, rebelled. Santa Anna went into hiding, but government troops captured him in 1845, and he was banished for 10 years.

Ironically, the means for his reinstatement as national leader was provided by the United States, then seeking to acquire some of Mexico's territory. The United States annexed Texas in 1845, and President James K. Polk's administration supported Texas' earlier claim that the Rio Grande was the frontier. That would give Santa Fe, New Mexico also to America. When Mexico refused to sell, Polk sent troops into the disputed region. Shots were exchanged, but the United States was not sure that it could win a war with Mexico. From exile, Santa Anna persuaded the United States that only he could settle the dispute over Texas. Polk ordered American warships to allow the general safe passage to Veracruz. But Santa Anna, always consistent in character, double-crossed him. He immediately began to mobilize against the United States and in August 1846, within a month of his return, he was leading his troops northward. Valentín Gómez Farías, then Mexico's president, named him *generalissimo*.

Santa Anna regained the presidency in December. In February 1847, at the head of an army of eighteen thousand, he lost the battle of Buena Vista to General Zachary Taylor. Retreating, he returned to Mexico City to regroup and turn east, only to be defeated again at Cerro Gordo by Winfield Scott, then advancing on the capital. Secret negotiations failed, and the city fell in September. The Treaty of Guadalupe Hidalgo of February 2, 1848, ended the war. Mexico ceded all territory north of the Rio Grande and the Gila River across the Colorado to the Pacific—almost half the country. The United States paid Mexico \$15 million and took over \$3.25 million in claims by U.S. citizens against the former Mexican government.

Again in disgrace, Santa Anna resigned. In April 1848 he went into exile in Jamaica, where remained until 1850 before moving to New Granada (modern Colombia). Much of his Mexican property had been confiscated, so he "quietly built a new estate in South America and waited until his countrymen so mismanaged the nation that they would let him return." In January 1853 the conservative Centralist Party recalled him but "again power turned his head."

Tuck writes that they “wanted a European prince to rule over Mexico . . . [and] until a selection could be made, Mexico would need a military dictator to keep order. . . . [The Centralist leader, Lucas] Alamán felt that Santa Anna was the only figure with enough experience to do the job. In February Santa Anna again took control.” At the end of the year the general decreed that his dictatorship should be extended indefinitely and demanded to be addressed as “His Most Serene Highness.” To increase his army, without consultation he sold territory south of the Gila River to the United States for \$10 million. Tuck continues, “Alamán, the only man who could control [him], died in June. Without Alamán to restrain him, Santa again depleted the treasury with his wild extravagance. In 1854 a *junta* of liberals . . . drove him out of office and into exile.”

For 11 years the ever-duplicitous Santa Anna plotted his return to Mexico. He “invested most of his property” in a vessel that he sailed to New York and offered to become “the nucleus of a planned invading force from the United States.” In 1866 the U.S. government, opposed to the French-backed emperor of Mexico, Archduke Maximilian, again enabled him to return to Mexico; his countrymen promptly returned him to Cuba, and the liberals deposed the erstwhile emperor without his help. Until 1874 Santa Anna lived in Havana and Puerto Plata, Cuba, the Dominican Republic, and Nassau. His role in Mexican politics was over. In 1874 he was allowed to return to Mexico City. Tuck wryly remarks, “The first thing he did was to demand a large pension on grounds of ‘past services to the nation.’” Santa Anna lived in obscurity, almost blind, and “in part, on the charity of relatives and friends” until his death in June 1876.

Many American historians portray “the most famous and infamous” of nineteenth-century Mexicans in a way that opens them to suspicion of bias. Mabry observes that “to U.S. citizens, especially Texans, his reputation is unsavory. Mexicans tend to have mixed opinions. Most . . . agree that he was a man without integrity, an opportunist.” But Tuck admits that “he was not without courage, was a superb organizer, and his colossal ego and reckless extravagance undoubtedly served him well in a *macho* society. . . . As for the numerous betrayals and doublecrosses that marked his career, they could be explained as actions of one with a finely honed sense of real politik” and remarks, “If ever a man embodied *chutzpah*, it was Antonio López de Santa Anna.”

NOTES

1. Young, Kevin R, “Alamo’s Significance,” *The Alamo Forum*. www.tamu.edu/ccbn/ccbn/dewitt/adp/central/forum/forum36.html#significance2
2. Matyszczyk, Stephanie, “The Alamo as a Pyrrhic Victory: The Mexican Experience in the Battle of the Alamo,” *Lethbridge Undergraduate Research Journal*, 1(no. 2), 2007.

3. De la Peña, Jose Enrique, *With Santa Anna in Texas: A Personal Narrative of the Revolution*. Translated and edited by Carmen Perry. College Station: Texas A & M University Press, 1997.
4. Wharton, Clarence R., *El Presidente: A Sketch of the Life of General Santa Anna*. Austin, TX: Gammel's, 1926.

FURTHER READING

- Baugh, Virgil E. *Rendezvous at the Alamo: Highlights in the Lives of Bowie, Crockett, and Travis*. Lincoln: University of Nebraska Press, 1985.
- Callcott, Wilfrid Hardy. *Santa Anna: The Story of an Enigma Who Once Was Mexico*. Hamden, CT: Archon, 1964.
- Castañeda, Carlos E., ed. *The Mexican Side of the Texas Revolution*. Washington, DC: Documentary Publications, 1971.
- Crisp, James E. *Sleuthing the Alamo: Davy Crockett's Last Stand and Other Mysteries of the Texas Revolution*. New York: Oxford University Press, 2005.
- Davis, William C. *Lone Star Rising: The Revolutionary Birth of the Texas Republic*. College Station: Texas A & M University Press, 2006.
- Davis, William C. *Three Roads to the Alamo: The Lives and Fortunes of David Crockett, James Bowie, and William Barret Travis*. New York: HarperCollins, 1998.
- Fowler, Will. *Santa Anna of Mexico*. Lincoln: University of Nebraska Press, 2007.
- Hansen, Todd, ed. *The Alamo Reader: A Study in History*. Mechanicsburg, PA: Stackpole, 2003.
- Hardin, Stephen L. *The Alamo 1836, Santa Anna's Texas Campaign*. Westport, CT: Praeger, 2004.
- Hopewell, Clifford. *James Bowie, Texas Fighting Man: A Biography*. Austin, TX: Eakin, 1994.
- Huffines, Alan C. *Blood of Noble Men: The Alamo Siege and Battle: An Illustrated Chronology*. Austin, TX: Eakin, 1999.
- Lemon, Mark, et al. *The Illustrated Alamo 1836: A Photographic Journey*. College Station: Texas A & M University Press, 2007.
- Lofaro, Michael A., ed. *Davy Crockett*. Knoxville: University of Tennessee Press, 1985.
- McDonald, Archie P. *Travis*. Austin, TX: Jenkins, 1976.
- Olsen, James S., and Randy Roberts. *A Line in the Sand: The Alamo in Blood and Memory*. New York: Free Press, 2001.
- Peña, José Enrique de la. *With Santa Anna in Texas: A Personal Narrative of the Revolution*. College Station: Texas A & M University Press, 1997.
- Santa Anna, Antonio López de. *The Eagle: The Autobiography of Santa Anna*. Austin, TX: State House Press, 1988.
- Todish, Timothy J. *Alamo Sourcebook, 1836: A Comprehensive Guide to the Alamo and the Texas Revolution*. Austin, TX: Eakin, 1998.
- Turner, Martha Anne. *William Barret Travis: His Sword and His Pen*. Waco, TX: Texian, 1972.
- Winders, Richard Bruce. *Sacrificed at the Alamo: Tragedy and Triumph in the Texas Revolution*. Abilene, TX: State House Press, McMurry University, 2004.

INTERNET SOURCES

Alamo. www.thealamo.org/main.html

Lofaro, Michael A. "Crocket, David." *Handbook of Texas Online*. www.tshaonline.org/handbook/online/articles/CC/fcr24.html

Mabry, Donald J. "Antonio López de Santa Anna (1794-1876)." www.historicaltextarchive.com/sections.php?op=viewarticle&artid=159.

Tuck, Jim. "Master of Chutzpah: The Unsinkable Antonio Lopez de Santa Anna." www.mexconnect.com/mex_/history/jtuck/jtsantaanna.html



Courtesy Library of Congress

Alcatraz, San Francisco, California

*"On a clear day, you can
see Alcatraz."*

Alcatraz is among San Francisco's most popular tourist destinations, with 1.4 million visitors taking day or night tours each year. Many of the city's shops sell souvenirs—refrigerator magnets, key rings, shot glasses, coffee mugs, postcards, models of the island (incongruously including snow domes), replica handcuffs and guns, spoons, chocolate bars, puzzles, and caps and t-shirts emblazoned “Alcatraz” or bearing portraits of some of its more infamous residents. The U.S. Library of Congress holds about fifty fiction and nonfiction English-language titles about the prison, for adults and children; many are graphic memoirs of former inmates or guards. The fact that nineteen books have been published since 2000 is an indicator that a consciousness of Alcatraz remains very much a part of American culture. Only 3 years after the prison opened Hollywood made a B-grade movie called *Alcatraz Island. The Last Gangster*, starring Edward G. Robinson and James Stewart, followed in the same year and until 1996 by fourteen more films.

In the popular mind the word *Alcatraz* conjures a dark image of an escape-proof “little iron curtain world of lost souls sitting in the shadow of the Golden Gate,” reserved for America's most desperate, incorrigible criminals. That picture was deliberately created by the “New Dealers” in the 1930s in response to the nation's question, “What are you doing to protect us from rampant crime?” and fostered and embellished by Hollywood and tabloid newspapers.

Alcatraz is among a number of erstwhile prisons throughout the world, now tourist attractions, which appeal to our morbid fascination with crime and punishment. Each reflects what a society *was* and *how it changed*. As will be shown, Alcatraz is twice iconic: not only an intimidating former prison, but a symbol of freedom for Native Americans.

Alcatraz's meaning has changed several times, whether by political will, by social manipulation, or by the power of the people. That meaning is as complex as its colorful history, and the stylistic and functional diversity of its architecture is almost irrelevant. During 160 years of U.S. government occupation the island has been also a lighthouse station (its only continuous nonindigenous association), an artillery emplacement, a military stockade, a political symbol for Native Americans, and a national park and bird sanctuary.

Although it was America's version of Devil's Island for less than one-fifth of that time, it is the notorious federal penitentiary looming out of the fog on the “grim, tide-gnawed rock” that is an icon of American architecture.

THE YEARS WHEN LITTLE HAPPENED

Alcatraz is a waterless rocky island, 1½ miles offshore from San Francisco Bay's northern marina. Rising precipitously to 130 feet above sea level, it is about 19 acres in area and at its widest approximately 500 feet across. It was visited—but never occupied—by the indigenous Coastal Muwekma and

Costanoan people (aka Ohlone, “people of the west”) who settled nearby grassy and wooded Angel Island about 2,000 years ago. Then, as now, Alcatraz was a rookery for many species of seabirds and thus a source of eggs. Some writers, basing their speculation on oral history, claim that the islet was believed to “harbor evil spirits, and used to isolate or ostracize tribal members who had violated a taboo,” rather incongruously adding that it could have been a hiding place for Indians attempting to escape the Spaniard’s California Mission system. Evil spirits and punishment are hardly compatible with voluntary flight and sanctuary, and such assertions may stem from a *post facto* construct related to the Europeans’ consecutive military and civil prisons.

The first nonindigenous people to see Alcatraz were with the Spanish explorer Lieutenant Juan Manuel de Ayala when he sailed the packet boat *San Carlos* into San Francisco Bay on the night of August 5, 1775. They spent the next 6 weeks exploring the area. Making charts from a small boat, Ayala’s pilot, José de Cañizares described an island “so arid and steep there was not even a boat harbor there: I named [it] *La Isla de los Alcatraces* because of their being so plentiful there.” *Alcatraces* is an archaic Spanish word for a seabird—perhaps gannet, pelican, or cormorant. By 1826 the name was anglicized to Alcatraz.

After more than a decade of conflict with Spain, the Republic of Mexico was constituted in 1824 and laid claim to former Spanish territories including California. According to most sources, in April 1846 one Julian Workman, a naturalized resident of Los Angeles, petitioned California’s Governor Pío de Jesus Pico IV for tenure of Alcatraz under a Mexican law that allowed the secession of coastal islands to approved Mexican citizens. Title was granted in June on condition that Workman build a lighthouse. He immediately transferred ownership to his son-in-law, one Francis Temple, just as the Mexican–American War reached the West Coast; before Temple could take possession of the island, American Naval forces seized California. The War was ended in February 1848 by the Treaty of Guadalupe Hidalgo, and because no lighthouse had been built under the land grant, the U.S. government rejected private ownership claims. Aware of its strategic significance, California’s acting Military Governor John Charles Frémont personally paid Temple \$5,000 for the unoccupied island on behalf of the government; it seems that his repeated applications for reimbursement were turned down.

FORTRESS ALCATRAZ

Gold was discovered in the Sierra Nevada foothills in January 1848. In the ensuing Gold Rush, San Francisco’s population grew from about 450 in 1847 to an estimated 100,000 by the end of 1849. A little over one-third of the newcomers arrived by sea in the second half of 1849, at the rate of one thousand a week. With the vast mineral wealth and the inevitable mass migration

to the West Coast, the U.S. government needed to secure its citizens, its borders, and its resources; and in 1850 plans were put in hand for a lighthouse and a military installation on Alcatraz.

In 1847 only six trading vessels had entered San Francisco Bay. But from April to December 1849 the number of ships was about 550, emphasizing the urgent need for a lighthouse in the foggy harbor. In line with the passage through the Golden Gate, Alcatraz was a logical site, and its tower was the first in a chain of eight that the Baltimore firm of Gibbons and Kelly built along the northwestern coast of the United States. Although Congress appropriated funds in 1850, an “advance crew” did not begin the foundations until mid-December 1852. Construction of the white-painted two-story cottage with a 52-foot tower at its center began at the end of January 1853 and was completed 6 months later. Even when the lens for the light arrived the following October, “budget problems” delayed its commission. That finally happened on June 1, 1854. A fog bell—necessary because the light was not always visible—was added in 1856.

In 1850 an executive order from President Millard Fillmore reserved strategic lands—the old Presidio, Fort Mason, the Golden Gate’s north wall, the Marin Headlands, Angel Island, Yerba Buena and Alcatraz—to protect the burgeoning city of San Francisco, especially in the threatening shadow of war with Spain. When Congress approved funding in 1852 a Board of Engineers for the Pacific Coast was appointed to oversee construction of a “triangle of defense” at Fort Point, Lime Point, and Alcatraz for the entrance to the Bay.

Alcatraz was given priority and in the following year First Lieutenant Zealous B. Tower (who eventually rose to be Brigadier General) began work. The fortress consisted of a number of “barbettes” (gun platforms), mostly facing the Golden Gate, that were quarried from the rock and protected by masonry breastworks. When its emplacements were completed in April 1855, the first permanent harbor defense of the West Coast fairly bristled with ordnance. The largest guns, of 15-inch bore, had a range of 3 miles. The steep cliffs around the island were blasted to make storming the defenses more difficult.

The sole access to the island was from a pier on the northeast side, defended by a casemate (bomb-proof enclosure) with eleven cannons. From the landing point the only way to the lighthouse, barracks, and service buildings on the highest ground was along a narrow road, heavily defended by a sally port near the dock. The massive fortified barracks at the summit of the island—aptly nicknamed “The Citadel”—was designed as a last line of defense by Second Lieutenant Frederic E. Prime. Enclosed by a dry moat, the plain 3-story brick building accommodated officers, non-commissioned officers (NCOs), and enlisted men, as well as service areas and storage spaces. Surrounded with rifle slots protected by iron shutters, its first level (the only part that survived a series of remodelings), formed a half-basement. The ground level—also with narrow windows that could serve as rifle slots—was reached across drawbridges at each end. The third level had slightly wider windows, and the roof

was surrounded with a parapet over which infantry could fire. It was completed in November 1859.

A month later Captain Joseph Stewart took command with the eighty-six strong Company H, Third U.S. Artillery. Alcatraz was replete with barbette batteries housing seventy-five large-caliber cannons ringing the island beneath the Citadel. The whole island was a fortification. During the Civil War, the defenses were reinforced with three more batteries—a total of 101 guns and nineteen howitzers. Immediately after the War, the ordnance was gradually augmented, and by 1868 the island boasted fifty unmounted and 103 mounted pieces. But none was ever fired in anger.

As the initial exuberance at the end of the Civil War turned to a sober realization of the war's great cost, the country's political climate changed more and more to one of isolationism. . . . The Army's energies became centered on its role as a frontier constabulary, rather than as a force to be pitted against other modern military establishments.¹

Then Alcatraz's military development suddenly ended. Being unrifled, most of her guns were considered too obsolete to defend the harbor and were removed. The Island began its metamorphosis to a prison.

FROM CANNONS TO CONVICTS

The first military prisoners—eleven men court-martialled for “infractions of Army Regulations”—arrived on Alcatraz with the original garrison in 1859. The Rock soon became a conveniently isolated prison to which other military posts sent their “problem” soldiers, until in August 1861 the Army designated it as the official stockade for the Department of the Pacific. Before long, the increasing number of inmates was further augmented by recaptured deserters and servicemen who had committed serious crimes. All were incarcerated in overcrowded conditions in the unsanitary basement of the sally port, where cells were shared with as many men as could fit in the space, sleeping head to toe on the floor, on wooden pallets and “vermin-breeding straw tick mattresses.” The first room was located barely above the high tide mark, and the lack of fresh water and the absence of a latrine made the guardhouse “pestilential in the extreme.”

Two years later convict laborers constructed a 20- by 50-foot temporary wooden cell block north of the prison. It was followed by several other structures nearby, constituting the “Lower Prison.” In 1867 a brick cell block that provided a 6- by 3½-foot space for each man was built on top of the sally port. Until the end of the century, the Lower Prison housed an average of one hundred inmates. Then, partly to house prisoners taken in the Spanish–American War of 1898, many serving short sentences, the number increased by about five times in the first years of the twentieth century. In 1904 an

“Upper Prison”—a stockade enclosing three timber-framed two-story cell blocks—was built on the parade ground. Over the next few years prisoner work crews added a mess hall, kitchen, workshops, library, and a wash-house. The original Lower Prison, which had been almost burnt down in 1902, was refitted as workshops. That fire, and those that devastated San Francisco as a result of the April 1906 earthquake, prompted the administration to replace the timber buildings with masonry ones.

In March 1907 the last infantrymen left Alcatraz. Command passed to Major Reuben B. Turner of the Third and Fourth Companies of the U.S. Military Guard, and the island was redesignated “Pacific Branch, U.S. Disciplinary Barracks, Alcatraz.” Demolition of the upper two stories of the old Citadel began late in 1908, the basement level and moat being retained as a starting point for the first permanent prison building. Designed by Turner and built by prisoner labor, the state-of-the-art reinforced concrete cell house—barges brought in all materials and building equipment—was completed in February 1912. It had central steam heating, skylights, and electricity, and its vast main space contained four blocks with a total of six hundred one-man cells, a dining hall and kitchen, a hospital (removing the risk of transferring inmates to the mainland for treatment), offices, and a recreation yard. Turner also built a simple rectangular two-story power plant. Eighteen months later a strange review of the development appeared in the *San Francisco Chronicle*, making the establishment sound a little like a resort:

Standing in the center of the San Francisco Bay and commanding a full view of the Golden Gate, it is one of the beauty spots of the bay, its splendid, large, white stone buildings gleam brightly in the sunlight and make a conspicuous showing for many miles. As a prison it is ideal both as to location and buildings. Around the island erratic currents sweep, making it practically impossible for a prisoner to escape by swimming, could he elude the vigilant guards. The prison buildings are new, scrupulously clean and are light and airy, with modern plumbing in each cell, electric lights and comfortable beds. There are 200 shower baths for prisoners, a library, barber shop and all possible comforts—saving liberty.²

The utilitarian aesthetic of the cell house, with minimal quasi-classical detailing, was nothing to write home about. The concrete ground floor walls simulated coursed masonry; above them a simple molding carried shallow Tuscan pilasters, dividing a plain wall crowned with a low-profile cornice. The windows were simply unadorned rectangular holes. The plainness—it must be said, *uninformed* plainness—may have been an indicator of Turner’s architectural education or artistic skill, or (less likely) an attempt to find that *architecture parlante* appropriate to prisons that so long had eluded architects. Certainly it demonstrated that visual considerations were not paramount.

The new prison building blocked the light from the original 50-foot lighthouse, which also had been damaged in the 1906 San Francisco earthquake.

The rather more ornate electricity-powered 84-foot reinforced concrete tower that replaced it was completed in December 1909.

Soon after the state-of-the-art military prison was completed, changes in penological philosophy (at least, in the military) were in the wind. The *San Francisco Chronicle* reported

Saving for the most hardened offenders . . . Uncle Sam does not intend to keep his soldiers who have erred behind prison bars much longer. Deserters, men who have proved insubordinate, men who have in a thousand and one ways broken the military regulations so that courts martial have condemned them to imprisonment, are going to be given another chance to make good. They are going to be placed in disciplinary barracks where they will drill like soldiers and perform soldierly duties. Then when they show that they want to prove themselves fit to again wear the uniform they will be released, reassigned to regiments and given another chance to earn their honorable discharges. Incurrigibles and men who have committed grave crimes will be sent to Leavenworth.³

The average age of prisoners was 24, and most were serving short sentences for relatively minor offenses. Alcatraz was a minimum-security institution whose inmates attended “remedial education and vocational training” sessions. Many later returned to duty; some were given a dishonorable discharge. “With labor” varied according to a prisoners’ offense and responsibility; some were assigned as domestic servants and even babysitters for officers’ families; others crushed rock in the quarry on Alcatraz.

Because everything used on the island, including water, had to be brought by barge from the mainland, the cost of maintaining the military prison became prohibitive, especially as the Great Depression tightened its grip. The decision to close the facility in June 1934 coincided with another growing social need in America. There soon would be changes at Alcatraz.

A “DEVIL’S ISLAND” OF OUR VERY OWN

By the early 1930s the widespread poverty caused by the incipient Great Depression and the corruption generated by Prohibition (the Volstead Act had been in effect for 10 years) were sources of increasing organized crime in American cities, and lawlessness in rural areas. The era’s notorious criminals—Al Capone, Bonnie Parker and Clyde Barrow, the Ma Barker gang and others—were kept in the public eye by newspapers and a plethora of lurid true-crime magazines like *True Detective*, *Police Gazette*, *Master Detective*, and *Police Story*. By the early 1940s an estimated two hundred fifty titles were in print. A recent commentator significantly noted that though there was “public fascination with psychopathic violence” these graphic accounts “invariably [ended] with more general invocations of the need for tough measures against criminals of all sorts.” Encouraged by what the American public

read, a “cry went out to take back America’s heartland,” as another writer put it.

Moreover, the matter was taken up by politicians and bureaucrats. Anthropologist Joel Gazis-Sax writes that in 1933 Sanford Bates, director of the Bureau of Prisons, drew the nation’s attention (as though it was necessary) to the “bold and ruthless depredations of a small group of desperate criminals” whose prominent exposure in the media undermined the public’s trust in the Federal Prison System. Bates lamented the evil influence of these desperados on “the man who is a criminal by force of circumstances, the accidental offender, the feeble-minded, the under-privileged and the sorely tempted” simply because they were incarcerated in the same prisons. Attorney General Homer Cummings warned that the United States was “confronted with real warfare which an armed underground is waging upon organized society . . . a war that must be successfully fought if life and property are to be secure in our country.”

On a national radio broadcast of October 12, 1933, Cummings emphasized that the worst offenders would be put out of reach in a new type of federal prison “on a precipitous island in San Francisco Bay, more than a mile from shore. The current is swift and escapes are practically impossible. . . . Here may be isolated the criminals of the vicious and irredeemable type.” The following day *The New York Times* confirmed that the Bureau of Justice had taken over the former military prison on “rocky, inaccessible Alcatraz Island . . . for confinement of defiant and dangerous criminals.” The well-chosen words covered it all: “rocky,” “defiant” and “dangerous” fit the punishment to the crime; “inaccessible” reassured the public of security against the forces of evil. Many of Cummings’ words were rhetorical, and many of his actions symbolic. Primarily, the establishment of the federal penitentiary on Alcatraz was a political move—after all, none of the Army’s reasons for leaving had changed and maintaining a civilian prison would cost the American taxpayer no less. But if for a while it soothed a restive public, even by creating an illusion of security in the big cities, it was a worthwhile investment.

In the middle of 1934, after \$263,000 had been spent on sophisticated physical and technological modifications to Turner’s 1909–1912 cell house, *The New York Times* followed with, “Equipped with the latest devices to prevent escape . . . the ‘Devil’s Island’ of the Government prison system is ready to receive incorrigible convicts.” After a couple of weeks the newspaper reinforced the announcement with the evocative, verbose headline, “Alcatraz prison also a fortress; on its lonely rock it is as secure as man and nature are able to make it.” And more than 60 years after its closure that is what the name “Alcatraz” normally conjures in the public mind.

English historian Michael Woodiwiss claims that “Alcatraz held unlimited potential for the writers of popular fact and fiction. It almost immediately became part of American folklore.” Only 4 years after the penitentiary was opened Yip Harburg would include in the lyrics of “Lydia the tattooed lady,”

one of Groucho Marx's signature tunes in *At the Circus*: "For two bits she will do a mazurka in jazz, / With a view of Niagara that nobody has./ And on a clear day you can see Alcatraz./ You can learn a lot from Lydia!" The movie was internationally released, and when we consider that for comic effect Alcatraz is bracketed with such familiar references as the Battle of Waterloo, Lady Godiva, Niagara Falls, Picasso, and Nijinsky its instantly *international* iconic quality becomes obvious. Indeed, Woodiwiss' observation could be stated without qualification: "It almost immediately *became part of folklore.*"

THE WHAT-MAN OF WHERE?

Folklore inevitably embraces myths. And there is little doubt that the "official" secrecy that swathed the grim penitentiary—the press was forbidden to visit the island—and the popular appetite for the salacious combined to generate an Alcatraz mythology. Perhaps the best-known theme was in Thomas Eugene Gaddis' 1955 book, *Birdman of Alcatraz: The Story of Robert Stroud*, made into a movie by MGM in 1962. Nominated for four academy awards, the film was a huge success at the box office.

Hollywood has never let truth stand in the way of a good story, and the "taglines" read "Inside the rock called Alcatraz they tried to chain a volcano they called 'the birdman,'" and "Now the world will know the story of the most defiant man alive!" Because of it, the hitherto unknown Robert Franklin Stroud was probably Alcatraz' most famous prisoner. But he never had a single bird in the 17 years that he was there. Nor did he in any way resemble Burt Lancaster (who portrayed him in the film); far from a benign, bespectacled, bearded grandfatherly figure, Stroud was a gaunt, balding, hatchet-faced, thin-lipped man with a history of psychotic episodes.

In Alaska in 1909, when 18 years old, he shot a young bartender to death, seemingly over a mere \$10. Convicted of manslaughter, he was sentenced to 12 years imprisonment in McNeil Island federal penitentiary. Soon after arriving there he stabbed (though not fatally) a fellow prisoner, and with a 6-month extension to his sentence, he was transferred to Leavenworth. Almost immediately he became a disciplinary problem. After several minor misdemeanors, on March 25, 1916, and in front of a thousand witnesses, Stroud in an aggressive outburst used a "shank" to stab to death a guard with whom he'd had ongoing conflicts. He was convicted of murder and sentenced to hang. Stroud's mother hired a lawyer to appeal the verdict. It stood, but his sentence was reduced to life imprisonment. At a second retrial, Stroud was again found guilty; this time, after more than 2 years of legal wrangles, he was resented to death. A third challenge was again unsuccessful, and the death sentence was upheld. Finally, in 1920 President Woodrow Wilson commuted it to life imprisonment without parole. Because of Stroud's erratic eruptions of violent behavior, he was permanently segregated.

During the 30 years spent in Leavenworth he studied birds. Starting with two sparrows that he found in the yard, later he requested a canary; and his collection grew eventually to hundreds, kept in wire cages stacked in two adjoining cells. Stroud bred and sold canaries, developing a lucrative business and attracting international attention from the bird-lovers' community. His research was published in two books, *Diseases of Canaries* (1933) and *Stroud's Digest on the Diseases of Birds* (1943). At first, prison officials encouraged Stroud's studies because of the publicity value for the prison. But soon there were problems. As one biographer notes:

Stroud had become an administrative nightmare. The huge volume of mail and special requests that he burdened the staff with on a daily basis came to be almost unbearable. The task of censoring his copious mail and filling his orders for bird feed, reading materials, and other research items could have justified hiring a full-time personal assistant. Leavenworth was severely overcrowded, yet he was allowed to maintain residence in two cells. . . . Stroud's birds and his research had at one time, but now his demands had become a bitter nuisance to the administration.⁴

In December 1942 he was transferred to Alcatraz where he spent the next 17 years, 6 years in segregation on the third tier of D Block, after which, because of his mental condition that gave rise to violent mood swings, he was moved to the prison hospital where he "endured the deepest lock-down of his imprisonment." In 1959 he was again transferred, this time to the Medical Center for Federal Prisoners in Springfield, Missouri. On November 21, 1963, he died of natural causes at the age of 73. Stroud had been incarcerated for 54 years, all but 10 of them in segregation. Although he may have been "the bird doctor of Leavenworth," he never was the Birdman of Alcatraz.

THE ROCK OF DESPAIR

The 60-year-old lawyer, civic leader, and banker James A. Johnston, Alcatraz's first warden, had formerly worked in the California Department of Corrections. One writer claims that despite his reputation as a humanitarian reformer, by the time he reached Alcatraz he had thoroughly embraced the theories of Frederick Winslow Taylor, known as the "father of scientific management." Johnston's program—probably the most inflexible in the U.S. correctional system and long anachronistic in penological terms—was designed so that "big men were to be made small." He created a penal purgatory, "the Rock of Despair." According to Joel Gaziz-Sax,

It was impressed [on an inmate] that he was powerless. . . . The function of the case-hardened steel bars; of the labyrinth of catwalks and barbed wire crisscrossing the skies over the prisoners' heads; of the dank, brick dungeons

underfoot; of the empty isolation rooms; of the sacrosanct rule of silence; of the mirror sheen of the concrete floors; and of the guards who moved up and down the aisles [counting each man] was to evoke . . . awe of the penitentiary. The Rock was intended to be a place of ignominious anonymity and damnation for the prizes in the war on crime.⁵

In order to hold America's "most poisonous malefactors" considerable alterations were made to Turner's original reinforced concrete cell house. Robert Burge, one of America's foremost security experts, was commissioned as consultant under the joint guidance of Cummings, Bates, and Johnston. Beginning in April 1934, the soft strap-steel fronts and doors of 336 of the 600 cells (Blocks B and C) were replaced with tool-proof steel bars, fitted with remote locks that allowed guards to operate the doors row by row. None of the four three-tiered blocks within the cell house touched a perimeter wall. They were separated by corridors (later given such ironic nicknames as Times Square, Broadway, Park Avenue, and Michigan Avenue) with highly polished green concrete floors.

Alcatraz, with a total of approximately 1,545 inmates over 29 years, never reached its capacity as a civilian prison. The average population was about 260, less than 1% those held in federal facilities. The highest recorded occupancy was 302, and the lowest 222. Inmates were assigned a cell in B or C block. D Block contained thirty-six segregation cells and six solitary confinement cells. Apart from occasional emergency occupancy, A Block was utilized for materials storage. There was also a library and barbershop on the main floor of the cell house. Multilevel gun galleries at each end of the building allowed patrolling guards to carry weapons behind protective bars and wire mesh. Tool-proof steel bars with alloy steel cores secured all the windows. The old ducts and tunnels that honeycombed the island were concreted to make them "prisoner proof."

The administrative offices were located at the southern end of the cell house; a large space that doubled as a chapel and movie theater occupied the floor above them. The kitchen and mess hall were at the northern end. Remotely activated tear gas canisters—they were never discharged—were installed in the mess hall and main entrance, and metal detectors were located outside the dining hall and on the access paths to the workshops. A hospital above the mess hall had treatment, operating and X-ray rooms, a dental clinic, and several small wards (including a psychiatric unit), all staffed by U.S. Public Health Service employees. Shower rooms and clothing stores were located in the basement of the kitchen wing.

The recreation yard, a bleak concrete rectangle west of the kitchen was a little smaller than a football field, and enclosed by 20-foot high walls patrolled by armed officers. Plain concrete bleachers abutted the main building. A laundry and dry-cleaning plant and workshops were housed elsewhere on the site. An armory protected by tool-proof steel was constructed near the main entrance,

outside of but close to the cell building. Four tall guard towers were strategically positioned around the barbed-wire fence of the 7-acre prison compound. Searchlight towers and floodlights were also installed, as well as telephone and shortwave radio connections to the mainland.

Some employees were provided with rental accommodation. The first contingent numbered about seventy-four, about fifty of whom were correctional officers (some with families) handpicked by Warden Johnston from other institutions. He noted in his first report that the three-story former barracks—known as the “Sixty-four Building,” it was next to the dock—had been converted into twenty-seven apartments for single men and a few families “to the end that we would have a sufficient number of custodial officers available . . . to meet any emergency.” The rudimentary apartments had 12-foot ceilings, uneven floors, and steam radiators. The building also housed a post office and a canteen. On the other side of the parade ground there were newer three-bedroom apartments boasting stainless steel sinks, balconies, and “spectacular views of San Francisco.” A large house was built for the warden adjacent to the cell house, and a duplex was provided for the captain and associate warden. Besides the correctional officers—about one third of whom lived on the mainland—there were twenty-five office staff, a “Religious, Welfare and Educational Director,” health workers, and workshop foremen. Eventually, in addition to the prisoners, about three hundred civilians—men, women, and children—would be living on Alcatraz at any given time. They had their own bowling alley, soda fountain shop, and a convenience store. The prison boat made twelve return trips daily, so most shopping was done on the mainland.

The penitentiary was ready for occupation by mid-August 1934. The military had withdrawn about 6 weeks earlier, leaving behind thirty-two “hard case” prisoners—murderers, robbers, rapists, and homosexuals. By June 1935 the total number of civilian prisoners in Alcatraz stood at 242; there was one guard for every three, compared to an average ratio of one to seven in other penal institutions. The first cohorts came from Washington State’s McNeil Island, and from the federal penitentiaries at Lewisburg, Atlanta, and Leavenworth. Federal prisons throughout the country had been encouraged to send their least redeemable inmates with “histories of unmanageable behavior” to The Rock. As one authority explains, prisoners were not directly sent to Alcatraz by the courts; rather, “they ‘earned’ their transfer . . . by attempting to escape, exhibiting unmanageable behavior, or . . . had been receiving special privileges.” The “birdman” certainly fit the latter category. So did Al “Scarface” Capone.

AN ARISTOCRAT AMONG CRIMINALS—NO LONGER

Alphonsus Gabriel Capone, who in 1925 had “inherited” an organized crime empire—bootlegging, prostitution, and gambling—in Chicago, worth \$100

million a year (about \$1.2 billion at today's values), was among the first federal prisoners transferred to Alcatraz. Capone eluded the law through violence and murder, intimidation and bribery, until in October 1931, following investigation by IRS intelligence agents led by Elmer Iray, he was convicted of income tax evasion. After a failed appeal, in May 1932 Capone was sentenced to 11 years imprisonment in the federal prison in Atlanta, Georgia.

There, he bribed guards to obtain special privileges, such as unlimited visits and having uncensored reading materials and alcohol smuggled to him. And he continued to run his Chicago rackets through subordinates who had taken rooms in a hotel near the prison. But as a result Capone was transferred to Alcatraz where tight security and Warden Johnston ensured that he had no contact beyond the island. The swaggering crime boss was soon disabused of the view that life would be the same as in Atlanta.

On The Rock, despite several attempts to buy favor and flaunt his power, he was treated the same as any other inmate. Strange as the claim may seem, Capone was different from the "veterans of the penal system" who were part of the first transfer to Alcatraz. Unfamiliar with prison culture, he was continually harassed; threats—and actual attempts—on his life necessitated his protection by inmates paid by his declining crime syndicate. He made enemies among the prisoners, partly for his arrogance and partly because some "detested [him] because of his wealth, short sentence, and because his men had 'taken care of' some of their friends."

One historian notes, "Fearing for his life, [he] did not use the recreation yard; instead, he retreated to a basement shower room where he played his banjo." His jobs included work in the laundry and cleaning the showers and latrines, for which (it is said) he earned the sobriquet, "the wop with the mop." After 4½ years in Alcatraz his mental state began to deteriorate. He was diagnosed with irreversible syphilis, contracted decades earlier, that had reduced him to a "confused, babbling and docile" wreck. He completed his term in January 1939 and was transferred to the Terminal Island Federal Correctional Institution in California near Los Angeles, from which he was released in November. Al "Scarface" Capone died of heart failure at his Palm Island, Florida, estate in January 1947. He was 48.

THE "WORST OF THE WORST": LIFE IN ALCATRAZ

In most American prisons convicts shared a cell with at least one other inmate; in Alcatraz each had his own cell. Although in other accounts dimensions vary slightly, a description of a typical cell is best left to Alvin Karpis, "Public Enemy No. 1," who lived in one for 26 years—almost the entire life of the prison:

It is eight feet by five and one-half feet with an eight-foot ceiling, on which is mounted a twenty-watt light bulb. The bunk is made up with two white [cotton]

sheets and a blanket as well as two more blankets folded military style across the foot of the bed. The bunk hangs by chains from the wall and folds up against the wall when necessary. The toilet is at the end of the bunk beside a small wash basin in the center of the back wall. Under the basin a heavy mesh screen a foot off the floor encloses a ventilator [into the service duct] eight inches wide and six inches high. Eighteen inches from the ceiling a shelf of one-inch plank, one foot wide, sits against the back wall. . . . On the shelf I find the following items: [a safety razor, an aluminum cup for drinking water, a second one with a cake of Williams shaving soap in it, a shaving brush, a highly polished metal mirror, a toothbrush, toothpowder, playmate soap, a comb, nail clippers, Stud smoking tobacco, a corncob pipe, a roll of toilet paper, brown shoe polish, a green celluloid eye shade, a whisk broom . . . , and the rule book.]. In the middle of the wall opposite the bed a steel table and seat fold against the wall when not in use. [Under] the long shelf are several clothes hooks.⁶

The steel-barred fronts of the spartan cells afforded no privacy; along “Broadway” especially, between B and C blocks, prisoners stared across the corridor into another cell. They were denied almost all contact with the outside world. The necessities of life—food, water, clothing, and medical care—were regarded as their only rights; anything else was a privilege. A few examples will suffice. Visits, all needing Warden Johnston’s direct approval, were limited to one a month and had to be earned; none was allowed during the first 3 months of “quarantine status.” Inmates could also earn access to the prison library—ten thousand books and carefully selected periodicals were available by the end of the first year—but no publications were allowed that gave a glimpse of what was happening in the world beyond Alcatraz. Receiving and sending letters was also a privilege, and all correspondence was censored and retyped by prison staff. Even work was regarded as a privilege that had to be earned by good conduct; without it, the prisoner was condemned to the excruciating boredom of regimented and inflexible routine. But whether working or not, day would pass into indistinguishable day. On weekdays, inmates spent at least 14 hours locked in their cells; the time outside the cells was for working or eating, always at exactly the same moment in exactly the same place.

Awakened at 6:30 A.M., they were allowed 25 minutes to tidy themselves and their cells and stand to be counted (in the course of a day, there were twelve scheduled counts). Then the cells were opened tier by tier, and the inmates marched single file and in silence to breakfast in the Mess Hall. Twenty minutes later they lined up for work details; anyone not “privileged” to work was locked in his cell and came out only for meals. The others worked from 8.20 until 11.35 A.M., with one 8-minute rest period. At noon, 20 minutes were allowed to eat lunch in the Mess Hall, after which all prisoners were “locked down” for a half-hour “break.” Work resumed at 1:30 P.M. and continued until 4:10, with another 8-minute break. All prisoners ate the evening meal in the Mess Hall, and by 5.30 P.M. all were locked in their cells for the

night; “lights out” was at 9:30 p.m. That was today’s schedule; it was yesterday’s; it would be tomorrow’s. Only when the weather was bad or the island was fogbound did the daily routine vary: then, because of anticipated escape attempts, inmates were confined to their cells except at mealtimes.

As other wardens succeeded Johnston, there was a little relief from this mind-numbing routine. Revised in 1956, the *Regulations for Inmates, U.S.P., Alcatraz* stated, “As a general rule, you will work eight hours a day, five days a week, with Saturdays, Sundays and Holidays devoted to recreation. Movies are shown twice each month [earlier it had been only once]. Exercise Yard activities include baseball, handball and various table games.”

Many former inmates from Alcatraz’s early years regarded Johnston’s repressive rule of silence as their most unbearable punishment. It is reported that several were driven insane by it. It was derived from the “silent” system introduced in 1816 at Auburn Prison in Cayuga County, New York, where prisoners slept in tiny single-occupancy cells but worked together during the day, although in enforced absolute silence. Most northern and eastern state prisons followed the model after the Civil War, but in the early decades of the twentieth century it was no longer used in the United States.

That is, except at Alcatraz. Prisoners were allowed to converse only to ask someone to pass the salt, pepper, or sugar during meals; for 3 minutes during morning and afternoon work breaks on Monday through Friday; and for 30 minutes in the yard on Saturdays. Despite two unsuccessful (and punished) protests in 1936 and 1937 to have the policy revoked, it remained in force until later in 1937 when Johnston finally capitulated—one of only a few changes he ever made. He told the press that he abolished the rule “to ease the rigidity of discipline”; in return, he was praised for the “humanitarian gesture.”

Of course other sounds broke the silence at Alcatraz, all on schedule. In time, their regularity may have made them blend in the environment: an “ear-shattering bell” awakened the inmates each morning; a shrill whistle signalled every phase of the daily routine; and doleful “foghorns at opposite ends of the island [blasted] every twenty seconds and every thirty seconds.” But one sound must have remained unnerving: almost every night, the guards had target practice outside the prison wall and the noise of pistols, machine guns, rifles, and riot guns disturbed the prisoners; worse, guards intentionally left the bullet-riddled target dummies lying around until the next day.

“GETTING THE TREATMENT”

Privileges granted for good behavior were taken away for the slightest infraction of the rules. But there were far worse punishments for recalcitrants.

Because the outer blocks, A and D, had not been included in the 1934 upgrade at Alcatraz, for several years they were used only occasionally to temporarily isolate a few troublesome inmates. But following a disastrously

unsuccessful escape attempt in January 1939, the Bureau of Prisons provided funds to secure the forty-two-cell D Block for disciplining delinquent prisoners. Completed in 1941, it became known as the “Treatment Unit.” Once segregated, an inmate lost contact with the rest of the prison population. Thirty-six refurbished isolation cells had steel-barred fronts and steel-lined floors, walls, and ceilings. Most were a little larger and (because they faced an outer wall) lighter than those in Blocks B and C; otherwise, they differed little. D Block inmates were not allowed to work and left their cells only for two showers and one visit to the recreation yard each week. All meals were eaten in the cells, and the sole concession was access to approved reading materials.

Dubbed “Black Holes” by prisoners, five of the remaining D Block cells on the bottom tier, the coldest place in the prison, were for solitary confinement. Reserved to punish serious breaches of prison rules, they contained only a sink, a toilet, and a weak light bulb controlled by the guards. A standard barred door stood 3 feet inside a solid steel outer door that excluded all natural light and most sound; of course, that arrangement made the room much smaller. The occupant was denied showers, time in the exercise yard, or books. One account describes how officers flicked lights on at 6:30 A.M. and passed one big lump of oatmeal and prunes soaked into bread through a slot inside the barred door. Then the officers flicked out the lights until the next meal. During the day there was nowhere except the steel floor to sit or lie down. Each night after a meager supper the inmate was handed bedding that he was forced to hand back 20 minutes after breakfast the following morning. According to one former inmate, if a prisoner’s attitude did not improve “he remained in the hole—sometimes as long as nineteen consecutive days,” the maximum time he could be confined in solitary. If he remained obdurate, guards removed him, fed him a full meal, allowed him to brush his teeth, and then returned him to the hole for 19 days more. It is difficult to imagine a worse existence. But the prison authorities managed to devise one: sensory deprivation.

The remaining “strip cell,” also known as the “Oriental,” was the most severe discipline. The amazing thing is that it was considered an acceptable way to treat a human being. It was a punishment that even the most case-hardened inmates of Alcatraz truly feared. Alvin Karpis was assigned to the “Oriental” on several occasions—an experience not easily forgotten. He recalled,

The double doors block out all light even in the middle of the day. The walls and floors are steel, nothing else exists in the small cupboard-like space except a hole in the floor which is the toilet. A guard flushes it from outside the cell. Otherwise, nothing. No bed, no blanket, no book, no shelf, no sink. . . . Standing naked on the damp steel floor, I hear the doors lock behind me and realize that if I [raised both my arms] I would touch both walls and that I might walk about three steps before colliding against the [end] wall. I am supposed to receive one

subsistence meal a day. The bread and water diet has been replaced by a dixie cup of mush . . . [mashed] leftovers from the main line—beets, carrots, spinach . . . a sickly looking puke that is more liquid than solid. . . . Days seem like nights and nights seem like days.⁷

A mattress was provided at night and removed at dawn. Inmates were usually subject to this degree of punishment for only one or two days. That was enough.

ON THE OTHER HAND . . .

When later reflecting on their incarceration, some inmates actually spoke of two “positive” aspects of Alcatraz: single cells and the quality of the food. The first gave at least some degree of privacy and reduced the chance of being sexually violated. And who wouldn’t appreciate better food? However, Warden Johnston’s motives were hardly altruistic: apart from the fact that they already existed in the military cell house and cost less to convert, single cells further isolated the inmates. He also believed that good food would remove a major cause of the riots that frequently were experienced in other institutions. Under Johnston, prisoner “culinary workers,” supervised by trained correctional officers, prepared three balanced meals a day (totalling 3,600 calories) from a 10-day cycle of menus devised by Public Health Service nutritionists. The food was served cafeteria-style from *bain-maries* at one end of the mess hall. Inmates held out their trays in silence to those serving the line, each of whom would give a measured portion of the food he was serving. Those who didn’t want a particular part of the meal were not obliged to take it. But whatever they took, they had to eat or face disciplinary action. That meant there was no waste.

Probably under pressure from the Bureau of Prisons, the rigid program of the Johnston years was gradually relaxed, and by 1937 the “Rule of Silence” had been discontinued. By 1940 the mail restrictions were relaxed, and prisoners could correspond with a second relative. In 1945 the men could see one movie a month; a library with fiction, reference, and periodical sections had been organized, and there was a prison band. When Johnston retired in 1948 prisoners were already allowed to undertake approved hobbies in their cells and keep the necessary equipment with them, as well as their own books, drawing materials, writing paper, and educational material. They could even decorate their cell walls with pictures and religious objects.

Johnston was replaced by the “militant and uncompromising” Edwin Swope, whose “patronizing manner” undermined the morale of guards and prisoners alike. Swope was succeeded in 1955 by Paul J. Madigan, who had worked his way up through the prison service, and whose “listening skills endeared him to both personnel and inmates.” The last warden of Alcatraz,

“liberal, relaxed” Texan Olin G. Blackwell was only 46 years old when he “inherited an aging, crumbling prison” in 1961 and introduced more generous reforms. One commentator writes that the latter two “helped change Alcatraz from the famous prison of ‘punishment and not reformation’ to one where prisoners could live, eat and relax, relatively unmolested by the . . . guards or tortured by the strict prison rules.” Madigan installed radio headsets in the cells, tuned to light music and baseball stations, and at Christmas he provided cigars, chocolates, and a special dinner. Blackwell (among other things) had hot water piped to the cells, added new sports to the exercise yard, and extended the radio network to include news broadcasts and talk shows.

But for all that, Alcatraz was still Alcatraz. During the life of the penitentiary, eight prisoners were murdered by their fellows, five committed suicide, fifteen died of natural causes, and several went insane. Of a total of 1,545 prisoners who “did time” there, thirty-six tried to escape in fourteen attempts, the last of them in 1962. Twenty of the fugitives were recaptured, seven were shot and killed, two drowned, and five were never found, assumed by prison authorities to have perished in the icy waters of San Francisco Bay.

The 1962 incident, documented in J. Campbell Bruce’s 1963 book *Escape from Alcatraz*, was popularized in a 1979 Paramount motion picture of the same name, starring Clint Eastwood. Leaving papier-mâché dummies in their cells, Frank Morris and brothers John and Clarence Anglin disappeared on the night of June 11, 1962 in a sophisticated escape. They planned for 11 months, and for over 6 they chipped away moisture-damaged concrete with improvised tools to gain access to a services duct behind Cell Block B. The escape route then led through a disused ventilator duct to the roof. Climbing down service pipes, they scaled a 12-foot fence; at the shore they inflated their life vests and raft made from stolen raincoats and launched into the Bay. Plywood paddles and fragments of the raft were found on Angel Island and although the official report (published by the FBI after several years) concluded that the escapees drowned, one historian was told by relatives of the Anglins that they had received postcards from South America. Frank Morris was never heard from again.

CLOSURE

Late in 1962, Attorney General Robert F. Kennedy ordered the closure of Alcatraz. The decision was taken principally for financial reasons: first, the marine atmosphere had caused severe deterioration of the aging concrete and steel structures; second, public concern was growing about pollution of San Francisco Bay by the island’s sewage (together, the cost of repairs to the building fabric and the drainage system was estimated at \$5 million); and third, the day-to-day operating cost—all food, fuel, supplies, and even water had

to be brought to Alcatraz by barge—was three times that of any other federal prison. The Bureau of Prisons regarded The Rock as “an administrative monstrosity.”

But money wasn't the only problem. One historian cites a combination of less tangible issues: such as “the increase in assaults and general violence; the turnover of personnel, involving an increase in the number of inexperienced officers; a general decline in staff morale; public concerns about the location of the prison; and the rising tide of criticism by penologists.” The author of *The Birdman of Alcatraz*, Thomas Gaddis, called the penitentiary “the federal prison with a name like the blare of a trombone, a black molar in the jawbone of the nation's prison system.” Changes in penal philosophy were leaning toward rejecting “the spirit of retribution and [attempting] coolly to balance the needs of deterrent and detention with the possibilities of rehabilitation”—an approach for which Alcatraz had never made provision. From fall 1962 inmates were transferred to other establishments, including Atlanta, Leavenworth, and Terre Haute in Indiana. In March 1963 the twenty-seven remaining prisoners were relocated to a new maximum security prison near Marion, Illinois—“the new end of the line, a true heir to Alcatraz in its barbaric treatment of prisoners”—and 2 months later Alcatraz Island was transferred to the General Services Administration.

“WE HOLD THE ROCK!”

Alcatraz has a unique iconic meaning for Native Americans. Through the 1950s the U.S. Bureau of Indian Affairs undertook a massive but spectacularly unsuccessful Voluntary Relocation Program to persuade indigenous people to migrate from reservations to urban centers—a move that for many of them led to poverty and isolation. The federal government's termination policy of August 1953 (called “the ultimate forced assimilation policy”) was intended to end the recognition of Indian nations, thus invalidating treaties made over a century earlier.

On March 9, 1964, after 5 years of frustrating inaction on the part of the 1964 Presidential Commission on the Disposition of Alcatraz Island, and in order to draw public attention to the problems of the Bay Area Indian community, five Sioux demanded title to The Rock under the terms of the 1868 Treaty of Fort Laramie. They remained on Alcatraz for only 4 hours, calling for it to become a site for an Indian university and cultural center, ecology and spiritual centers, and a museum.

The claim was reiterated on November 9, 1969, when at San Francisco's Pier 39 a college student Richard Oakes, a Mohawk, symbolically offered \$24 in trade goods for Alcatraz Island—as much as Peter Minuit paid the Canarsee Indians for Manhattan in 1626. Calling themselves “Indians of All Tribes,” Oakes and his supporters then chartered a boat, the *Monte Cristo*, and claimed

Alcatraz for the Indian people “by right of discovery.” The next morning the Coast Guard peaceably removed them from the island.

Ten days later, about one hundred Native Americans—eighty students from the American Indian Studies Center at the University of California at Los Angeles (UCLA), some married couples, and six children—occupied Alcatraz. They set up headquarters in the former warden’s house and used the cell house as living quarters. Within 3 weeks a council was elected, which drafted rules and established policies about elementary education, health, and child care. Tasks were assigned, and decisions were made by consensus; as time passed, a complex administrative infrastructure was developed to manage resources and undertake public and media relations. The Indians’ essential demands had not changed since 1964, and their resolve was hardening. Their persistence eventually obliged the federal government to agree (at least ostensibly) to enter formal negotiations. But it was willing to yield nothing and wanted the occupiers off the island. Growing public support for them made forcible removal politically inadvisable.

Cracks began to appear in the Indian organization early in January 1970. Oakes’ teenage step-daughter Yvonne died in a fall, and a few days later he and his family left Alcatraz. Indian college students returning to school were replaced by urban Indians and others from reservations. Moreover, non-Indians, including many people from the San Francisco hippie and drug culture moved to the island, blurring the focus of the occupation. A power struggle for political control led to the tribes’ downfall as two competing groups, both of whom earlier had opposed Oakes, jockeyed for leadership. The changing population on the island, characterized by the “open use of drugs, fighting over authority, and general disarray of the leadership” became an increasing problem.

On December 4, 1970, the government shut off the island’s electrical power supply. The backup generators were inoperative, food was spoiled, and fuel and water lines leaked. The fresh water supply barge was discontinued. Three days later fires destroyed several historic buildings. As the occupation extended into 1971 and problems multiplied, media and public support for the Native Americans was eroded. When early in June, FBI agents, federal marshals, and police removed six unarmed Indian men, five women, and four children from Alcatraz Island, the occupation that had lasted 19 months and 9 days was over.

The Indian occupation of Alcatraz has been identified as “perhaps the most significant event in the history of US-American Indian relations in the post-reservation era.” For the Native American people, the brief and shining moment represented a new sense of pride, culture, and hope. The personal lives of many of them were dramatically changed as a result of the occupation, and it gave others a new hope. As Troy Johnson points out,

The underlying goals of the Indians on Alcatraz were to awaken the American public to the reality of the plight of the first Americans and to assert the need

for Indian self-determination. As a result of [it], either directly or indirectly, . . . Indian self-determination became the official US government policy. [While] the occupiers were on Alcatraz Island, President Nixon returned Blue Lake and 48,000 acres of land to the Taos Indians. Occupied lands near Davis California would become home to a Native American university. Alcatraz may have been lost, but the occupation gave birth to a political movement which continues. . . .⁸

One cannot avoid being aware of parallels between the Bureau of Prisons' treatment of the tried and convicted public enemies taken in the politically driven 1930s "war on crime," and the way in which since 2001 the U.S. administration has dealt with an estimated seventeen thousand "public enemies" held without trial, alleged enemy combatants in a "war on terror." Late in 2003, U.S. personnel at Afghanistan's Bagram airbase described the habitual use of sensory deprivation (just like that in D block at Alcatraz) as "torture lite." The then U.S. vice president stated that such torture is a legitimate means—"whatever it takes"—to break enemies' spirits.

At Guantanamo Bay hundreds of men were held, all without charge; some for years on end. Reuters reported in January 2007 that about 160 were locked alone for 22 hours a day in the 6- by 12-foot cells of a new "state-of-the-art" maximum security Camp 6. The fluorescent lights were never turned off, and "all they [had were] an inch-thin mattress, a steel platform to sleep, a steel sink and toilet and the *Koran*." The isolation suffered by convicted criminals in Alcatraz in the 1930s (when presumably we were less enlightened) was denounced by the courts as "cruel and unusual punishment." It rightly horrifies and outrages us to read of it. What happened to our commitment to the presumption of innocence and our respect for human rights in the intervening generations, if we treat in the same way men who have yet to be convicted of a crime?

NOTES

1. Haller, Stephen, et al., *Seacoast Fortifications Preservation Manual*. Golden Gate National Recreation Area, July 1999. www.nps.gov/goga/historyculture/alcatraz-fortifications.htm
2. Baily, C. H., "The Rock," *San Francisco Chronicle* (June 14, 1914), 5.
3. Baily.
4. "Robert Stroud: Birdman of Alcatraz." www.alcatrazhistory.com/rs4.htm
5. Gazis-Sax, Joel, "American Siberia: The Purpose of Alcatraz." www.notfrisco2.com/alcatraz/purpose.html

6. Karpis, Alvin (as told to Robert Livesey), *On the Rock: Twenty-Five Years in Alcatraz*. New York and Toronto, Canada: Beaufort, 1980.
7. Karpis.
8. Johnson, Troy, *The Occupation of Alcatraz Island: Indian Self-Determination and the Rise of INDIAN Activism*. Champaign: University of Illinois Press, 1996.

FURTHER READING

- Babyak, Jolene. *Birdman. The Many Faces of Robert Stroud*. Berkeley, CA: Ariel Vamp Press, 1988.
- Bennett, James V. *I Chose Prison*. New York: Knopf, 1970.
- Beyeler, Ed and Susan Lamb. *Alcatraz—The Rock*. Flagstaff, AZ: Northland, 1988.
- Bruce, J. Campbell. *Escape from Alcatraz*. New York: McGraw-Hill, 1963.
- DeNevi, Don. *Alcatraz '46*. San Rafael, CA: Leswing, 1974.
- DeNevi, Don. *Riddle of the Rock*. Buffalo, NY: Prometheus Books, 1991.
- Esslinger, Michael. *Alcatraz—A Definitive History of the Penitentiary Years*. San Francisco: Ocean View, 2003.
- Fuller, James. *Alcatraz Federal Penitentiary, 1934–1963*. San Francisco: Asteron, 1982.
- Gaddis, Thomas E. *Birdman of Alcatraz: The Story of Robert Stroud*. New York: Random House, 1955.
- Grassick, Mary K. *Alcatraz Island, Main Prison Building: Golden Gate National Recreation Area, San Francisco, California*. Harpers Ferry, WV: Media Services, National Park Service, 2005.
- Gregory, George H. *Alcatraz Screw: My Years as a Guard in America's Most Notorious Prison*. Columbia: University of Missouri, 2002.
- Heaney, Frank, and Guy Machado. *Inside the Walls of Alcatraz*. Palo Alto, CA: Bull, 1987.
- Hurley, Donald J. *Alcatraz Island Memories*. Sonoma, CA: Fog Bell Enterprises, 1987.
- Johnson, Troy R. *We Hold the Rock: The Indian Occupation of Alcatraz, 1969 to 1971*. San Francisco: Golden Gate National Parks Association, 1997.
- Johnston, James A. *Alcatraz Prison and the Men Who Live There*. New York: Charles Scribner's Sons, 1949.
- Johnston, James A. *Prison Life Is Different*. Boston: Houghton Mifflin, 1937.
- Karpis, Alvin (as told to Robert Livesey). *On the Rock: Twenty-Five Years in Alcatraz*. New York, Toronto, Canada: Beaufort, 1980.
- Madigan, Paul J. *Institution Rules and Regulations*. San Francisco: Golden Gate National Parks Association, 1983.
- Martini, John A. *Fortress Alcatraz—Guardian of the Golden Gate*. Kailua, HI: Pacific Monograph, 1990.
- McHugh, Paul. *Alcatraz: The Official Guide*. San Francisco: Golden Gate National Parks Conservancy, 2006.
- Needham, Howard, and Ted Needham. *Alcatraz*. Millbrae, CA: Celestial Arts, 1976.
- Odier, Pierre. *The Rock: A History of Alcatraz: The Fort/the Prison*. Eagle Rock, CA: L'Image Odier, 1982.

Oliver, Marilyn Tower. *Alcatraz Prison in American History*. Springfield, NJ: Enslow, 1998.

Quillen, Jim. *Alcatraz from Inside*. San Francisco: Golden Gate National Parks Association, 1991.

Stuller, Jay. *Alcatraz, the Prison*. San Francisco: Golden Gate National Parks Association, 1998.

Thompson, Leon. *Alcatraz Merry-go-Round*. Fiddletown, CA: Author, 1995.

Thompson, Leon. *Last Train to Alcatraz*. Fiddletown, CA: Author, 1988.



Courtesy Library of Congress

Brooklyn Bridge, New York City

"Do I have a bridge for you!?"

The publisher's note for Richard Haw's 2005 study, *The Brooklyn Bridge: A Cultural History* claims that the bridge is among "the world's most recognizable and beloved icons," adding that it has been endorsed (although failing to say by whom) as "a flawless symbol of municipal improvement and a prime emblem of American technological progress." Flawless? Perhaps not, but the rest of the claim is accurate enough.

Nevertheless, true iconic status is conferred by the ordinary people, not an elite. Almost since its opening the bridge has been a common element of popular culture—on magazines and postcards and in comic books, advertisements, films, television programs, and cartoons. Its image has embellished all kinds of tourist souvenirs, and collectibles that had little else to do with New York. It has even been the design motif for over two hundred fifty different silver spoons. However, when something becomes a part of our language, its claim to iconhood—if that is a word—is placed beyond challenge.

In the twenty-first century the expression "selling the Brooklyn Bridge" remains in use to describe an offer or promise that exploits gullibility. As Brooklyn author Gabriel Cohen observes, "The idea of illegally selling [the bridge] has become the ultimate example of the power of persuasion." In the 1937 Paramount film *Every Day's a Holiday*, Mae West plays Peaches O'Day who sells it and receives a bill of sale for "One bridge in good condition." That was art mimicking life. From as early as the 1880s, New York confidence tricksters paid for information about recently arrived passengers—"marks"—who might be parted easily from their money. The proximity to Ellis Island and the international fame of the bridge made it an ideal subject for scams. The notorious Gondorf brothers Charles and Fred (immortalized in *The Sting*) sold it many times. William McCloundy (aka "I.O.U." O'Brien) was sent to Sing Sing for the same trick in 1901. And on several occasions George C. Parker forged plausible "ownership" documents to take in eager buyers. By the 1920s newcomers had become more sophisticated and the deception no longer worked; besides, immigration officials distributed pamphlets explaining that New York's public buildings were not for sale.

BEFORE THE BRIDGE

Only 12 years after the Dutch founded New Amsterdam at the southern tip of Manhattan Island, a few crossed the East River to farm on the western edge of Long Island. In 1646, Breuckelen—named for a village near Utrecht in The Netherlands, it was the first municipality in what is now New York State—was established. When the British annexed the town 18 years later, the name was anglicized to Brooklyn.

Communication across the 500 yards of water was difficult. Cornelis Dircksen Hooglandt, a Long Island farmer, started the first regular ferry service around 1642. Apart from the introduction of government regulation, little

would change for almost 200 years. Crossing the fast-flowing, turbulent tidal inlet in a rowboat that carried a sail (when weather and tide were auspicious) was at worst dangerous, because of the busy marine traffic combined with floating ice, storms, or fog. At best, it was inconvenient and therefore costly; one early-nineteenth-century writer recalled waiting “from morning to night . . . in a northeast storm, before any boat ventured to cross to the city.” Some winters saw the river freeze over and ferry services were cancelled for days at a time. As demand increased, the proliferating ferry services peppered the river with an increasing range of craft: oar-barges for pedestrians; spritsail boats for horse-drawn vehicles; and unstable, flat-hulled pirogues; there were even vessels powered by horses on treadmills.

The advent of steam ferries revolutionized the short journey. In 1813 Robert Fulton and William Cutting were granted a franchise, and Fulton introduced his steamboat *Nassau* in May 1814. Twin-hulled with a connecting deck, she could carry five hundred fifty passengers and a few wagons, and she was designed to cross and return without needing to put about. By 1839 all the steam ferries in service were owned by the New York and Brooklyn Ferry Company, and over the next quarter-century twenty-four vessels had been added to the service. By then Brooklyn’s population had grown to about three hundred fifty thousand, and the ferries were carrying 41.4 million passengers annually, not without difficulties. New York printer Samuel W. Green wrote in 1883, “the transportation of the vast mass of humanity and freight . . . across the East River, like true love, does not always run smooth.”¹ Of course, the story of the ferries is a saga in its own right, too long to be more than hinted at here.

OVER THE RAINBOW

It seems that the earliest proposal for a bridge between Manhattan and Brooklyn was made in 1800, when someone described as a “gentleman of acknowledged abilities and good sense” offered to build one in just 2 years. Bridge historian David McCullough identifies the gentleman as Thomas Pope, a New York carpenter and landscape gardener, whose “invention,” as he saw it, [was] available in all sizes and suitable for any site. An 1800-foot span cantilever between Manhattan and Brooklyn, expectedly and unsuitably built entirely of timber, was to soar some two hundred feet over the water, like “a rainbow rising on the shore.”² And all for \$144,000! Details were explained in Pope’s self-published book of 1811, verbosely titled, *A Treatise on Bridge Architecture; in which the Superior Advantages of the Flying Pendent Lever Bridge Are Fully Proved. With an Historical Account and Description of Different Bridges Erected in Various Parts of the World, from an Early Period, Down to the Present Times*. It is hardly surprising that he was not taken seriously. There was no shortage of suggestions—most of them flights of fancy—over

the next several decades. Republican Congressman James Stranahan later recalled that an anonymous “gentleman now residing in Brooklyn” had championed a “solid bulkhead pier of some five hundred feet in width from city to city, with a narrow opening for the flow of water [the velocity of the current would have been enormous] and the passage of vessels [the smashes against the piers would have been spectacular] in the center of the river, spanned by a draw-bridge.” He dismissively commented that “there was not the slightest prospect that the General Government would ever consent.” Someone even absurdly proposed a pontoon bridge—the temptation to remark that the idea was never floated is irresistible.

By midcentury it was clear that a permanent link was urgently necessary. McCullough cites one prophecy but does not name the prophet: “If there is to be a bridge it must take one grand flying leap from shore to shore over the masts of the ships. There can be no piers or drawbridge. There must be only one great arch all the way across.” “New York and Brooklyn must be united,” insisted *The New York Tribune* in 1849, giving voice to widespread public feeling. But nothing happened. The problem posed by building the foundations in the strong swirling currents of the tidal strait, “one of the busiest stretches of navigable salt water anywhere on earth” seemed insurmountable.

STANDING IN THE WINGS

John Augustus Roebling was born in Muhlhausen, Prussia (now Germany), in 1806, where he received his elementary and secondary education. At the Royal Polytechnic School in Berlin he studied architecture and engineering, bridge construction, hydraulics and languages, as well as philosophy under the famous Georg Hegel. Following his graduation with a degree in civil engineering in 1826, he served an obligatory 3 years working for the government, mostly on road building in Westphalia. In 1831, on Hegel’s advice, he emigrated to the United States, where he founded the utopian farming community of Germania (later Saxonburg) in Butler County, Pennsylvania, with his brother Karl and other refugees from ideological oppression.

When the agricultural venture failed Roebling returned to engineering, from 1837 working on several canal and railroad projects. One source has it that the “general idea of suspension bridges [was] a favorite one with him, ever since his college days, when it formed the subject of the graduating thesis.” Applying his earlier studies, he completed the Allegheny Aqueduct in Pittsburgh in 1845 for the Pennsylvania Main Line Canal; over the next 3 years followed the Monongahela Bridge, Pittsburgh Bridge and four aqueducts—Delaware, Lackawaxen, High Falls, and Neversink—on the Delaware and Hudson Canal. Between 1851 and 1855 he built the 825-foot Niagara Suspension Bridge, connecting the New York Central and Canada’s Great Western Railway.

Before he designed the great bridge across the East River, Roebling's greatest achievement was the Cincinnati-Covington (now John A. Roebling) bridge over the Ohio River, of 1856–1857; its 1,057-foot suspension span was then the longest in the world. Except for the foundations of the towers, all the design features and construction techniques that defined the Brooklyn Bridge had been developed by Roebling on its Cincinnati-Covington forerunner.

John Roebling's suspension structures used the low-carbon iron wire rope that he first patented in 1841–1842; indeed, it was integral to their success. Architectural historian Kenneth Frampton identifies this innovation as “one of the decisive breakthroughs in modern suspension bridge technology.” Inspired by a German invention, Roebling's experiments were conducted on a “rope walk” behind his Saxonburg farm, where at first he employed his fellow villagers to make the rope by hand. The cables for his aqueducts were spun on-site, either compacted as parallel strands or twisted. A cable-wrapping device, also patented by Roebling in 1842, protected the iron from corrosion. By 1848 his factory (by then mechanized) was serving a growing market and he relocated it in Trenton, New Jersey.

There is a story, perhaps apocryphal, that on a winter's day in 1853, Roebling was on an East River ferry, trapped by floating ice between Manhattan and Brooklyn. The experience (it is said) prompted him to think about a bridge. In fact, he had been entertaining that idea since 1852, believing that the “locality [most] favorable to bridging” was Blackwells Island (since 1973, Roosevelt Island). According to the *Long Island Democrat*, that site had been mooted as early as October 1836. Anyway, it was not until June 1857 that Roebling wrote to the iron manufacturer Abram Stevens Hewitt, who supplied the wire for his rope works, contending that two bridges—one from Manhattan to Blackwells Island and another from the island to Long Island City—could be built for \$600,000. Hewitt had the letter printed in the *New York Journal of Commerce*, and it excited great interest. A little later *Frank Leslie's New Family Magazine* would describe a suspension bridge of three 700-foot spans, the middle one crossing Blackwells Island. Nothing happened. Two years later, responding to would-be backers, Roebling proposed two 800-foot suspension spans linked over the island by a 500-foot cantilever, near the site of the present-day Queensboro Bridge. The estimated cost had doubled. Before any further progress could be made, the project was shelved because of economic depression. Then came the Civil War.

A BRIDGE WITH NO NAME

In 1865 a former army engineer, Colonel Julius Walker Adams of Brooklyn, exhibited the first “practical design” for an East River bridge—a suspension structure, using steel chains—at the annual fair of the American Institute of the City of New York for the Encouragement of Science and Invention.

In January 1867 his influential and wealthy friend William C. Kingsley, contractor and publisher of *The Brooklyn Daily Eagle*, having widely canvassed support for the design, pressed State Senator Henry Cruse Murphy to introduce a bill in the New York State Legislature to enable a private company to build Adams' bridge.

In April, thirty-eight prominent Brooklyn citizens formed the board of directors of the New York Bridge Company (a name allegedly chosen because they intended to build a bridge *to* New York). For 16 years the press would alternatively refer to the project as the East River Bridge, the Great Bridge, the Brooklyn Bridge, or even (as events transpired) the Roebling Bridge. The obverse of the commemorative medallion struck for its opening would bear the motto, "Two Cities As One," the reverse legend reading, "Souvenir of the Opening of the East River Bridge, May 24th 1883."

According to McCullough, the Bridge Company was granted "broad and ambiguous" powers, including authority to acquire land for the bridge and its approaches. The legislation called for a toll bridge yet mentioned nothing of an approved location or design. Optimistically, it set a completion date of January 1, 1870. Although the act had set up a private corporation, the City of New York was allowed to make a \$1.5 million capital investment, and the City of Brooklyn \$3 million; private stockholders would provide the remaining \$500,000. The share price was fixed at \$100; it is noteworthy that over 60 percent of the private funding came from Kingsley and those he represented.

Within a month Adams' proposal was replaced by Roebling's. The exact circumstances surrounding the Board of Directors' collective change of mind remain obscure. At its second meeting, on May 23, 1867, it elected Murphy president and, mainly as a result of Kingsley's lobbying, named John Augustus Roebling as chief engineer. Assisted by the gifted young Wilhelm Hildenbrand, engineer-in-charge of his drafting room, Roebling set about preparing detailed plans and choosing a site. Submitted in September, his report boasted:

The completed work, when constructed in accordance with my designs, will not only be the greatest bridge in existence, but it will be the greatest engineering work of the continent, and of the age. . . . The great towers will serve as landmarks to the adjoining cities, and they will be entitled to be ranked as national monuments. As a great work of art, and as a successful specimen of advanced bridge engineering, this structure will forever testify to the energy, enterprise and wealth of that community which shall secure its erection.³

As the proposal firmed over the next year there were mounting rumblings of disgruntlement, disagreement, and disapproval from many quarters and for different motives. Roebling needed to silence his critics, including the New York Polytechnic Society (that convened lectures questioning the engineering validity of the structure), Mayor Martin Kalbfleisch of Brooklyn, and the publisher of *The New York Tribune* Horace Greeley (both of whom had

doubts about the span). More important, he needed to reassure potential investors. So when the design was complete, he asked that an independent Board of Consulting Engineers assess the design. McCullough notes that “he did not want their advice or opinions, only their sanction.”

Roebing nominated seven of the nation’s most reputable engineers. They were appointed in January 1869, with generous \$1,000 honoraria (now worth about fifteen times that amount) paid by Kingsley. Under the chairmanship of the civil engineer and inventor Horatio Allen, the Board comprised William Jarvis McAlpine, president of the American Society of Civil Engineers, the architect Benjamin Henry Latrobe, John J. Serrell, J. Dutton Steele, and James Pugh Kirkwood. Adams, whose proposal had been displaced by Roebing’s, and who (not unexpectedly) had pronounced the design unsound, was a canny inclusion. The Board’s deliberations were no mere formality. After half a dozen meetings during which it examined the documents and virtually cross-examined Roebing, in March it unanimously agreed that his proposal was acceptable and achievable.

The U.S. government wanted to be sure that the bridge would not impede navigation, especially in giving access to the New York Navy Yard, so the project still needed the *imprimatur* of Congress. Chief of Army Engineers General A. A. Humphreys directed Major-Generals John Newton and Horatio Wright and Major W. R. King, all engineers, to examine the design independently of the civilian Board. In mid-April the soldiers, together with the Board, John Roebing, and his son Washington (of whom more is said below), several potential Brooklyn investors and a few others took a railroad tour to see Roebing’s bridges at Pittsburgh, Cincinnati, and the Niagara Gorge. The military engineers recommended that the air draft—that is, clearance above the average high spring tide level—at center span of the East River bridge be increased by 5 feet to 135 feet, a recommendation that seems pedantic, given the vagaries of tides. Otherwise, “there was no doubt of the entire practicability of the structure nor of its stability.” On June 21, 1869, the government advised the Bridge Company that it approved the design and location of the bridge. Subscriptions to capital stock were filled within 6 weeks.

“HARP AND ALTAR, OF THE FURY FUSED”

Straightforward physics underlie Roebing’s design. The four main suspension cables, continuous from anchorage to anchorage, pass over the towers and hang in catenaries (the curve that cables naturally assume when suspended from two points) between them. That frees the towers from horizontal forces; acting in compression, they transmit the self-weight of the structure and any live loads to the foundations. The colossal anchorages resist the tensile forces in the main cables. The steel-framed bridge deck hangs from those cables on vertical “suspenders,” and diagonal stays stabilize it against wind loads.

Roebing designed the bridge with a safety factor of six; that is, the ratio of the breaking stress of the structural components to the estimated maximum stress when they are in “ordinary use.” Modern engineers and safety authorities are generally content with a safety factor of two. Then, he was attempting to achieve something that had never been done before. The total length of the bridge is just over 6,000 feet. Its 1,616-foot long main suspension span, with its center soaring 135 feet—about twelve stories—above the East River, passes at a height of 119 feet through two arches in each tower (in a masterpiece of understatement Roebing called those towers the “most conspicuous features”) that rise close to either shore of the river. Above the waterline the towers are built of granite quarried in Maine; beneath it, they are of New York limestone. They stand upon almost incomprehensibly massive timber footings—caissons—that are in themselves an audacious wonder of engineering. Reaching a height of 276 feet—about twenty-five stories—above the river, for 15 years the towers, except for the spire of Trinity Church, were by far the tallest buildings in New York City. They have been called “gothic” (by others but never by John Roebing), a stylistic categorization that stretches the architectural lexicon. They have pointed arches, that’s all; otherwise, their style may be described generously as “engineers’ nondescript.”

A 930-foot-long suspended “land span” at each end of the bridge returns its roadway to ground level. All three spans are supported by suspension cables. Swooping over the river, the cables—one at each edge and two at the central axis of the bridge—continue, via roller joints in saddles on the tops of the towers, to the rectangular masonry anchorages in Manhattan and Brooklyn. Each seven-story high anchorage is a third of an acre in area and weighs 60,000 tons; four 23-ton embedded anchor plates with 152 anchor bars secure the cables in each. Almost 16 inches in diameter, each main cable consists of nineteen strands made up of parallel pencil-thick steel wires—a total of almost 5,500 individual filaments in each cable. The strands are wrapped in soft wire. Roebing prophesied that steel was “the metal of the future”; by using it in a structural application, he anticipated other American architects by almost 20 years. Just then, engineers were leading the way to a new technology and a new aesthetic. Fifty years after Roebing chose steel, the Swiss architect Le Corbusier would point out that “the engineer, inspired by the law of economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony.”

The 85-foot wide bridge deck, made of spruce, is carried on a braced grid, with 33-inch deep steel principal trusses suspended from the main cables by 2-inch diameter wire ropes at 7½-foot centers. Six lines of trusses extend from one anchorage to the other. Diagonal stays of steel wire rope connect the tops of the towers to points at 15-foot centers along the deck’s longitudinal edge beams, extending about 400 feet from the towers in each direction. The visual contrast of the (comparative) wire filigree and massive stone towers was best described by the poet Hart Crane as “harp and altar, of the fury fused” in *To Brooklyn Bridge*.⁴

To connect the elevated railroad systems of New York and Brooklyn, Roebling provided two cable-car tracks; between them and 18 feet above the deck, a pedestrian boardwalk (he gave it the grand title, “elevated promenade”) afforded uninterrupted panoramic views. Flanking the tracks there were two-lane carriageways for horses and horse-drawn vehicles. Of course, roadway use has continually changed with changes in transportation modes; although the bridge now carries three lanes of automobiles in each direction—a daily total of more than two hundred thousand—it retains the exclusive pedestrian right-of-way.

A BRIDGE GROWS IN BROOKLYN

When attempting to analyze the Brooklyn Bridge’s iconic quality, the 13-year-long construction process is as significant as the finished structure. The story begins in tragedy. On July 6, 1869, while John Roebling was locating the Brooklyn tower, a ferryboat collided with the slip on which he stood, crushing his right foot against the piling. The injured toes were immediately amputated—he refused anaesthetic—but (perhaps because he insisted upon hydrotherapy over conventional medical treatment) tetanus followed. He died on July 22, with his *magnum opus* hardly started.

Washington Augustus Roebling was just 32 years old when he succeeded his father as chief engineer of “the most prestigious [engineering project] of the continent and of the age.” Certainly it was the most ambitious bridge that America had ever seen. Washington had worked off and on in the family business since graduating from Rensselaer Polytechnic Institute in 1857. When the Civil War erupted, he enlisted as a private in the 6th New York Artillery. Transferring to staff duty as an engineer in 1862, he designed suspension bridges over the Shenandoah and Rappahannock rivers. After three field promotions he resigned his colonel’s commission and in January 1865 married Emily Warren of Cold Springs, New York. Rejoining the family company after demobilization, he assisted his father during the construction phase of the Cincinnati-Covington Bridge. When the Roeblings won the East River bridge commission Washington and Emily moved to an apartment in Brooklyn Heights. For much of the next year they traveled in Europe, where the young engineer consulted experts about the all-important foundation design.

The construction and placing of the bridge *caissons* (the French word for boxes) was a truly monumental undertaking. Constructing foundations in fast-flowing waters had always been problematical for bridge builders. For Westminster Bridge (1750) over the River Thames in London the Swiss engineer Charles Labelye had constructed enormous inverted timber caissons on shore; they were then floated into position and slowly sunk as masonry piers were built on them. A century later the Englishmen William Cubitt and John Wright developed Labelye’s idea for a bridge over the Medway at Rochester. They created the first *pneumatic* caisson; after the water had been forced out

by compressed air, workmen could enter through airlocks and excavate in dry conditions.

In October 1869 the contract to build the caissons was won by Eckford Webb and George Bell's Greenpoint shipyard at Newton Creek, Brooklyn. The surveying and dredging work completed, laborers began clearing the Brooklyn Tower site on January 2, 1870. The 3,000-ton Brooklyn caisson, constructed from huge foot-square flitches of oak and yellow pine, was launched on March 19; measuring 168 by 102 feet (about the area of four basketball courts), it had, when completed, a 15-foot thick roof; 9-foot thick walls enclosed its chambers. The lower 3 feet were clad in boiler plate, inside and out. The joints were caulked with oakum, hot pitch was poured between the courses of the roof, and the entire outside was painted with marine varnish. There were holes in the roof for two access and two supply shafts and air, gas, and water pipes. In May six tugboats towed the gigantic structure to its final location 5 miles to the south of the shipyard, where finishing touches were added before it began to disappear forever beneath the East River.

On June 15 the first limestone blocks were laid atop the caisson; it took the weight of three courses of stone before it began to sink. For the next 14 months, ferryboat commuters would watch workmen swarming over the base of the Brooklyn tower; of course, they would see nothing of the hazardous underwater work. Compressed air was pumped into the caisson to prevent water from flowing in; then (mostly) impoverished Irish, German, or Italian immigrant laborers at first using hand tools (but later, even dynamite) excavated clay and boulders from the river bed. The atmosphere within the caisson was dank, and the temperature was at least 80° Fahrenheit. Roebling's master mechanic, E. Frank Farrington compared the horrific working conditions with Dante's inferno: "[inside the caisson] everything wore an unreal, weird appearance [with] the flaming lights, the deep shadows, the confusing noise of hammers, drills and chains, [and] the half-naked forms flitting about."⁵ For this work the excavators were paid \$2 a day. Over twenty-five hundred individuals worked in the Brooklyn caisson, and about one hundred a week quit, despite their desperate need for work. Although 260 men worked three shifts around the clock, weekly progress was measured in inches. On March 11, 1871, a stable stratum was reached about 45 feet below water level, and the caisson was filled with Rosendale natural cement.

The slightly larger Manhattan caisson—because it needed to go deeper its roof was 22 feet thick—was launched on May 8, 1871. For safety reasons its interior was fully lined with boiler plate (there had been a fire in the roof of the Brooklyn structure) and painted white better to reflect light for the workers. Once fitted out, it was towed to the site in October and by November settled on the river bed.

Apart from "normal" mishaps like fire, flood, and sometimes violent blow-outs, the workmen faced an even greater peril. As the excavation deepened, air pressure in the workspaces had to be increased to as much as four

atmospheres. By May 1872 the Manhattan caisson reached firm sand at 78 feet, although it was still 30 feet short of bedrock. Roebling decided to go no deeper. At least three men died from caisson disease (decompression sickness or “the bends”). Andrew H. Smith, the Bridge Company’s surgeon, reported a further 107 nonfatal cases of the agonizing condition; of those afflicted, one man in seven was paralyzed to some degree. Washington Roebling was himself among them. Early in the summer of 1872, suffering a second attack—the first had been in December 1870—he was carried out of the Manhattan caisson. By the year’s end, he was partially paralyzed, hardly able to speak, deaf, and beginning to go blind.

EMILY WARREN ROEBLING: “SURROGATE CHIEF ENGINEER”

Fearing that he might not survive, and although it exhausted him, he spent almost 4 months dictating to Emily his detailed instructions for completing the superstructure. He taught her mathematics and physics—strength of materials, stress analysis, and catenary curve calculation—as well as “bridge specifications and the complexities of cable construction.” One essayist asserts (with some justification) that “although her training was informal, Mrs. Roebling [was], without official position or title, surrogate chief engineer between 1872 and [the opening of the bridge] in 1883.”

Indeed, her part in building the great bridge cannot be overstated. First, her husband was able to continue only because of the constant care, patience, strength, and understanding that she provided; as he later wrote: “At first I thought I would succumb [to my illness], but I had a strong tower to lean upon, my wife, a woman of infinite tact and wisest counsel.” However, Emily was to him much more than a nurse and an inspiration. On her daily visits to the construction site, she answered questions from the staff and the contractors; she kept the records, took care of correspondence, lobbied, addressed meetings of engineers, represented Washington at social functions, and in 1882 successfully fended off attempts to replace him as chief engineer. And all before she was 40 years old!

One writer has called her the “public face of the Brooklyn Bridge.” Another remarks that she was soon doing everything so competently that many believed that she *was* the chief engineer. McCullough notes that “it was common gossip that hers was the great mind behind the great work and that this, the most monumental engineering triumph of the age, was actually the doing of a woman.” He adds that some of her contemporaries thought it “preposterous and calamitous” that she had crossed the social boundaries set for an affluent woman in the late Victorian era.

About a week before the bridge’s official opening Emily was the first person to cross it, riding in a carriage and carrying a live rooster as a symbol of victory. McCullough writes, “From one end of the bridge to the other, the men . . .

stopped their work to cheer and lift their hats as she came riding by.” At the subsequent ceremony New York congressman Abram S. Hewitt wordily declared,

This bridge will ever be coupled with the thought of one, through the subtle alembic of whose brain, and by whose facile fingers, communication was maintained between the directing power of its construction and the obedient agencies of its execution. It is thus an everlasting monument to the self-sacrificing devotion of woman, and of her capacity for that higher education from which she has been too long debarred. The name of Mrs. Emily Warren Roebling will thus be inseparably associated with all that is admirable in human nature, and with all that is wonderful in the constructive world of art.⁶

“THE MAN IN THE WINDOW”

But to return to the building of the bridge. In 1873 Emily had taken her ailing husband for treatment at the famous spa gardens in Wiesbaden, Germany where they remained for 6 months. When they returned to the United States, it was to Roebling’s family and business in Trenton. Then, in the middle of June 1877 they moved to a house in Columbia Heights, Brooklyn, within sight of the bridge. Although increasingly debilitated, Washington Roebling wanted to retain control of the project. From his third-floor back bedroom, “the man in the window” watched through field glasses every step in the construction and dispatched Emily with instructions for the assistant engineers. Of course, the work had continued while the Roeblings were away. Besides Hildenbrand, the assistant engineers associated with the project—all in their thirties when the work began—during its entire history were Francis Collingwood Jr., Charles Cyril Martin, George McNulty, William H. Paine, and Sam Probasco.

The Brooklyn tower was topped in June 1875. The Brooklyn anchorage, started in February 1873, was completed in the following October; the Manhattan anchorage, commenced in October 1871, was finished in July 1876, at the same time as the Manhattan tower. A month later the four structures were linked by a single $\frac{3}{4}$ -inch diameter wire rope. On August 25, to mark the achievement and prove the strength of that rope, E. Frank Farrington made the dizzying 22-minute crossing from Brooklyn to Manhattan on a jury-rigged boatswain’s chair, as “cannon roared, and the myriads of spectators swung their hats and cheered with wild excitement, while all the steam-whistles on land and water shrieked their uttermost discordance.” But it would be about 7 more years before the great bridge was finished.

There had been administrative changes during the Roeblings’ absence. Prompted by the perceived tardiness of the project and cost blowout, voices had been raised against the New York Bridge Company, claiming that it was

“influenced by political and other complications.” And there was talk of profiteering—a charge that an audit proved to be unfounded. As James Stranahan put it, “I doubt whether any public work was ever conducted with greater economy or a more sacred regard to the general good. There never was a dollar of jobbery in it, from beginning to end.” However, the original legislation was amended in June 1874 to allow the municipal governments of New York and Brooklyn to gain majority ownership of the bridge. The new Board of Directors successfully pushed for further enactments that would eliminate the private Bridge Company altogether and allow the work to be completed as a joint municipal project by Trustees acting for the two cities. There was a hiatus in the winter of 1875–1876, because of lack of funds, and another in the following September when several warehousemen unsuccessfully petitioned the United States Circuit Court to halt the work because the bridge was “an illegal structure interfering with navigation.”

Those matters were resolved. And just as the Roeblings returned to Brooklyn the task of spinning the main cables began. Of course, the four were fabricated together. Each comprised nineteen “strands” made up of bundles of 278 one-eighth-inch diameter steel wires that had been soaked in linseed oil and dried, laid parallel, and wrapped in soft wire by John Roebling’s patented process. There were nearly fifty-five hundred wires in each 16-inch thick cable. All the spinning, wire by wire, necessarily was done *in situ* by men poised above the river on “buggies” or “cradles”—call them what we might, they were little more than insubstantial platforms carried on “traveler ropes”; other ropes supported a 4-foot-wide footbridge for the workers. Hundreds of coils of continuous wire were unwound from huge spools in a shed near the Brooklyn anchorage, and a wheel fixed to a traveler rope carried them one at a time over the 10-minute crossing. It’s hard to imagine how all this daredevilry would have looked from 200 feet below—men walking in the air—or how the emerging lacy web may have caught the imagination of a public that had watched the growth of the ponderous towers for 7 years.

The complicated, onerous work took until the middle of October 1878. Roebling’s specifications for the cable wire were based on performance, rather than on the type of steel to be used. The lowest tender came from his family’s company—Washington had sold his shares to resolve any conflict of interest—for wire made by the new Bessemer conversion process. John Buell notes that lack of detailed knowledge of that technique allowed “a certain individual with a financial interest in one of the other bidders” to question its suitability. The contract therefore went to the lowest bidder for crucible-cast steel (the highest grade, used in cutlery and toolmaking). Two years into the cable spinning phase, it was discovered that J. Lloyd Haigh of New York was supplying wire made of Bessemer steel. Roebling decided not to replace the affected strands—after all, the calculated safety factor was very high—but Haigh was forced to increase by 250 the number of wires in each of them. He was imprisoned for fraud.

Beginning in January 1881, suspenders of wire rope, clamped to the cables by wrought iron, were fixed to carry the substantial prefabricated steel substructure of the deck. When the roadway was completed the diagonal stays from the towers were secured.

The bridge approaches that had been started in August 1877 were completed in July 1882. A month later, the firm of Jones and Benner won a contract for building the viaduct and a cast iron and glass station at the Brooklyn Terminal; the Pittsburgh Bridge Company carried out similar work at the New York Terminal. The bridge railway, with cable cars operated from a powerhouse between Main and Prospect Streets in Brooklyn, commenced service 4 months after the bridge's official opening. The elevated promenade between the tracks was illuminated at night by seventy electric arc lamps supplied by the Weston Electric Light Company of Newark, New Jersey. The steel components of the bridge were protected with two coats of mineral-based red paint, colored with hematite (iron oxide) mined near Rawlins, Wyoming.

Because of its revolutionary structural system and construction details were unfamiliar to traditional contractors, the bridge was built for the most part by men directly employed by the New York Bridge Company (or later by the Trustees). Many of them were recent immigrants, and almost all remain anonymous. Materials were purchased mainly by contract. Work was directed by Washington or Emily Roebling or their team of assistant engineers. Some sources put the size of the work force at six hundred at any one time; others give a total of twenty-six hundred over the 13 years of construction. Although records are at best inconsistent, it is believed that about thirty men died on the project: as noted, at least three died of caisson disease, and some of the worst accidents happened during the cable rigging when several men were killed by falls or by falling equipment. It is ironic that only those workers who died have been named.

During the last 6 years of the project, there were "several disheartening work stoppages caused by lack of funds or lack of steel." Perhaps it was to be expected that the final stages of such an attenuated undertaking would be fraught with growing criticism and heightened dissension, on any number of grounds. Well before the roadway was built, the budget had blown out. Some engineers and architects not involved with the project—one historian dubs them "kerbstone superintendents"—raised technical and aesthetic objections to the design; envy cannot be discounted as their motive. Opportunistic landowners inflated acquisition prices for properties at the bridge approaches and rapacious subcontractors inflated their rates. And when Roebling, with great foresight, introduced steel trusses to strengthen the roadway, *The New York Times* criticized his "stupidity," warning that the extra weight would overload the structure. Naturally, such public doomsaying (albeit unsupported by calculations) created fears among the bridge's potential users. In summer 1882 Roebling was obliged to prove the safety of his design to a bedside inquisition of Trustees, and his dismissal as chief engineer was narrowly

averted. One writer observed that “the emotional pain caused by ignorant criticism, fraudulent contractors, the virulent opposition of the press, and interference by trustees with neither ability nor vision hurt him far more” than his physical affliction.⁷

“THE CROWNING GLORY OF AN AGE”

Brooklyn’s schools and businesses closed at noon on May 24, 1883—“The People’s Day”—for the formal opening ceremonies. One newspaper reported that Manhattan was in a less festive mood. U.S. President Chester Arthur and New York Governor Grover Cleveland attended the event with their entourages. Escorted from Fifth Avenue to the Manhattan tower by the Seventh Regiment of the National Guard of the State and a military band, and accompanied by New York’s Mayor Franklin Edson and city officials they walked across the Great East River Bridge elevated promenade. At the center of the span the New York members of the party were replaced by their Brooklyn equivalents. Cannons saluted from Fort Greene, the harbor forts, the Brooklyn Navy Yard, and five naval vessels gathered for the occasion; whistles blew, and the bells of Trinity Church rang out.

At two in the afternoon more than fourteen thousand invitees and myriad others gathered around a bunting-draped podium at the Brooklyn railway terminal to watch William Kingsley, then vice president of the Trustees, formally present the “the crowning glory of an age memorable for great industrial achievements” to Edson and Mayor Seth Low of Brooklyn. They responded with speeches and Trustees Richard S. Storrs (for Brooklyn) and Abram Hewitt (for New York) also made speeches. After five o’clock, with the official program concluded, more than one hundred fifty thousand people crossed the great bridge; public celebrations continued into the evening with an extravagant, hour-long fireworks display. Just before midnight the carriageways were opened to vehicles, and eighteen hundred made the crossing.

What of Washington and Emily Roebling on that great day? The ceremonies concluded, and the dignitaries were driven to the engineer’s Columbia Heights house to congratulate him. Although he could walk Washington had been unable to attend the opening. *The New York Times* reported:

From the back study on the second floor of his house [he] had watched through his telescope the procession . . . until the Brooklyn tower was reached. Then he returned to his dark chamber to gain a few minutes’ rest. . . . Mrs. Roebling also had returned from the bridge immediately after [the formalities] and was not feeling very well. . . . However, she regained sufficient strength afterward to receive at her husband’s side and accept her share of the honors of the bridge.

John Roebling first had costed his East River Bridge at \$3 million. By 1867 that estimate had increased to \$7 million; 5 years later Washington Roebling

revised it to \$9.5 million. With the purchase of land, the figure grew to \$13.2 million in 1875, still far short of the \$15.2 million incurred by the time that the bridge opened. One source estimated the final cost at \$17.2 million (based on the unskilled wage index, today that figure would be about \$2.2 *billion*). Bridge Trustee Stranahan explained that the escalation was caused by changes in the interests of safety and convenience, ordered by either the government or the Trustees. Noting that the bridge was “not that contemplated in [the original] estimate,” but “higher, wider, and composed of stronger material,” he insisted that the changes were needed “to make the bridge what it should be,” whatever that meant.

Washington Roebling resigned as chief engineer on June 30, 1883, and his chief assistant, Charles Cyril Martin, was appointed in his place.

Between 1886 and 1896 the City of Brooklyn annexed surrounding towns, and in 1898 its residents voted by a narrow margin to form Greater New York with Manhattan, Queens, the Bronx, and Richmond (later Staten Island). In January 1915 the name of the bridge was officially changed from “New York and Brooklyn Bridge” to “Brooklyn Bridge,” although that had been determined long since by popular usage. The U.S. government designated the bridge a national historic landmark in January 1964; it was listed on the National Register of Historic Places in October 1966, and as a New York City landmark in August 1967. The American Society of Civil Engineers named it a National Historic Engineering Landmark in 1972. Nevertheless, it remains only a “potential” entry for UNESCO’s World Heritage list. Neither does official recognition make it an icon of American architecture or engineering.

THE EIGHTH WONDER OF THE WORLD

Why the *eighth* wonder? Simply because an arbitrary seven “wonders of the world” had been identified since classical antiquity. The idea first occurs in Herodotus’ *The History* in the fifth century B.C. About 200 years later the chief librarian of the Alexandria Mouseion, one Callimachus of Cyrene wrote *A Collection of Wonders Around the World* (since lost), and a century after that Antipater of Sidon and Philon of Byzantium named the seven, probably as a “must-see” list for tourists. Somewhat revised, it appeared in its present form in the Middle Ages, when only the pyramids at Gizeh remained standing; also included were the “hanging gardens” of Babylon (probably confused with Nineveh), Phideas’ statue of the Olympian Zeus, the Artemision of Ephesus, Mausolus’ Tomb at Halicarnassus, the Colossus of Rhodes, and the walls of Babylon (later cast aside in favor of the Pharos at Alexandria). The point to be made is that from its inception the list was in flux, so we must not be surprised if modern lists also have been revised.

The publisher of Haw's *The Brooklyn Bridge: A Cultural History* asserts that the bridge is "hailed by some as the Eighth Wonder of the World." But only some. There were modern contenders for the title before the Brooklyn Bridge; for example, the Victoria Bridge, Montréal of 1860. And since 1883 many others have been feted as the eighth wonder, among them the West Baden Springs Hotel, Indiana (1902), the Panama Canal (1914), the Houston Astrodome (1965), Sydney Opera House (1973—even an opera, *The Eighth Wonder*, was written about it), and the weird and wonderful Palm Islands of Dubai, still under construction. Were every one legitimate, candidates by now would be staking claims as the several hundredth "wonder." One source names the Victoria Bridge as "widely referred to as the eighth wonder of the *modern* world." That qualification betrays a trend: besides "wonders of the *modern* world," now there are lists of "*modern* wonders of the *western hemisphere*." As their ambit narrows such lists become less significant, especially in an age of accelerating technological change. Therefore, what yesterday was exalted to stand with the seven, today is supplanted, just like in the ancient world. The promotion of a work to the rank of wonder often is merely promotion, and it may be challenged by "Says whom?"

Inclusion even on a list of "modern suspension bridge wonders of the world," based on longest, highest, or biggest is not an indication of iconic status. There are sixty-five such bridges with longer spans than the Brooklyn Bridge. The longest to date—6,529 feet—is the Akashi-Kaikyo Bridge across the Akashi Straits in Japan. Although discontinued for political reasons in October 2006, the proposed Strait of Messina Bridge, linking the Italian mainland with Sicily, would have had a main span seven-and-a-half times that of the Brooklyn Bridge.

Roebing's bridge did not seize the popular imagination simply because it was big. What is "big" depends wholly upon the frame of reference within which it stands. In 1943 Oscar Hammerstein II wrote a song about an 1880s cowboy returning from Kansas City to the Oklahoma Territory. He reports, "They went an' built a skyscraper seven stories high—about as high as a buildin' orta grow!" In truth, that sentiment could have been expressed by his urbane cousin from New York City or Brooklyn, the first and third largest cities in the United States. The bridge was of brobdignagian scale in what was then at the most a five- or six-story cityscape. Because tall buildings are now commonplace—New York has more than eighty that exceed 600 feet—it is difficult for us to appreciate the wonder that those colossal granite towers generated in the tens of thousands of people who daily commuted across the East River. As it came into being over almost 14 years the bridge created a sense of anticipation and perhaps even of ownership within those who moved in its growing and familiar shadow. In the popular mind, of itself it assumed iconhood.

Drawing upon Alan Trachtenberg's *The Incorporation of America*, in which he examined the evolution in the late nineteenth century of the American

corporation and the “emergence of a changed, more tightly structured society,” Jennifer Pricola wrote in 2002, “The Brooklyn Bridge lies at the point where these processes intersect.” Identifying it as icon—more correctly, a metaphor—of industrial and corporate America, she added “the success of a suspension bridge relies on the inherent tension of its structure, and in the case of the ‘Great Bridge,’ everyday conflict and myriad obstacles prolonged and burdened the work, adding to its emblematic power. [In the same way] tensions bind America; its society stands on—and gains strength from—the incorporation of conflicting interests and ideologies.”⁸

As it reflected those social tensions, the bridge also exposed aesthetic tensions, certainly in America but also in most of the Western world. Appearing in *Harper's Weekly* just 2 days after the official opening, a critique by architect Montgomery Schuyler dismissed Roebling's design as “architectural barbarism,” guilty of “a woeful lack of expression.” He lamented that some “future archaeologist, looking from one of these towers upon the solitude of a mastless river and a dispeopled land, may have no other means of reconstructing our civilization than that which is furnished him by the tower on which he stands.” Commenting with Ruskinian dogmatism, “this . . . ought to be a question with every man who builds a structure which is meant to outlast him,” he wryly added, “The work which is most likely to become our most durable monument, and to convey some knowledge of us to the most remote posterity, is a work of bare utility; not a shrine, not a fortress, not a palace, but a bridge.”⁹

Schuyler cannot be blamed for failing to understand that he was witnessing a major change of direction: given impetus by the Industrial Revolution, the engineer was about to eclipse the architect. The greatest and most innovative structures, for a time, would be built without benefit of or even advice from architects. In the case of the bridge, style is not an issue: it is a harbinger of a new design approach in which the essence of the structure is clearly expressed in the form. The clumsy moldings and the tentative, archeologically incorrect “gothic” elements may be a slight nod toward contemporary fashion. One historian writes that Schuyler's review was simply sour grapes, but that it recognized the bridge “for the icon it [would] become—an icon built without architectural input and for which [an architect] can take no credit.”

In fairness, it must be noted that Schuyler's views mellowed as Western architectural thought evolved. In *Architectural Record* of March 1909, after congratulating himself for “the first attempt . . . made in this country at an aesthetic consideration of an important engineering work,” he admitted that what one demands in such a work [as the bridge] is “the adaptation of form to function.” He added that in the case of the bridge, “the successes are all won by letting the structure ‘do itself,’ so to speak, the failures all incurred by forcing it to do something else. Even to-day . . . there is no finer thing in its kind to be seen than the gossamer structure of the metal, the airy fabric that swings between the towers.”

His changed position is reflected by later writers. Analyzing a claim that the bridge was “offered as an example that negotiated a position midway between tradition and novelty, the stable and the exploratory,” Trachtenberg asserts that it is significant because it “embodies two styles of building: the masonry is traditional, while the steel is something new. To be recognized as architecture, structural stone must be carved into a familiar shape, while the steel, unburdened with precedents, could take whatever shape its function demanded.”

The Brooklyn Bridge is a multilayered icon, confirmed by its place in the heart of the people of Brooklyn and Manhattan, even when it was still in course of construction; by its reflection of changes in corporate structure and the rise of industry; by its heralding of a new dawn of engineering as art; and by its anticipation of a new architectural aesthetic. Another layer was added in the 1920s, when through their diverse media, a group of New York thinkers and artists including the poet Hart Crane, the painter Joseph Stella, and the essayist Lewis Mumford countered the pessimistic view of America expressed in T.S. Eliot’s 1922 epic poem, *The Wasteland*.

For the bridge’s centenary, on May 24, 1983, Paul Goldberger wrote an appreciation, “Brooklyn Bridge at 100, embodies the spirit of an age” in *The New York Times*:

The Brooklyn Bridge . . . stands for many things—for movement, for thrust, for the triumph of man over nature and, ultimately, for a city that prized these qualities over all other things. . . . So much more than a roadway [the bridge] was, by itself, the tallest and grandest manmade thing in the city. [Its] Gothic towers of granite were New York’s first skyscrapers, for in 1883 they stood high above everything else on the skyline; its roadway provided a spectacular panorama of the city that could be obtained nowhere else. To see the city and the river from the Brooklyn Bridge was like flying.

But the genius of John Roebling’s design goes beyond even this. The bridge is an object of startling beauty. . . . What makes it magic is the way the towers, the cables and the roadway all play off against one another. The towers stand like great, majestic gateways to Manhattan and Brooklyn. The cables offer a gentle counterpoint, so delicate that they look like harp strings, and though they are, in fact, made of heavy strands of steel bound together, they make us feel that if we plucked them they would respond with beautiful music. And the roadway lifts in a gentle curve, animating the entire composition.

NOTES

1. Green, Samuel W., *The Complete History of the New York and Brooklyn Bridge: From Its Conception in 1866 to Its Completion in 1883*. New York: S.W. Green’s Son, 1883.
2. McCullough, David G., *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge*. New York: Simon & Schuster, 1983, 24.

3. McCullough, chapter 1 and widely elsewhere.
4. First published in Hart Crane, *The Bridge: A Poem*. New York: H. Liveright, ca.1930.
5. Deborah Nevins, "1869–1883–1983," in Brooklyn Museum, eds. *The Great East River Bridge 1883–1983*. New York: The Museum; Abrams, 1983.
6. ASCE. "History and Heritage of Civil Engineering: Emily Roebling." www.asce.org/history/bio_roebling_e.swf
7. Keller, Allan, "The Great Brooklyn Bridge," *American History Illustrated* (April, 1973), 10.
8. Pricola, Jennifer, "American Icon." <http://xroads.virginia.edu/~MA03/pricola/bridge/intro.html>
9. Schuyler, Montgomery, "The Bridge as Monument," *Harper's Weekly* (May 26, 1883). See also Schuyler, "Our Four Big Bridges," *Architectural Record* 25(March 1909), 147–160.

FURTHER READING

- Brooklyn Museum, ed. *The Great East River Bridge 1883-1983*. New York: The Museum; Abrams, 1983.
- Crane, Hart. *The Bridge: A Poem*. New York: H. Liveright, ca.1930
- Haw, Richard. *The Brooklyn Bridge: A Cultural History*. New Brunswick, N.J.: Rutgers University Press, 2005.
- Latimer, Margaret, Brooke Hindle and Melvin Kranzberg, eds. *Bridge to the Future: A Centennial Celebration of the Brooklyn Bridge*. New York: New York Academy of Sciences, 1984.
- Lopate, Phillip, and Burhan Dogancay. *Bridge of Dreams: The Rebirth of the Brooklyn Bridge*. New York: Hudson Hills, 1999.
- McCullough, David G. *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge*. New York: Simon & Schuster, 1982.
- Roebling, John A. *Report to the President and Directors of the New York Bridge Company on the Proposed East River Bridge*. Brooklyn, N.Y.: The Daily Eagle, 1867.
- Roebling, Karl. *The Age of Individuality: America's Kinship with the Brooklyn Bridge*. Fern Park: Paragon Press, 1983.
- Schuyler, Hamilton. *The Roeblings: A Century of Engineers, Bridge-Builders and Industrialists; The Story of Three Generations of an Illustrious Family, 1831–1931*. New York: AMS Press, 1972.
- Shapiro, Mary J. *A Picture History of the Brooklyn Bridge: With 167 Prints and Photographs*. New York: Dover, 1983.
- Trachtenberg, Alan. *Brooklyn Bridge: Fact and Symbol*. Chicago: University of Chicago Press, 1979.
- Vogel, Robert M. *Building Brooklyn Bridge: The Design and Construction, 1867–1883*. Washington, D.C.: National Museum of American History, Smithsonian Institution, 1983.

Weigold, Marilyn E. *Silent Builder: Emily Warren Roebling and the Brooklyn Bridge*. Port Washington, NY: Associated Faculty Press, 1984.

INTERNET SOURCES

Brooklyn Bridge website. www.endex.com/gf/buildings/bbridge/bbridge.html

Pricola, Jennifer. "American Icon: Incorporating Tensions in the Brooklyn Bridge." <http://xroads.virginia.edu/~MA03/pricola/bridge/print.html>



Courtesy Library of Congress

Empire State Building, New York City

*“The strangest story ever
conceived by man”*

James Sanders' *Celluloid Skyline*, a book about Hollywood's vision of Manhattan, reveals filmmaker Merian Cooper's inspiration for the climax of the movie *King Kong*: "One afternoon in February 1930 . . . [he] glanced up just as the setting sun glistened off the wings of a plane . . . near the New York Life Insurance Building." Cooper later wrote that when he imagined "a giant gorilla on top of the building [he] thought . . . , if I can get the gorilla logically on top of the mightiest building in the world and then have him shot down by the most modern of weapons . . . then no matter how great he was in size that gorilla was doomed by civilization."¹ While the film was in production, the Chrysler Building soared past the Life Insurance Building, and in 1931 the Empire State Building became the tallest in the world. Cooper twice made changes to his scenario in response to this "race to the sky." When *King Kong* was released in March 1933 with the tagline "The strangest story ever conceived by man," the gigantic primate was seen by the world climbing the Empire State, then only 2 years old. The movie's breathtaking climax did much to establish the towering structure as an American icon quite early in its history, and since then the motion picture industry has done much to affirm that.

Sometimes a Hollywood producer makes a "discovery" and an actor has appeared in a leading role in his or her very first movie, without having to climb the arduous ladder from bit player to star. That, in a sense, is what happened with the Empire State Building. And although it was momentarily eclipsed by the upstart One World Trade Center (WTC), it reprised the role with great success in 2005, in color and with very convincing special effects. In Dino De Laurentiis' 1976 remake of *King Kong*, the final showdown between giant ape and (in that case) jet aircraft took place atop the WTC—a change that recognized that the Twin Towers had won (at least temporarily) the title of the world's tallest buildings. But in Peter Jackson's nostalgic remake Kong was back on his original perch, snatching biplanes from the air. The Empire State's propagandists observe that "a building with this much character can't seem to keep itself out of the movies." But it seems that its prominence in films has more to do with its size than its character. Those people who count such things tell us that almost twelve thousand movies have been set in New York City; to avoid showing the Empire State Building is analogous with a director asking a 7-foot tall extra to mingle inconspicuously in a crowd scene.

However, the soaring office tower has had more than "walk-on, walk-off" roles in around ninety movies—certainly too many to examine in any detail here—usually as a location for a least some of the action. Memorable among them was the "legendary tearjerker" *An Affair to Remember* (1957)—perhaps because it starred Cary Grant and Deborah Kerr—about star-crossed lovers who agree, after spending 6 months apart, to confirm their enduring love by meeting at the top of the Empire State Building. The film was the inspiration

for TriStar Pictures' romantic comedy *Sleepless in Seattle*, variously described by critics as "shallow, contrived and ineptly directed" and "predictable, manipulative, and completely satisfying," which (naturally) appealed widely to the same kind of audience. It also included a climactic meeting at the top of the Empire State. Is there nothing new under the sun?

In a rather different vein, Twentieth Century-Fox's 1996 "big, dumb, glossy blockbuster" *Independence Day*, with a \$71 million budget, spectacular special effects and the insipid tagline, "We've always believed we weren't alone. Pretty soon, we'll wish we were," evoked the sci-fi movies of 50 years earlier. In it, the Empire State Building is obliterated in an alien attack that reduced most of New York City to ashes. One reviewer quipped that the movie was "like an advertisement for more defense spending."

And now for something *completely* different. The Empire State Building was the sole star of *Empire*, filmed by Andy Warhol in July 1964. Despite the medium, it could hardly be classified as popular culture; indeed, the fact that it was added to the National Film Registry in the Library of Congress in recognition of its "cultural, historical and aesthetic significance" suggests that some regard it as high art. The grainy black-and-white silent film comprised one continuous, 8-hour-and-5-minute shot of the building at night. In 2006–2007 the New York Museum of Modern Art screened a 2-hour, 24-minute excerpt; then, who would know?

As late as 2007, the long-running BBC-TV sci-fi series *Doctor Who* included an episode titled "Daleks in Manhattan" in which the ubiquitous Time Lord confronted his old enemies in the recently completed Empire State Building, where they were modifying the mast to achieve their evil ends. There were plausible re-creations (or evocations) of the Art Deco interiors. In 1966 the building had been featured—albeit briefly—in another *Doctor Who* six-part adventure, "The Chase," in which William Hartnell played the original Doctor in black and white.

In 1955, the American Society of Civil Engineers named the Empire State Building as one of the "seven modern wonders of the western hemisphere," and on the occasion of its Golden Jubilee in 1981 it was, not without reason, designated an official New York City landmark.

As part of its 150th anniversary celebrations in 2007, the American Institute of Architects (AIA) polled over eighteen hundred people about "America's favorite architecture." The foremost popular choice was "the most iconic building in the United States—the Empire State Building." Commenting upon the list, R. K. Stewart, then president of the AIA, observed, "When you ask people to select their favorites, they don't choose buildings or designs that are the most advanced or scientific—they choose buildings that hold a place in their hearts and minds." Every year, nearly four million visitors pay \$18 each to take in the vista from the skyscraper's eighty-sixth floor observation deck.

THE TALL BUILDING HISTORICALLY CONSIDERED

William Starrett, a principal of the contracting firm that built the Empire State and many other tall buildings, claimed in 1928 that the skyscraper was “the most distinctively American thing in the world.”

It is all American and all ours in its conception, all important in our metropolitan life; and it has been conceived, developed and established all within the lifetime of men who are, in many cases, still active in the great calling. . . . For the skyscraper, to be a skyscraper, must be constructed on a skeleton frame, now almost universally of steel, but with the signal characteristic of having columns in the outside walls, thus rendering the exterior we see simply a continuous curtain of masonry penetrated by windows. . . . We use these skyscrapers and accept them as a matter of course, yet as each new one rears its head, towering among its neighbors, our sense of pride and appreciation is quickened anew, and the metropolis, large or small, wherein it is built, takes it as its very own, and uncomplainingly endures the rattle and roar of its riveting hammers, and the noises and the inconvenience of traffic which it brings. And this is because we recognize it as another of our distinctive triumphs, another token of our solid and material growth.²

Capitalism sired the skyscraper. From the late nineteenth century, because of spiralling real estate values in America’s major urban centers, there was a need to optimize land use. Chicago in particular was a focus of change, and the devastating October 1871 fire was a catalyst. Subsequent renewal of the central business district—The Loop—called for the fusion of existing knowledge and emerging technology to create a new building type: the tall office block. Load-bearing construction was uneconomical for such a use; the structural need for walls to be thickest at the lowest levels wasted prime rentable space at high cost. The drawbacks weren’t only financial but environmental as well; as Starrett explained, “Masonry structures of ten stories and more demanded lower walls of such fortress-like thickness and sparse window vents that the ground-floor space, most valuable of all, was devoured and the sunlight all but excluded.”

Once, Americans variously used the word *skyscraper* to describe a high-flying bird, a fly ball in baseball or even a tall hat. In 1883 an *American Architect and Building News* article applied it to building, declaring that public buildings should always have something in their vicinity that soared above all around, the form of “sky-scraper gives that peculiar refined, independent, self-contained, daring, bold, heaven-reaching, erratic, piratic, Quixotic, American thought.” It prophetically (and jingoistically) added that “American constructive and engineering skill” could build such a building strong enough to resist any gale. Indeed, the building type was, as Starrett affirmed a half-century later, an American invention in which (at least to the admiring eyes of European architects) those distinctively New Worldly qualities were

perceived. Nevertheless, Europe eagerly adopted the form and the name (except the Germans and the Dutch, who spoke more pedantically of “*cloud-scrapers*”).

Although tall buildings were nothing new, the skyscraper had no architectural precedent. Egypt’s Great Pyramid at Gizeh (ca. 2570 B.C.) was 481 feet high. Neither were the multistory buildings innovative: the 300-foot Ziggurat of Marduk—the biblical Tower of Babel—built in Babylon about 800 years later had seven stories. But these ancient buildings *defined* space, rather than *enclosing* it. The great Roman public baths and basilicas and the later Christian cathedrals throughout Europe, though they enclosed stupendous volumes, were essentially single-story buildings. There were a few historical examples of multistory space-enclosing buildings, such as the second century A.D. residential tenements in Ostia, Italy, but their practicality was limited, mainly by inconvenience of access to the upper levels.

The new building form can be related to new materials. As early as 1849 the New York inventor and architect James Bogardus had built the four-story Laing stores, in which the upper floors, roofs, and even the relatively thin external walls (“curtain walls” that served as nonstructural environmental screens) were supported by cast-iron frames. The building was assembled in about 2 months. Three decades later, the Chicago architect William Le Baron Jenney employed a similar structural system for his seven-story so-called first Leiter Building in the windy city.

But iron presented difficulties. Although much lighter than masonry construction of equivalent strength, it failed structurally at quite low temperatures; that risk could be reduced by encasing structural members in fire resistant material. However, though perfectly adequate in compression, cast-and wrought-iron had little tensile strength, so that iron beams were limited to relatively short spans, necessitating forests of columns, which in turn diminished the flexibility of space deployment, especially in commercial buildings. After about 1865 consistent quality steel was economically produced in large quantities by the Siemens-Martin open-hearth method; because of its high tensile strength a steel frame was lighter still. Jenney’s ten-story Home Insurance Building in Chicago (1884–1885) was the first to make use of full steel skeleton construction, and by the 1890s the “typical” skyscraper had a riveted steel frame that carried all the loads—self-weight, imposed dead loads, live loads, and wind loads—within an enclosing curtain wall.

In multistory buildings, a mechanical vertical transportation system was essential. Elisha Graves Otis installed the first passenger elevator in a New York department store in 1857; by 1873 over two thousand commercial buildings throughout the United States had steam-powered Otis systems (steam-powered *goods* lifts had been used in Britain since 1835). But steam elevators, that were slow and needed very large spaces to accommodate the vast drums around which their cables were wound, were not well suited to skyscrapers, even those of moderate height—say, up to twenty stories.

Otis and other manufacturers responded with hydraulic elevators; occupying much less space, they could travel at up to 700 feet a minute—nearly three times the speed of the fastest steam elevators. In 1880 the German Werner von Siemens employed an electric motor on a rack-and-pinion elevator, and 7 years later in Baltimore an electric version was developed that moved the cage by winding the cable on a revolving drum. The first Otis “direct-connected geared electric elevator” was used in the Demarest Building in New York in 1889.

NEW YORK, NEW YORK

Of course, in New York, the skyscraper had evolved in much the same way as elsewhere. As hard as it is to imagine now, before about 1880 Manhattan’s general skyline was only a few stories high. The rare soaring exceptions were the 281-foot neo-Gothic spire of Richard Upjohn’s Episcopal Trinity Church, completed in 1846, and Richard Morris Hunt’s 18-story, 250-foot *New York Tribune* building of 1873–1875. Generally, successive office buildings would increase from only seven or eight stories in the 1870s to eighteen or more in the 1890s. Although an intervening economic depression dampened commercial building activity, two very tall structures, both longer term projects, were completed in the 1880s: the Brooklyn Bridge, with its 276-foot towers, was opened in 1883 and the 301-foot Statue of Liberty was dedicated 3 years later.

Commercial developments began to catch up. In 1883–1884 Norris G. Starkweather built the eleven-story, cast iron-framed Potter Building with its ornate terracotta façades; 5 years later Bradford Lee Gilbert’s 130-foot Tower Building, also of eleven stories and the first in New York with a steel skeleton frame, was finished. Its close contemporary, the twenty-story, 309-foot *New York World* Building (aka the Pulitzer Building) by George B. Post was the first office tower taller than Trinity spire; it also was steel-framed, although the external walls had a partly structural function.

In 1892 the New York Building Law first regulated skeleton construction, and steel-framed skyscrapers proliferated before the turn of the century; examples include Robert Henderson Robertson’s 292-foot American Tract Society Building (1894–1895) and his thirty-story, 391-foot Park Row Building (1896–1899). The 612-foot Singer Building (completed 1908) by Ernest Flagg seized the “world’s tallest building” record from Ulm Cathedral, Germany; dubbed a cathedral of commerce and industry, it was the first secular building to hold the title. The following year it was surpassed by LeBrun and Sons’ 700-foot Metropolitan Life Insurance Building and then in 1913 by Cass Gilbert’s 792-foot Neo-Gothic Woolworth Building, that held the record until 1930.

Most New York office towers were monolithic prisms, rising directly from the edges of their sites. Flagg, an erstwhile critic of high rise, had advocated height limitations and restrictive zoning, as demonstrated in the Singer Building’s set-back design, so that “we should soon have a city of towers

instead of a city of dismal ravines.” Such views contributed to the Building Zone Resolution adopted by New York City in July 1916; a major catalyst to the legislation was the completion a year earlier of Ernest R. Graham’s thirty-six-story Equitable Life Assurance Building, which “caused resentment due to its massive scale . . . and for blocking sunlight from the street.” Among other things, the Resolution covered issues of health, fire safety, and compatible land use. More significantly in the present context it controlled the height and setbacks of tall buildings, assuring that adequate light and air reached adjoining properties and streets.

A QUESTION OF STYLE

The accelerating advances in technology made it (some might say) relatively easy to resolve the pragmatic aspects of the skyscraper. But what of an appropriate aesthetic for a new building type? In March 1896 the Chicago architect Louis Sullivan challenged,

Offices are necessary for the transaction of business; the invention and perfection of the high-speed elevators make vertical travel . . . , once tedious and painful, now easy and comfortable; development of steel manufacture has shown the way to safe, rigid, economical constructions rising to a great height; continued growth of population in the great cities, consequent congestion of centers and rise in value of ground, stimulate an increase in number of stories. . . . Thus has come about the form of lofty construction called the “modern office building. . . .”

Problem: How shall we impart to this sterile pile, this crude, harsh, brutal agglomeration . . . the graciousness of those higher forms of sensibility and culture. . . ? How shall we proclaim from the dizzy height of this strange, weird, modern housetop the peaceful evangel of sentiment, of beauty, the cult of a higher life?³

He had long since concluded that the tall building should incorporate a base (the floors that allowed public access), a shaft (a number of identical floors for offices), and a capital (a well-defined cornice terminating the composition). That was not to say that it should plunder history, but despite his denials, comparison with a classical column is inevitable. His Wainwright Building in St. Louis, Missouri (with Dankmar Adler, 1890–1891) probably best demonstrated his newly derived aesthetic.

The theories of the French architect Eugène Emmanuel Viollet-le-Duc (1814–1879) reached America just as architects were grappling with this issue. Until then, architecture had been a retrospective art; after all, the ways and means of building—indeed, the uses of buildings—had not changed significantly for centuries. At best, architects designed according to an appropriate stylistic precedent: for example, perhaps Gothic for churches, Greek for cultural institutions, or Renaissance for government buildings. At worst,

styles were selected or hybridized from an historical smorgasbord. In any case, as far as it was possible, archaeological detail (to a greater or less degree) masked the skyscraper's innovative structural system. The building form of the new "metallurgical architecture," Viollet insisted, should express the materials and methods that it employed. Yet it took some time for the tall building to shake free from the chains of historicism. Well into the twentieth century architects continued to select inappropriate styles as precedents; that is true of all the New York buildings already cited. The mind-set is betrayed in the 260 entries in the 1922 *Chicago Tribune* competition for "the most beautiful office building in the world"; European designers employed a new aesthetic, American designers did not.

A major influence on the surface appearance—inside and out—of New York skyscrapers was the 1925 Paris *Exposition Internationale des Arts Décoratifs et Industriels Moderne*, that gave rise to the jazzy "Art Deco" style. Someone has described it as "modernism with the plainness taken off." It may be that its decorative qualities, though owing nothing to historical sources, made it more acceptable than the austerity of socialistic (God forbid! Even communistic) European Modernism of those postwar years; besides, much of the New Architecture was rooted in Germany. That country had been deliberately sidelined by the organizers of the 1925 Paris show. And the United States declined to have a pavilion, ostensibly on the grounds of having insufficient original designs to exhibit (exposition rules excluded copies and imitations of old styles). For all that, the show, which ran from April to October, was well attended by interested Americans: architects, designers, and laymen alike.

Anyway, Art Deco, because it had no relevance to building *process* was little more than appliqué—young people now would call it "bling"—that, though often expensive, had no deep relationship with the underlying (and often quite pragmatic) architecture. Earliest New York examples include the offices and showrooms of the Cheney Silk Company (1925), decorated by the French metalworking company Ferrobrandt, and the fifty-six-story Chanin Building of 1927–1929, by Sloan and Robertson, embellished by architect Jacques L. Delamarre and sculptor René Chambellan.

In 1926 construction began on the Chrysler Building, in which the lavish application of Art Deco was stretched to the limits of taste. Many corporations built skyscrapers for their promotional value, and one writer extravagantly claims that automobile magnate Walter P. Chrysler wanted his building to be decorated with "hubcaps, mudguards, and hood ornaments, just like his cars, hoping that such a distinctive building would make his car company a household name." He also wanted it to be the world's tallest building.

AND THE WINNER IS . . .

From late in the nineteenth century 180 office blocks of at least twenty stories were built in Manhattan. Until 1929 the tallest—in fact, the tallest in the

world—was the 792-foot, fifty-five-story Woolworth Building on Broadway. After that, the “race for the sky” was between the Bank of Manhattan Trust Company at 40 Wall Street (since 1996, the Trump Building) and Chrysler’s tower on the corner of 42nd and Lexington Avenue.

The “cold and nondescript” Manhattan Trust building, designed by H. Craig Severance with associate Yasuo Matsui and consulting architects Shreve and Lamb, was completed in April 1929; at 927 feet (2 feet above the planned height disclosed by Chrysler) it won the world title—at least, momentarily. Its rival, designed by architect William van Alen, was intended to be crowned with a dome. But the architect covertly had obtained permission to add the stainless steel spire that is now recognized as the building’s most distinctive feature; its components were preassembled inside the upper floors, and it was fixed in just an hour-and-a-half on October 23, 1929, bringing the height to 1,048 feet. Triumph was short lived. The Empire State Building won the race a few months later. As historian Mark Kingwell colorfully puts it, “The Chrysler and the Manhattan Company buildings had gone head to head, neck and neck down the stretch. Now, it was as if a powerful novel breed of animal had rounded the curve behind them and, with a burst of powerful strides, beaten them soundly, going away.”⁴

Described by one of its architects as “the product . . . not of pure inspiration but of a symposium of owner, banker, builder, architect, engineer, and real-estate man,” the Empire State Building was the outcome of a courageous real estate speculation by a company formed in 1929, the year of the Wall Street crash. The principal investors were the multimillionaire John Jacob Raskob, former CEO of General Motors; industrialists Pierre Samuel du Pont and his cousin Coleman, both of E. I. du Pont de Nemours and Company; Louis G. Kaufman, president of the Chatham and Phoenix Bank; and Republican politician Ellis P. Earl.

Raskob, the prime mover of the project, was a self-made financial genius. In 1901 Pierre du Pont had hired him as a stenographer on an annual salary of \$1,000; within a decade he had become assistant treasurer of the vast DuPont corporation and in 1914 was promoted to treasurer. From 1915, advised by Kaufman, he invested the company’s profits from World War I munitions in General Motors stock, eventually securing almost half of the automobile company. In 1918 he became vice-president of finance of DuPont and General Motors.

Although a Republican, in 1926 Raskob contributed to the campaign to reelect as mayor of New York Democrat Alfred E. (“Al”) Smith, “a colorful, charismatic product of the lower East Side.” Both men were successes from poor Irish Catholic families, and their working relationship cemented a friendship. In 1928, against the best advice of the politician’s aides, Raskob was appointed as campaign manager in Smith’s unsuccessful contest with Herbert Hoover for the U.S. presidency. Paradoxically, a Republican millionaire was thus chairman of the Democratic National Committee. When he launched the Empire State Corporation Raskob offered Smith the position of

president at an annual salary of \$50,000. It was a canny public relations move, as one historian observes: “[they] had suffered side by side through bruising attacks on their religion and patriotism; now that Smith had returned to private life, Raskob was there with what he needed most—a job. Smith, like the building itself, was ‘up from the city streets,’ and he had a magnetism of legendary proportions: he would serve as front man and mascot for the [Empire State] project.”⁵

The paradox of that project was that it became a reality just when “almost everything else was coming apart and tumbling earthward.” The Empire State venture was made public in August 1929; land had been purchased, architects commissioned, documentation prepared, contracts let, and a company office set up at 200 Madison Avenue. Then at the end of October came the cataclysmic crash of the New York Stock Exchange; after a brief recovery in 1930, that fall would generate the Great Depression that spread internationally for most of the decade. But to discontinue the project would have inflicted monumental losses on his coinvestors and especially on Raskob. Having committed themselves they had no choice but to grit their financial teeth, take their chances on an economic turnaround and carry on with their plans. In December Smith announced that they had taken a loan of \$27.5 million from the Metropolitan Life Insurance Company. One commentator observes that the building was a “stalwart symbol of optimism”—perhaps *bravado* is a better word. Kingwell eloquently writes that the Empire State Building’s

unlikely birth in the middle of the 1929 crash; its defiant optimism steered by Al Smith and . . . Raskob, those quintessential self-made men; the astonishing assembly line of steel and stone that made it the fastest megaproject the world had seen; its gathering of workers from all nations and trades—all this combines to make [it] the ultimate dream building.⁶

It has been claimed that the name was chosen “as part of a public relations and morale boost” in those dark days. Some sources ascribe New York’s appellation as the Empire State to George Washington, who in December 1784 called it “the seat of the Empire.” Between 1785 and 1790 New York City was indeed the first seat of the U.S. government.

THE LIGHTHOUSE OF MANHATTAN

For much of the nineteenth century the Empire State Building’s Fifth Avenue site was farmland, later transformed into a desirable address for New York’s urban aristocracy. The block between 33rd and 34th Streets became the location of two mansions on expansive sites: the northern half was occupied by Caroline Astor, while her nephew, William Waldorf Astor built a house on the southern half. In 1893, “in order to spite his aunt,” he replaced his

residence with the Waldorf Hotel, designed by the highly productive turn-of-the-twentieth-century architect Henry Janeway Hardenbergh. Four years later Caroline fought back by replacing her own home with the Astoria Hotel, also by Hardenbergh. The hotels combined to create the Waldorf-Astoria, a gathering place for the “four hundred,” the cream of New York Society. In 1928, the complex was sold to Bethlehem Engineering Corporation, and the establishment was later “reincarnated” as a forty-seven-story Art Deco pile on Park Avenue.

The Empire State Corporation acquired the Fifth Avenue property, as well as adjoining lots that brought the total area to about 2 acres, for a little over \$16.2 million dollars. When space in the Empire State Building was eventually offered for lease in the 1930s, much would be made of the site’s history—it must be said, apparently to little effect. Journalist Frances Low wrote in *American Heritage* in 1968 that oversize press announcements trumpeted William Astor’s 1827 purchase of the land and “burbled on about the ‘perpetual prestige’ of the address.” Some advertisements included photographs of the Astor mansions, Astor weddings, or of the Waldorf-Astoria Hotel to attract tenants to “the world’s most distinguished address.”

The Corporation commissioned the architectural firm of Shreve and Lamb to design its building. Richmond H. Shreve was widely acknowledged for his expertise in dealing with logistical issues, and William F. Lamb was a talented designer. At first they were asked to create a fifty-story, 650-foot high office block but that program was to undergo several revisions—some sources say as many as fifteen. There is a persistent story that at a briefing meeting Raskob took from his desk drawer a thick “jumbo” pencil (the kind still available as novelties) standing it on end, he asked Lamb, “Bill, how high can you make it so that it won’t fall down?” The proposal was changed to an eighty-six story, 1,050-foot tower, crowned with an observation platform, giving the Empire State nine more rentable floors than the Chrysler Building. But that would make it only 4 feet higher than its rival. According to one writer, Raskob was “worried that Walter Chrysler would pull a trick like hiding a rod in the spire and then sticking it up at the last minute.” Believing the 4-foot margin to be inadequate, he asserted that “this building needs a hat.” Further changes to the design in December 1929 increased the Empire State to 102 floors and a height of 1,472 feet, including an ambitious 220-foot stainless steel mooring mast for dirigibles like the pioneering German *Graf Zeppelin*.

“THE LOONIEST BUILDING SCHEME SINCE THE TOWER OF BABEL”

In the 1930s newspapers across the United States published promotional photographs of the American airship *Los Angeles* docking at the Empire State Building. It never happened. All the images were “photographic

composites”—a polite way of saying “fakes.” Yet for a short time a mooring mast was seriously proposed. The romantic idea was that transatlantic travelers could disembark at the very heart of New York. The eighty-sixth floor would house airline offices and passenger lounges and facilities; the actual anchorage would be at the 106th level. The building frame was braced to resist the 50-ton pull of a moored dirigible—*Graf Zeppelin*, for example, was 776 feet long and 110 feet high—and some of the winch equipment was installed. Little thought was given to the practicalities, especially the major objection that the unpredictably fluctuating air currents over Manhattan would make it virtually impossible to securely moor the huge vessels. The Corporation’s lawyers nevertheless drafted documents to argue that “owners of neighboring buildings could not sustain a claim of trespass when they found dirigibles overhead.” Moreover,

Raskob and Smith were inviting the unwieldy craft to come in low and slow, over hazards such as the menacing Chrysler Building spire, and somehow tie up without use of a ground crew. Then, too, if the crew released ballast to maintain pitch control, a torrent of water would cascade onto the streets below. And once secured, a dirigible could be tethered only at the nose, with no ground lines to keep it steady.⁷

Even if such difficulties could have been overcome, passengers would have to disembark nearly a quarter mile in the air, and find their way down a swinging gangway to a narrow open platform near the top of the mast. They then would have to negotiate two steep ladders inside the mast to reach the elevators. That was hardly a dignified arrival for people affluent enough in those Depression days to spend \$5,000 for a one-way ticket. The chief of Germany’s *Zeppelin Gesellschaft*, Hugo Eckener, himself an experienced airship pilot, had strong misgivings about the proposal. The early support, even enthusiasm, of the American press soon gave place to a more cautious approach; one paper hyperbolically criticized, “the proposal . . . hangs on the highly dubious contention that the saving of an hour’s time to thirty or forty travelers is of more importance than the assured safety of thousands of citizens on the streets below.”

It took only one nearly disastrous attempt to moor a small U.S. Navy non-rigid airship—a “blimp”—to prove the point. On September 16, 1931, the docking procedure succeeded for just 3 minutes. The craft was almost upended by unpredictable eddies, and its spilled water ballast drenched pedestrians blocks away. Two weeks later a Goodyear blimp delivered a bundle of newspapers to the mast by rope. After that, the proposal was abandoned—a decision tragically validated in May 1937 by the fiery destruction of the *Hindenburg*. The question may be asked, “What would have happened if the hydrogen-filled *Hindenburg* had exploded over midtown Manhattan instead of at Lakehurst, New Jersey?” The observation decks would remain just observation decks, and the mast later formed the base of a television tower.

“THE PARAGON OF EFFICIENT BUILDING CONSTRUCTION”

The client’s brief was succinct enough: “a fixed budget, no space more than 28 feet from window to [central] corridor, as many stories of such space as possible, an exterior of limestone, and completion by 1 May 1931.” The potential outcome was largely constrained by New York’s strict zoning regulations, which mandated that from the thirtieth floor up the building could not exceed a quarter of the ground lot in area. In the event, the architects were more generous to their neighbors and to the New Yorkers who moved on the canyon floor below. Working in association with the structural engineers H. G. Balcom and Associates, Shreve and Lamb (joined some time in 1929 by Arthur L. Harmon) produced a steel-framed tower whose five-story base covered the whole site. Rising uninterrupted from a 60-foot setback at the sixth floor to the eighty-sixth floor, it was faced with silver-gray Indiana limestone and granite, and its verticality was emphasized by continuous chrome-nickel steel mullions.

Typically, the tower floors had a central core—elevators, stairs, toilets, service shafts, and corridors—surrounded on four sides by a 28-foot deep perimeter of office space. As one critic comments, the configuration had “the so-called skyscraper advantages of more windows and minimized interior darkness. Although there would be less rentable space, the tower footage was considered prestige space that would command good prices.” The structural system was hardly innovative: its 210 closely spaced steel columns produced a robust frame with a high degree of structural redundancy—that is, there were many alternate paths by which the building loads were transmitted to the foundation. The disadvantage was that this forest of columns restricted flexibility in the layout of offices, reducing market appeal for prospective lessees.

The Otis Company installed seven banks of elevators with a total of fifty-eight cars for passengers and eight for goods and services. Each bank (they varied in size) was dedicated to a number of levels; to expedite movement, those carrying passengers to upper floors would bypass the lower ones. They were designed to travel at 1,200 feet per minute, although when the building was progressing, changes to New York codes restricted speeds to just over half that. A month after the Empire State was opened, the code was again revised to allow faster movement.

The design aesthetic was unremarkable, and the building was either ignored or criticized by the *aficionados* of the sterile European modernism—the so-called international style—then incipient in North America. But apart from Raskob’s metaphor of the “jumbo” pencil, there seems to have been no client–architect discussion of the building’s style. Efficiency, not aesthetics, had been stressed. Noting architectural historian Edward Wolner’s comment that the “Empire State . . . was modernistic, not modernist. It was deliberately less pure, more flamboyant and populist than European theory allowed,” it can be

claimed justifiably that the building's artistic qualities are relatively inconsequential, because much of its significance lies in the fact that the design, in William Starrett's words, was "magnificently adapted to speed in construction." And speed *was* of the essence.

The contract was let to the Starrett Brothers construction company—the firm's name changed to Starrett Brothers and Eken in 1930—who were probably New York City's major builders of skyscrapers through the 1920s. They had a disarmingly honest approach to tendering; when the clients asked how much equipment they had on hand, Paul Starrett replied, "Not a blankety blank [*sic*] thing. Not even a pick and shovel," before explaining, "This building . . . is going to represent unusual problems. Ordinary building equipment won't be worth a damn on it. We'll buy new stuff, fitted for the job, and at the end sell it and credit you with the difference. . . . It costs less than renting second-hand stuff, and it's more efficient."

In 1928 his brother William wrote more politely and poetically of the difficulties of the heroic task in *Skyscrapers and the Men Who Build Them*:

Foundations are planned away down in the earth alongside the towering skyscrapers already built. Water, quicksand, rock and slimy clays bar our path to bedrock. Traffic rumbles in the crowded high-ways high above us and the subways, gas and water mains, electric conduits and delicate telephone and signal communications demand that they not be disturbed lest the nerve system of a great city be deranged. . . . The obtaining of materials near and far and the administration of all those thousands of operations that go to make up the whole, are the major functions of the skyscraper builder. Knowledge of transportation and traffic must be brought to bear that the building may be built from trucks standing in the busy thoroughfares, for here is no ample storage space, but only a meager handful of material needing constant replenishment—hour to hour existence. Yet it all runs smoothly and on time in accordance with a carefully prepared schedule; the service of supply . . . , the logistics of building, and these men are the soldiers of a great creative effort."⁸

To meet the almost impossibly tight schedule set for them the contractors had to adhere to a meticulously detailed program devised by the chief engineer, Andrew J. Eken. The critical path schedules were said to have been worked out to the minute. Coordinating over sixty different trades, those schedules were complicated by the downtown location, because there was nowhere to hold materials awaiting use. The Empire State was the first commercial project to employ the "fast-track" technique, in which construction began before design details were finalized—in this case, to win the race for the tallest building.

Of course, the first phase of construction was the demolition of the Waldorf-Astoria Hotel, beginning on October 1, 1929. Some sources claim that seven hundred workers removed 16,000 truckloads of debris that were loaded into barges and dumped into the Atlantic Ocean, "five miles beyond Sandy Hook."

Even before demolition was complete, excavation for the new building started. From January 22, 1930, two shifts, each of three hundred men working day and night, dug 55 feet below ground to construct footings in the gray Manhattan bedrock.

“SKY BOYS”—THE HIGH STEEL WORKERS

Work began on the building’s skeleton just under 2 months later. Rolled steel columns and beams manufactured in Pittsburgh were transported to a supply yard in New Jersey, to be taken by truck to the site. They were marked with their location in the frame and the number of the electrically driven derrick that would hoist them for fixing at their final location. It is said that often the whole process took only 80 hours. The frame rose an average rate of four-and-a-half floors a week. William Starrett justifiably boasted, “The first column was set on April 7, 1930 and twenty-five weeks later over 57,000 tons of steel had been topped out . . . 87 stories above the sub-basement level, twelve days ahead of schedule.”

This unprecedented feat was achieved by a well-organized workforce of three hundred skilled high steel workers—the “sky boys.” They came from different backgrounds; some had been sailors, accustomed to the lofty rigging of ships (a generic term for men who work on tall building frames is still “rigger”). But most of those on the Empire State Building were Caughnawaga Mohawks from an Indian reserve on the St. Lawrence near Montreal, Canada. The photographer Lewis Wickes Hine was commissioned to document the construction of the Empire State Building. His heart-stopping images show steelworkers—known as “sky boys”—walking on beams or sitting astride them, “riding the ball,” climbing on guy wires, even relaxed, eating their lunches or clowning around between heaven and earth, without hard hats or any of the safety gear mandated by modern laws. According to Low, the popular press lauded these “poet builders . . . who ride the ball to the 90th floor or higher, and defy death to the staccato chattering of a pneumatic riveting-hammer.” “Fitting-up gangs” secured the prefabricated steel sections to hoisting cables, and “raising gangs” rode them to their place, where they were built into the frame by “riveting gangs.” When the steelwork was at its busiest, thirty-eight riveting gangs were employed. They worked in teams of four: the “heater” raised the rivets to red-heat in a forge, picked them up with 3-foot tongs and lobbed them one by one to the “catcher,” who caught them in a can. Also using tongs, he placed them, still red-hot, into predrilled holes in the structural joint. The “bucker-up” supported the rivet while the “gunman” secured it with a compressed-air hammer.

Of necessity, the rest of the building work was also efficiently organized. Low writes, “Other crews in the construction process swarmed in [an appropriate verb] on the heels of the steel setters.” The various suppliers of materials,

machinery, or equipment synchronized delivery with installation. Materials arrived on-site in trucks that drove into the ground floor—at the peak of activity, that meant almost five hundred deliveries every day. They were immediately unloaded into any of twenty rail cars (each one, pushed by workers, held about eight wheelbarrows full) that was raised to the designated floor on a purpose-built temporary elevator, and transported on tracks to the location where the material was “deposited at the workers’ very elbows.” Movement of the ten million bricks used in the building was handled in a similar way. Delivery trucks dumped their loads down a chute to a hopper in the basement; as they were needed, bricks were dropped from the hopper into railway carts and taken to their location. The building’s masonry skin was fixed by mid-November 1930; all the stonework except for few ornamental details at the lower levels was set in 16 weeks. Low wrote,

Stairways rose through the skeleton; then came the electric cables and various kinds of piping, the building’s veins and arteries. The lower floors were plastered before the roof was made tight. The overlapping schedule was working well, and, with the omnipresent pressure for speed, it all gave, in the [*New York Times*’s felicitous phrase, the impression of “a chase up into the sky.”

More time was saved by organizing the lunch breaks. Low states that “When the noon whistle blew, five mobile cafeterias began shuttling up and down [on the 3rd, 9th, 24th, 47th, and 64th floors of the] scaffolding. For forty cents—and with no time lost—a man could sit on a girder and gulp down two sandwiches, coffee or milk, and pie.” The provision meant that the men had more time to eat, and the contractors had a more productive workforce. Fewer than one in seven of the workmen left the site at lunch times. A temporary reticulation system provided drinking water throughout the site.

Starrett Brothers and Eken executed the contract for the Empire State “with a level of organization and detail that was unequalled . . . as the paragon of efficient building construction and a record for speed of construction that remains unmatched.” The building was finished ahead of schedule on April 11, 1931—only a year and 45 days after it had begun. That was achieved by an average workforce of twenty-five hundred. During spring and summer 1930, when site activity reached its peak, thirty-four hundred workers—nineteen hundred on the principal contractor’s payroll, and fifteen hundred employed by sixty-seven subcontractors—saw the building rise more than a story every day. Altogether, they worked 7 million carefully monitored man-hours, including Sundays and public holidays. According to *The New York Daily News*, fourteen men died in accidents in the course of building; although of little consolation for their families, the project had an impressive safety record, because as a rule of thumb, the expected number of construction deaths was then one worker per floor.

On May 1, 1931, in “almost a holiday atmosphere” New York City officially dedicated the skyscraper. With Governor Franklin D. Roosevelt and

Mayor “Jimmy” Walker watching, Al Smith, his wife, and two grandchildren cut the ribbon to the main entrance of the Empire State Building. A congratulatory message from President Herbert Hoover was read at the opening ceremonies on the observation deck: “This achievement justifies pride of accomplishment in everyone who has had any part in its conception and construction and it must long remain one of the outstanding glories of a great city.” By touching a golden telegraph key in the White House, he turned on the building’s lights. The CBS and NBC networks broadcast the proceedings, and the highest telegraph station in the world transmitted and received telegrams. *The New York Times* hailed the Empire State as “Building in excelsis”; other newspapers were just as effusive about this “poetry in steel” and “the tallest arrow in Manhattan’s quiver.”

THE “EMPTY STATE BUILDING”

There can be no question that the building opened at the wrong time. Optimistically conceived during a real estate boom, the venture’s financial success was shattered by the Wall Street crash; construction of the skyscraper had proceeded “against all logic.” But because of Depression prices, it cost only \$24.7 million—half the notional budget and well below the contractor’s estimated \$43 million.

Despite its well-publicized renown as the world’s tallest office building, the owners were hard pressed to find tenants for the 2.1 million square feet of office space. Witty New Yorkers coined the epithets “Empty State Building,” “the 102-Story Blunder” and “Smith’s Folly.” To exacerbate the impact of the Depression, the Fifth Avenue address, classy as it may have been, was too far from the central business district. Even after *King Kong* made it more famous in 1933, only a quarter of the building was leased; 6 months later there were still fifty-six vacant floors. To create an illusion of higher occupancy, lights were kept burning at night on the empty floors. Following World War II, New York commerce found its center of gravity in the Rockefeller Center, a 22-acre, nineteen buildings complex on 48th and 51st Streets, between Fifth and Seventh Avenues.

The Empire State now has over eight hundred small tenancies supporting nine thousand employees in what are decidedly unfashionable offices. Kingwell characterizes it as “a kind of urban time machine filled with diamond merchants, insurance companies and private investigators, among many, many others.” The rents are around 77% of Midtown Manhattan averages. He writes,

In business terms, the Empire State Building may be the most famous white elephant on the planet. . . . It has never succeeded in its ostensible function as an office building. . . . Vacancy rates have recently climbed again, from a low of 1.7 percent in 2000 to more than 18 percent. . . . The small offices and antiquated

infrastructure are part of the deterrent, despite projected upgrades; but so is a continuing feud between the two companies that control the building. . . , which complicates leasing arrangements.⁹

On the other hand, he admits that “Nostalgic love of the building seems to fend off any association beyond a name with American empire, taking the old building on its merits as an icon of capitalism, technology, and the modern,” and wistfully adds, “The Empire State was meant, without irony, as a concrete expression of the American Dream, the optimism in technology and perseverance that can conquer all challenges . . . this was an illusion born of romance and sadness.”

Perhaps the most lyrical response to the Empire State Building was that of the blind and deaf author Helen Keller, following a 1932 visit to the Observation Deck:

I was pleasantly surprised to find [it] so poetical. From everyone except my blind friend I had received an impression of sordid materialism—the piling up of one steel honeycomb upon another with no real purpose but to satisfy the American craving for the superlative in everything. . . . Well, I see in the Empire Building something else—passionate skill, arduous and fearless idealism. The tallest building is a victory of imagination. Instead of crouching close to earth like a beast, the spirit of man soars to higher regions, and from this new point of vantage he looks upon the impossible with fortified courage and dreams yet more magnificent enterprises.

What did I “see and hear” from the Empire Tower? As I stood there ’twixt earth and sky, I saw a romantic structure wrought by human brains and hands. . . . I saw it stand erect and serene in the midst of storm and the tumult of elemental commotion. I heard the hammer of Thor ring when the shaft began to rise upward. I saw the unconquerable steel, the flash of testing flames, the sword-like rivets. I heard the steam drills of pandemonium. I saw countless skilled workers welding together that mighty symmetry. I looked upon the marvel of frail, yet indomitable hands that lifted the tower to its dominating height. Let cynics and supersensitive souls say what they will about American materialism and machine civilization. Beneath the surface are poetry, mysticism and inspiration that the Empire Building somehow symbolizes. In that giant shaft I see a groping toward beauty and spiritual vision. I am one of those who see and yet believe.¹⁰

The Architects

Canadian Richmond Harold Shreve (1877–1946) graduated in architecture from Cornell University in 1902, and after a brief teaching career joined the New York Beaux-Arts firm of Carrère and Hastings in 1906. He was at various times president of the American Institute of Architects, chair of the International Congress of Architects, president of the New York Building Congress, governor

of the Real Estate Board of New York, and a member of the Board of Design of the 1939 World's Fair. William Frederick Lamb (1883–1952) studied architecture at Columbia University and L'École des Beaux-Arts, Paris. On graduating in 1911, he also joined Carrère and Hastings. Carrère died in 1911, and following Hastings' retirement the practice became known in 1920 as Carrère and Hastings, Shreve and Lamb, but 4 years later the latter two established a new practice, with Shreve as the administrative force in the firm and Lamb as the principal designer. Arthur Loomis Harmon (1878–1958) studied at the Art Institute of Chicago, before graduating from the Columbia University School of Architecture in 1901. After working in several New York architectural offices, including McKim, Mead, and White, he established his own practice in 1913. He joined Shreve and Lamb as a partner in 1929, after the Empire State building had started, and shared the design development work with Lamb.

Despite the Depression, the firm produced a number of tall buildings before World War II, including (among others) Carew Tower, Cincinnati, Ohio (1929); R.J. Reynolds Tobacco Co. Building, Salem, North Carolina (1929); and in New York City: Lefcourt National Building (1929); 500 Fifth Avenue (1930–1931); 99 John Deco Lofts (1933). The practice flourished in the postwar years, even after the death of the founders. Perhaps its best-known building from that phase was the Deutsche Bank (opened in 1974 as Bankers Trust Plaza) that had to be demolished as a result of damage sustained from the collapse of the Twin Towers on 9/11.

The Structural Engineer

Homer Gage Balcom (1870–1938), the “man who made the Empire State Building stand,” after receiving a civil engineering degree from Cornell University, was employed by the Berlin Iron Bridge Co. in Connecticut. When the firm was subsumed by the American Bridge Co. in 1900, he became design engineer and within 3 years was responsible for design of its New York City and Pittsburgh commissions. In 1905 he joined New York architects Reed and Stem, designers of Grand Central Terminal, and 3 years later formed an engineering partnership with Wilton J. Darrow.

When Darrow retired in 1916 the practice was renamed H. G. Balcom and Associates; it (and especially Balcom) had already earned an international reputation for structural steel design. During the Great World War I, he voluntarily served as chief structural engineer at the Emergency Fleet Corporation Yard, Hog Island, Pennsylvania. Besides the Empire State Building, Balcom's important New York skyscrapers were the Park-Lexington Building (1923), 230 Park Avenue (1929), the new Waldorf-Astoria Hotel (1931), the Bank of New York Building (1931), and the GE Building, 30 Rockefeller Plaza (1933).

The Contractors

Starrett Brothers and Eken was the construction division of the Starrett Corporation. The Starretts had long been associated with leading building and architectural firms in New York and Chicago. Paul Starrett (1866–1957) began his professional career in Daniel H. Burnham’s office in 1887. In 1897 he joined the George A. Fuller Co., America’s largest construction firm, working in Baltimore and Washington; the following year he moved to their New York office. He became a chief of construction and served as president from 1905 until 1922. William Aiken Starrett (1877–1932) received a civil engineering degree from the University of Michigan, and joined the Fuller Co. in 1898. From 1901 until 1913 he joined his brothers Theodore and Ralph as vice president of the Thompson-Starrett Construction Co., before becoming a partner in the architectural firm of Starrett and van Vleck. He returned to the Fuller Co. in 1919 as a vice president but left with his brother Paul to found Starrett Brothers in 1922.

After working as an engineer on both coasts and overseas, Andrew J. Eken (1882–1965) became a vice president of the Fuller Co. in New York and then president the Canadian office. He joined Starrett Brothers in 1929; the name of the firm was changed to Starrett Brothers and Eken in the following year. “Starrett Brothers became known for undertaking large-scale and complex construction projects executed with efficiency and speed.” Besides the Empire State, they were responsible for other Manhattan landmarks, including the Pennsylvania Railroad Station, and buildings for the New York Life Insurance Co., the Manhattan Company, McGraw-Hill, Fuller (the Flatiron Building), the Plaza, the Commodore and Biltmore hotels, as well as hotels in other U.S. cities and the Lincoln Memorial in Washington, D.C.

During the Depression, Starrett Brothers and Eken undertook large-scale housing projects, including Hillside Houses in the Bronx, and Williamsburg Houses in Brooklyn, and Parkchester in the Bronx.

NOTES

1. Sanders, James, *Celluloid Skyline. New York and the Movies*. New York: Knopf, 2003. www.moviediva.com/MD_root/reviewpages/MDKingKong.htm
2. Starrett, William A., *Skyscrapers and the Men Who Build Them*. New York: Charles Scribner’s Sons, 1928, 1.
3. Sullivan, Louis H., “The Tall Office Building Artistically Considered,” *Lippincott’s Magazine* (March 1896), 403–409; widely republished later.
4. Kingwell, Mark, *Nearest Thing to Heaven: The Empire State Building and American Dreams*. New Haven, CT; London: Yale University Press, 2006, 11.

5. Low, Frances, "A Chase up into the Sky," *American Heritage Magazine* 19 (October 1968). www.americanheritage.com/articles/magazine/ah/1968/6/1968_6_14.shtml
6. Kingwell, "New York's Lighthouse," *New York Times* (April 23, 2006).
7. Reingold, Lester A., "Airships and the Empire State Building—Fact and Fiction," *Air and Space Smithsonian* (July 2000).
8. Starrett, *Skyscrapers and the Men Who Build Them*.
9. Kingwell, "New York's Lighthouse."
10. Keller, Helen, *The New York Times Magazine* (January 1932), cited in Alexander Klein, *Empire City: A Treasury of New York*. New York: Rinehart, 1955, 76.

FURTHER READING

- Architectural Forum*. 52(June 1930) through 55(July 1931). [Empire State Building, a series of 12 (mostly technical) articles]
- Doherty, Craig A., and Katherine M. Doherty. *The Empire State Building, Featuring the Photographs of Lewis W. Hine*. Woodbridge, CT: Blackbirch, 1998.
- Empire State: A History, May 1, 1931*. New York: Empire State Inc., 1931. [Commemorative booklet of opening]
- Finan, Christopher M. *Alfred E. Smith: The Happy Warrior*. New York: Hill and Wang, 2002.
- Goldman, Jonathan. *The Empire State Building Book*. New York: St. Martin's, 1980.
- Hine, Lewis Wickes. *Men at Work: Photographic Studies of Modern Men and Machines*. New York: Macmillan, 1932. Republished in an unabridged, enlarged edition New York: Dover, 1977.
- James, Theodore, Jr. *The Empire State Building*. New York: Harper and Row, 1975.
- Kingwell, Mark. *Nearest Thing to Heaven: The Empire State Building and American Dreams*. New Haven, CT; London: Yale University Press, 2006.
- Nakamura, Toshino, ed. "Empire State Building, 1931." *A+U* (April 1987).
- O'Connor, Richard. *The First Hurrab: A Biography of Alfred E. Smith*. New York: Putnam, 1970.
- Pacelle, Mitchell. *Empire: A Tale of Obsession, Betrayal, and the Battle for an American Icon*. New York: Wiley, 2001.
- Rasenberger, Jim. *High Steel: The Daring Men Who Built the World's Greatest Skyline*. New York: HarperCollins, 2004.
- Robins, Anthony W. *Empire State Building* (LP-2000). New York: City of New York, 1981. New York City Landmarks Preservation Commission Designation Report.
- Shreve, Richmond Harold. "The Economic Design of Office Buildings." *Architectural Record*, 67(March 1930), 341–359.
- Tauranac, John. *The Empire State Building: The Making of a Landmark*. New York: Scribner, 1995.

Walsh, James J. "John J. Raskob." *Studies: An Irish Quarterly Review of Letters, Philosophy and Science*, 17(1928).

Willis, Carol, ed. *Building the Empire State*. New York: W.W. Norton in association with the Skyscraper Museum, 1998.

INTERNET SOURCES

Empire State Building official Internet site. www.esbnyc.com



Courtesy Library of Congress

Fallingwater, Bear Run, Pennsylvania

*The most beautiful house . . .
of any century?*

On a hillside beside PA Route 381, about 70 miles from Pittsburgh between the villages of Mill Run and Ohiopyle in southwestern Pennsylvania, and surrounded by woodland, is one of the most famous houses in the world. Fallingwater, suspended over a waterfall on the clear, swift-flowing Bear Run, was created by the architect Frank Lloyd Wright as a weekend retreat for Philadelphia retailer Edgar Kaufman and his wife Liliane; it has been an American icon since its completion in 1937.

Opened to the public in 1964, despite its remoteness, it has been the destination of about four million people, making it the twentieth most visited house in America. Many architecture critics have hailed it as Wright's greatest work—not an easy decision to make—and in 1991 the American Institute of Architects (AIA) voted it the best work *ever* produced by an American architect. Others have gone further: when naming the house Commonwealth of Pennsylvania Treasure 2000, Janet Klein, chair of Pennsylvania's Historical and Museum Commission, called it “a magnificent work that has inspired people of all ages around the world . . . considered by experts to be the ‘top building of the 20th century.’” It continues to capture the hearts of the American public. Placed thirty-ninth in the AIA's 2007 survey of the nation's favorite architecture, after the White House, Biltmore Estate, and Monticello, it was the fourth most popular house. Lynda Waggoner, who manages it for the Western Pennsylvania Conservancy (WPC), says “[Fallingwater] is taught in every Art History 101 class.”

Why is it iconic? R. Jay Gangewere wrote in 1999:

Created in the midst of the Great Depression, the woodland retreat over the waterfall had a fast track into the American psyche. It was a personal escape into nature, produced at a time when Hollywood was creating escapist fantasies of its own about avoiding economic hardship. Millions of Americans, including unemployed workers in western Pennsylvania, could dream about life in a private retreat created by the most famous architect in America.¹

Former Wright apprentice Robert Miller Green observed:

A couple of years ago the American Institute of Architects published a paper which rated the one hundred “Most Influential Buildings in the History of the World.” . . . Every great building in the world was on this list. [Fallingwater] was rated ahead of the Taj Mahal, The Parthenon, the great Gothic churches of France, Westminster Cathedral, the best buildings of the Renaissance, all the finest buildings which have been constructed since, as the building which has had the most influence upon architecture. It was as if, now that Frank Lloyd Wright had set the limits so high, nothing could now be forbidden the creative architect. And, people wanting to live in houses no longer had to be content with the box house that most reside in, that there was something different and better available. Frank Lloyd Wright had made that possible!²

Public awareness of Fallingwater was immediately manipulated by the wealthy, well-connected, and marketing-savvy Kaufman, who was aware that

“a merchant could rely on no more effective advertising than a glamorous lifestyle.” About a month after the owners moved in, the *St Louis Post-Dispatch* ran a piece, “A House that Straddles a Waterfall.” New York’s Museum of Modern Art (MoMA) mounted a photographic exhibition from January to March 1938—it is said to have affected Ayn Rand as she was writing *The Fountainhead*. MoMA board member Henry R. Luce, an evangelist of modernism, was also owner and editor-in-chief of *Time* magazine, and on February 21 its color cover featured a portrait of Wright seated in front of a large perspective drawing of Fallingwater. By then Lewis Mumford already had reviewed the house in *The New Yorker*. In the first 2 months of 1938 the building was also featured in *Architectural Forum* (owned by Luce), in Pittsburgh’s *Bulletin Index*, in Pennsylvania’s *We the People*, and in the national periodicals *Town and Country* and *Art Digest*. It was first published outside the United States in the Argentinean journal *Nuestra Arquitectura* in the following October.

Since then, besides appearing in every general book about twentieth-century architecture, Fallingwater has been, internationally, the subject of more than 120 dedicated books and monographs and articles in many languages. Its iconic status is inextricably linked with that of its designer.

FRANK LLOYD WRIGHT: ARCHITECT AND ICON

Frank Lloyd Wright is certainly the twentieth century’s most famous architect. He once said, “Having a good start, not only do I fully intend to be the greatest architect who has yet lived, but . . . to be the greatest architect who will ever live.” Following his death in April 1959 the *AIA Journal* observed, “His place in history is secure. His continuing influence is assured. [America’s] architectural achievements would be unthinkable without him. He has been a teacher to us all.” A few years earlier an affectionate caricature of the architect had appeared in an episode of Al Capp’s internationally syndicated comic strip, “Li’l Abner.” That he was recognizable in such a popular cultural medium proves that he was then (and remains) a truly iconic figure, and not just in the United States. In his later life he was showered with American and international honorary degrees, awards, and tribute, including the Gold Medals of the Royal Institute of British Architects in 1941 and, belatedly, of the AIA in 1949.

Wright held himself in high regard. “Early in life I had to choose between honest arrogance and hypocritical humility,” he said. “I chose the former and have seen no occasion to change.” Anecdotes about his egotism—many apocryphal—abound. One example will suffice. Wright, who flaunted his own “Welshness,” in 1956 visited the Welsh coastal village of Portmeirion, bursting with wildly eclectic architecture built over decades by Bertram Clough Williams-Ellis. After subjecting Wright to what someone has called “an excruciating display of and recitation about” his own long career, Williams-Ellis

asked for Wright's opinion of his work. The American drily observed, "It can truly be said that we are both doing God's work. You're doing it your way. I'm doing it his way."

In a 74-year career Wright produced nearly 1,150 designs for all types of buildings; more than 530 of them were realized. He also designed furniture and furnishings, light fittings, stained and art glass, dinnerware, and graphic work; he wrote several books and countless articles, most of them polemical and many of them seminal works on modern architecture. And he proposed Broadacre City, a way to decentralize urban America, "the culmination of [his] ideas on a new architecture for a new democracy." Documentary filmmaker Ken Burns described Wright's life as "a rollercoaster of stunning success and fame, vilification and exile, public humiliation, scandal, and devastating personal tragedy. He was controversial, notorious, provocative, and above all unpredictable—an epitome of excess in an age of propriety."³

Frank Lincoln Wright ("Lloyd" was a later substitution in deference to his mother's family) was born in June 1867 at Richland Center, Wisconsin, the son of music teacher William Cary Wright and Anna Lloyd-Jones Wright, also a teacher. When he was about age 9, his mother gave him the "Froebel gifts," geometric wooden blocks designed by Friedrich Froebel, the German creator of kindergarten. Wright claimed that they greatly influenced his architecture; his father played Bach, which Wright identified as the source of his sense of harmony. An elementary education in Wisconsin and Massachusetts (he never completed high school) preceded three terms of civil engineering studies at the University of Wisconsin. In 1887–1888 he worked in architect Joseph Lyman Silsbee's Chicago office, followed by 6 more years in the firm of Dankmar Adler and Louis Sullivan, where he eventually became chief draftsman, responsible for residential commissions.

In 1889 Wright married Catherine "Kitty" Tobin. With \$5,000 borrowed from Sullivan, he bought land in Oak Park (now a Chicago suburb) and built his first home. But while employed by Adler and Sullivan he undertook a number of private—so-called bootlegged—commissions and was dismissed for "moonlighting." In 1893 he started his own practice in Oak Park and Chicago, and over the next 8 years or so he built about fifty residences. Published in the *Ladies Home Journal* of February 1901, his "Home in a Prairie Town" demonstrated a "modern architecture for a democratic American society." Culminating with the Frederick Robie house in Chicago, by about 1909 he had refined this "Prairie" type: frugally ornamented long, low buildings, their horizontality accentuated by low-pitched roofs with broad eaves and bands of windows. With their distinctive central fireplaces and especially the open floor plans that eliminated traditional box-like rooms, Wright's houses would revolutionize middle-class domestic architecture, first in the American Midwest, and eventually throughout the world.

In 1910 the Berlin publisher Ernst Wasmuth produced a sumptuous folio, *Ausgeführte Bauten und Entwürfe* [*Buildings and Designs*] von Frank Lloyd

Wright. A more modest version soon followed. Wright was still a parochial architect in the United States, and these volumes opened his work to an admiring international audience and significantly influenced the development of European Modernism. H. P. Berlage, regarded as the father of Dutch modern architecture, hailed him as the “most talented” of American architects. When the Wasmuth publications appeared Wright was in Europe.

In September 1909 he had caused a scandal in Chicago when he deserted Kitty, his wife of 20 years and their six children, to run off with Mamah Borthwick Cheney, the wife of a former client. The abrupt closure of his studio stranded his staff, as well as those clients whose commissions were incomplete. Because of financial “complexities,” none of his employees would take over the practice; but Wright finally convinced Herman Von Holst to do so. After their escape Mamah worked at Leipzig University, while Wright lived at Fiesole near Florence, preparing drawings for Wasmuth. From time to time they met in Berlin, and after her work was finished she joined him in Italy. Presenting themselves as married, they traveled to Bavaria, Vienna, Paris, and London before returning to Chicago in 1911, only to be met with social and professional ostracism. Catherine denied him a divorce.

Leaving her and his children in the Oak Park house, Wright attempted to reestablish his practice in Spring Green, Wisconsin. On 200 acres of family-owned land he began to build a house which he named “Taliesin,” after the sixth-century Welsh bard. The press preferred to call it a “love bungalow,” and Mamah moved in shortly after Christmas 1911, while it was still incomplete. Around then only few of Wright’s designs were realized; until 1914 there were some houses, but most commissions were for insignificant works. One major project, the Midway Gardens restaurant and beer garden on Chicago’s South Side, led to his frequent absences from Taliesin in 1913 and 1914. In mid-August 1914, while Wright was in Chicago, Mamah dismissed a servant, Julian Carlton. A few hours later the man returned to the house and set one wing on fire; as the occupants ran out he used an axe to murder Mamah, her children Martha and John, three employees, and the teenage son of another; two others were injured. Wright was devastated and buried himself in what work he had.

Since 1913 he had been negotiating the commission for a new Imperial Hotel in Tokyo, “a project that literally consumed his emotional and physical energies.” Well, almost all his energies. When the contract was signed in 1916 he went to Japan, accompanied by the sculptor Miriam Noel, whom he had met after she had written to him offering sympathy a few months following the Taliesin calamity. In summer 1915 he had asked her to move into Taliesin.

Until 1922 Wright spent about two-thirds of his time in Tokyo, completing the hotel that would famously survive the Kanto earthquake that destroyed most of the city in September 1923. In those years he undertook other commissions in Japan and built several houses in Los Angeles and elsewhere in the

United States. In November 1922 Catherine finally agreed to a divorce, and a year later, having lived together for 8 years, Wright and Miriam, by then a morphine addict, married at Spring Green. It didn't last. They quarreled a great deal, and she left Wright in April 1924.

In November 1924 Wright met the Serbian dancer Olga Ivanovna (Olgivanna) Milanoff; 33 years his junior, she was the estranged wife of a Russian architect, Vlademar Hinzenberg. Three months later Wright invited her and her 8-year-old daughter Svetlana to move into Taliesin. She divorced Hinzenberg, and at the end of 1925 she and Wright had a daughter, Iovanna, although they didn't marry until August 1928. Happiness was elusive: for years they fought for custody of Svetlana and immigration charges initiated by Hinzenberg, as well as other accusations made by the mentally unbalanced Miriam, with whom an acrimonious 3-year divorce was emotionally and financially ruinous for Wright. Miriam died in 1930.

Wright had rebuilt the parts of his house destroyed in 1914; there was another fire in April 1925, and he rebuilt again. But throughout the 1920s, for the reasons outlined, his architectural commissions were few. By 1927 he was deep in debt. The Bank of Wisconsin foreclosed on Taliesin, and Wright was evicted. Owing nearly \$500,000, he was forced to auction his collection of valuable Japanese prints and offer his beloved house for sale. His old friend and client Darwin Martin rallied others to form Wright Inc., which assumed ownership of Taliesin and managed Wright's finances. But with the onset of the Great Depression commissions all but disappeared and money problems deepened. Attempting to keep his name before the public, Wright turned to lecturing, writing books, and articles and mounting "The Show," a national (and later international) traveling exhibition of his oeuvre. He also published the inspiring (if not altogether honest) *An Autobiography*. But the small income derived from all this self-promotion was hardly enough to maintain the run-down Taliesin, and plagiarizing didactic notions outlined to them by the visionary Dutch architect Hendrik Theodor Wijdeveld, in 1932 Wright and Olgivanna established a design school—the Taliesin Fellowship.

Reconstruction at Spring Green began in April. Under the motto, "first the buildings, then the creative work," the students—known as "apprentices"—were set to plastering and painting walls, digging ditches and growing food. For "washing dishes, caring for their own rooms . . . kitchenizing and philosophizing in voluntary cooperation in an atmosphere of natural loveliness they are helping to make eventually habitable," in the first year each *actually paid* Wright \$675 for what he described as "education" and keep.

. . . Wright was sixty-five when the Taliesin Fellowship commenced. Although there was a seed of underlying altruism, the school had been started principally to raise money. Wright sought other teachers in music and painting but they would not come unless he could pay them. By his own admission he was . . . incapable of working with anyone whose ideas differed from his own. Thus his

“curriculum” was architecture and Wright was the solitary master of the apprentices. Any diversity resulted from some apprentices already having training outside architecture: the crafts, painting, civil engineering, music and sculpture.⁴

Wright and Olgivanna ruled at Taliesin. Ayn Rand observed during a visit that at mealtimes the couple sat with their family and occasional guests at “high table” on a dais in the dining room, eating gourmet food while the apprentices were served fried eggs.

It seems that the wider architectural community then regarded Wright as a spent force—“yesterday’s news” and out of touch with the times. After all, he had built only a couple of houses since 1920 and had turned his attention to self-publicity, income generation in a world of professional famine and idealistic speculation: his autobiography, the Taliesin Fellowship, and developing his “Broadacre City.”

Then he met Edgar J. Kaufmann Senior, and his renaissance began.

EDGAR JONAS KAUFMANN SR., “MERCHANT PRINCE”

Wright was commissioned to design Fallingwater by Pittsburgh’s “merchant prince,” Edgar Jonas Kaufmann Senior. Kaufmann’s Jewish father Morris had emigrated to America from Viernheim in Hessen, Germany, in 1870 with three brothers—Jacob, Isaac, and Henry—when he was only 12 years old. With their \$1,500 capital, the following year Jacob and Isaac established an off-the-rack clothing store in a tiny room on Carson Street, Pittsburgh, selling mostly to workers from the nearby Jones and Laughlin steel mill.

They prospered, and in 1877 the business was relocated at Smithfield Street and Diamond Alley (now Forbes Avenue) in downtown Pittsburgh. A decade later “Kaufmann’s Grand Depot,” boasting itself to be “America’s largest outfitting establishment,” had expanded to Fifth Avenue. The two younger brothers, Morris and Henry eventually joined the business; Jacob died in 1905. Through competitive pricing and wide choices the store attracted a broad socioeconomic cross-section of clientele to its “ornate, midtown shopping palaces stuffed to the brim with all the goods a lady or gentleman would want.” In 1910, when the “The Big Store” had 11 acres of floor space and twenty-five hundred employees, Edgar was invited to run the business.

He was the second of Morris and Betty Kaufmann’s four children, born in November 1885. He was educated at Pittsburgh’s Shady Side Academy—then private boys’ school—and following a year at Yale University School of Engineering, he turned to a highly successful career in the family business. To gain retailing experience he worked for Marshall Field’s in Chicago, *Les Galeries Lafayette* in Paris, Karstadt in Hamburg, and for a store in Connellsville, Pennsylvania. In June 1909, perhaps for business reasons, he married his uncle Isaac’s daughter Lillian (later changed to Liliane). Their wedding was in

New York because marriage between first cousins, while permitted by Jewish law, was illegal in Pennsylvania.

By 1913 Morris had bought out Henry's interest in the business; Edgar had acquired Isaac's, making him the major shareholder. Under his management annual net sales rose to \$30 million by 1920, and he was soon recognized as the "most brilliant retailer in the family." He has been described as "a most charismatic man, fond of social life, genuinely interested in the lives of his employees. Handsome, fit, he possessed a captivating gaze. . . . A philanthropist and patron of the arts, he also loved the outdoors, and especially enjoyed horseback riding, fishing and hiking."⁵ The other side of Edgar Kaufmann was a tough bargainer who got what he wanted.

In 1918 he organized six other Pittsburgh department store owners to found the Research Bureau for Retail Training. Collaborating with the Carnegie Institute of Technology (now Carnegie Mellon University) and the University of Pittsburgh; it provided professional education for retail managers and salespeople and conducted research into the retail sector. From 1929 he chaired its executive committee, until 2 years before his death in 1955.

Kaufmann's first architect was the Beaux-Arts-trained Benno Janssen. In partnership with Franklin Abbott in 1913 Janssen enlarged "The Big Store" into an eleven-story stylistically indeterminate monolith. In 1922 he designed the Kaufmanns' house, "La Tourelle" in Fox Chapel about 6 miles northeast of downtown Pittsburgh—a rambling amalgam of historical revivalist forms. Then in 1925 Kaufmann commissioned Janssen and his partner William York Cocken to undertake a major remodeling of his store's main floor. Opened on May 1, 1930, the "art-deco masterpiece," which "set the store apart from all others in Pittsburgh," was replete with black glass, bronze finishes, terrazzo floors, new elevators, and a series of ten 15- by 8-foot murals by New York artist Boardman Robinson, unfolding the history of commerce. In 1933 Liliane established the glamorous Vendome Shops (named for the Place Vendôme in Paris), up-market boutiques on the store's underperforming eleventh floor, in which "she sought to offer sophisticated customers [an] interesting and tasteful selection of quality goods"—at a price.

The 1920s renovation to his store marks Kaufmann's first engagement with modern (more accurately, *moderne*) architecture. What circumstances moved him to commission the aging (and some said, *passé*) Frank Lloyd Wright to design a weekend retreat in the forest?

IN HARMONY WITH NATURE

Speaking of the house in a May 1953 NBC television interview with Hugh Downs—the transcript has been widely published since—Wright said,

There in a beautiful forest was a solid, high rock ledge rising beside a waterfall, and the natural thing seemed to be to cantilever the house from that rock bank

over the falling water. . . . Then came (of course) Mr. Kaufmann's love for the beautiful site. He loved the site where the house was built and liked to listen to the waterfall. So that was a prime motive in the design. I think that you can hear the waterfall when you look at the design. At least it is there, and he lives intimately with the thing he loves.

As noted, early in his career Kaufmann had worked at Connellsville in Fayette County, southwestern Pennsylvania. Then, its population of over twenty-two thousand was supported by a thriving coal and coke industry. Local workers, and others from farther afield, often retreated to the leafy mountains on their days off. One could imagine that Kaufmann was among them. What would become the Bear Run Nature Reserve lies on the west slope of Laurel Ridge, facing the dramatic gorge of the Youghiogheny River in Pennsylvania's Allegheny Mountains. Its 5,000 acres is covered in forests of white oak, black oak, red oak, birch, tulip, maple, hickory, butternut, apple, and wild black cherry—in fact, more than five hundred species of evergreen and deciduous trees—rising from the dark, rich soil. The WPC recently published an idyllic description of Bear Run, the clear stream that passes directly under Fallingwater and flows through this demi-paradise:

Depending upon water level, you will hear either its roar or gurgle long before you approach the first of [its] four bridges. . . . [It] flows through a gauntlet of rhododendron, winds its way through old hemlock and over rock formations that at times produce a spectacular array of rapids and waterfalls. Tumbling over moss-covered rocks, dodging lichen-encrusted boulders, and pouring a smooth, even flow across sandy, leaf-littered terraces, [it] relentlessly . . . descends more than 1,500 feet to the Youghiogheny River.⁶

The Baltimore and Ohio Railroad made a twice-a-day whistle stop just where Bear Run reached the river, providing a focus for the small industry that dotted the area. And because the place was accessible, in 1890 a group of Pittsburgh Freemasons bought about 135 acres upstream from the station and built the Masonic Country Club, a members' weekend retreat. Five years later they bought another 1,500 acres. But the venture was not successful, and the property changed hands three times between 1906 and 1909, when it was acquired by the Syria Improvement Association (also a Pittsburgh Masonic group), and renamed the Syria Country Club; it comprised a large clubhouse, a dance pavilion, six cottages, and assorted buildings along the streamside road.

Kaufmann may have heard from one of his store detectives, Charles Filson, a Mason, that the property was available. He leased it in 1916 and established Kaufmann's Summer Club as a vacation site for his store's women employees, where they could enjoy "tennis, swimming, volleyball, hiking, hayrides, picnicking, sunbathing, singing, theatre and 'quiet' reading" well away from industrially polluted Pittsburgh. In 1921 the club renewed its 5-year lease, and in May 1926 the store employees' group, The Kaufmann

Beneficial and Protective Association, bought the property. Kaufmann held the mortgage, but the camp lost its appeal and fell into disuse during the Depression, so he took over the title in July 1933.

In 1921 he and Liliane had built their first summer retreat—a rustic wooden cabin made by Aladdin Read-Cut Homes, “without electricity, indoor plumbing, or heat, except from a woodstove” about 500 yards southeast of the site of the future Wright house. It was nicknamed “Hangover” because it stood on the edge of a cliff. The Kaufmanns would spend a couple of weeks at a time there in the summers, although they went there year-round to fish, hike, swim, or just read.

Edgar Kaufmann actively promoted Modernist art and design. The 1913 touring New York Armory International Exhibition of Modern Art was shown in Kaufmann’s Pittsburgh store. He had met German modernists during his European travels and knew the architect Joseph Urban and the furniture designer Paul T. Frankl, both Viennese émigrés. From the 1920s his store held exhibitions and organized lectures and undertook “an innovative series of special programs [that identified it] with technological and scientific progress.” For example, after the influential Paris *Exposition Internationale des Arts Décoratifs et Industriels Modernes* of 1925, Kaufmann’s presented its own Industrial Arts exhibition; and in 1928, following Charles Lindbergh’s solo Atlantic flight, the store mounted an aircraft exhibit, drawing fifty thousand visitors in a single week.

Kaufmann, “irresistibly drawn to Wright’s charming personality and mesmerizing sermons about buildings,” probably chose the architect to design his summer house simply because he had seen his work and liked what he saw. It has been suggested that the merchant approached Wright in late summer 1934 after becoming aware of his mid-1920s unrealized proposal for a planetarium and “automobile objective” (Wright’s words for a parking garage) for Gordon Strong on Sugarloaf Mountain in Maryland. In *Fallingwater Rising: Frank Lloyd Wright, E.J. Kaufmann, and America’s Most Extraordinary House* Franklin Toker asserts that the merchant had been corresponding with Wright from the beginning of the year, “and probably before.” He comments that it is hard to comprehend “what Kaufmann’s support did to launch Wright on one of the great comebacks in art history. . . . Kaufmann did not create Fallingwater, but it speaks volumes for his courage and shrewdness that when Fate gave him a chance to sponsor an architectural wonder, he seized it.”⁷

For a long time the conventional wisdom held that Edgar and Liliane Kaufmann’s first contact with Wright was through their only child, also Edgar. On returning to the United States in 1934—he had been studying painting in Vienna and Florence—the 24-year-old gained an apprenticeship in the Taliesin Fellowship in October through a deal struck between his father and Wright. But after only 6 months he left to become a manager in the family business; it has been suggested that Junior was dismissed for what Wright called a lack of “circumspection.” Toker believes that it was only after his father’s death in

1955 that he started to present himself as the most important element in the Kaufmann equation. It worked. At (his) death in 1989, *The New York Times* wrote: “More than anyone else except, of course, Frank Lloyd Wright, Edgar Kaufmann Jr. was responsible for Fallingwater.” But as Gill summarizes, “Junior was into his own mythmaking as the man who brought . . . Wright to the attention of the senior Kaufmann. Junior, an artist and architect with no future but later a curator at the Museum of Modern Art . . . was many things, but he was not midwife to Fallingwater.”⁸

Anyway, in December 1934 Wright visited the Bear Run site with Taliesin apprentice Bob Mosher to supervise the mapping of its natural features. A few weeks later he wrote to the Kaufmanns, “The visit to the waterfall in the woods stays with me, and a domicile has taken vague shape in my mind to the music of the stream.” The details of the site survey—carefully plotted contours and the exact location of each boulder and tree—arrived at Taliesin from Pittsburgh in April 1935; surveyors use different scales from architects, and all had to be replotted to the normal scale of building plans.

“THE SINGLE MOST CELEBRATED ACT OF ARCHITECTURAL CREATIVITY EVER”—REALLY?

Many writers, drawing upon apprentice Edgar Tafel’s account of subsequent events, claim that Wright did nothing with the commission for 9 months and then drew complete plans for the house in a couple of hours. In the face of reasonable refutations (like that offered by Toker in 2003) this romantic myth of the genesis of Fallingwater continues—maybe because it *is* romantic. As late as June 2005 Hugh Pearman, the London *Sunday Times* architectural critic wrote:

Wright sat down, got out his coloured pencils and—in two hours flat or as much as three by some accounts—*designed the house, in its entirety, down to the smallest detail*. As he drew it, he talked, describing it. It was all in his head. Wright placed the house on a great rock right on top of the waterfall. He named it, and signed it. *This astonishing feat of speed-design is the single most celebrated act of architectural creativity ever. It really happened*: several people witnessed it.⁹ [emphases added]

Three months earlier Ken Burns had told the same story when delivering the Nancy Hanks Lecture on Arts and Public Policy in New York.¹⁰ The gist is as follows.

On Sunday, September 22, 1935, Kaufmann Senior telephoned Wright from 140 miles away: he was on his way to see the designs for his house. Mosher later recalled, “Fees for the sketches of the new house were determined and presentation was scheduled for September 1935.” Burns said, “Though

Wright had as yet committed absolutely nothing to paper, he remained completely calm”; with a filmmaker’s dramatic flair he continued:

The communal work at the fellowship came to a halt and a hush descended on the cavernous drafting studio as word went out among the students that Wright had begun, at last, to draw. For more than two hours, anxious apprentices handed him pencil after pencil, quieted those acolytes who walked in unaware of the unfolding drama, and watched transfixed as the Great Master summoned up, in a remarkable moment of architectural alchemy, the design he had obviously been thinking about for some time.

“He draws the first floor plan,” Edgar Tafel said, “and he draws a second floor plan and he shows how the balconies are, and Mr. Wright says, ‘And we’ll have a bridge across, so that E.J. and Liliane . . . can walk out from the bedroom and have a picnic up above.’” The apprentices are amazed as Wright then quickly draws . . . a “section through the building,” then a huge elevation, twice the normal size of preliminary drawings. “And he’s putting the trees in,” Tafel exclaimed, “he knows where every damn tree is.”

A few minutes later, a secretary announced that Kaufmann had arrived. Wright dramatically ushered him in. “Welcome, E.J.,” he said expansively, “we’ve been waiting for you.”

Burns concluded, “Wright named the home he had designed for Kaufmann Falling Water. It would of course eventually become the most famous modern house in the world—and he had drawn it all in less than three hours.” Burns inferred from the story, as have others, that design and drawing are synonymous. That is not so. In the practice of architecture there are great differences between preliminary design, design development, and drawing—especially presentation drawing. The instant design scenario is unreasonable; and as Judge Judy says, “If it’s not reasonable, it’s not true.” It does not fit with the actions of a cash-strapped architect without another commission on his horizon. Indeed, the only phrase in Burns’ version that resonates is “the design *he had obviously been thinking about for some time.*” Tafel, then a 23-year old sorcerer’s apprentice with a rose-colored view of Wright, may be excused his awe at the genius-at-work illusion.

Toker’s “best guess” was that Wright had privately worked on the design and was so intimately familiar with its smallest details that they existed in his mind as “virtual drawings,” so to speak. It was a simple matter to put them on paper, with no seeming effort. Gangwere had reached the same conclusion 4 years earlier. So had Wright’s biographer Meryle Secrest, who in 1992 had described Fallingwater as “the fruit of a mature creativity and a deeply felt aesthetic.”

Although Victor Cusack, a later member of the Fellowship, was not present, he passed on Mosher’s version of events in defense of his idol Wright. It is only fair to include his comments:

Toker’s absurd speculation . . . is ridiculous on the face of it and to no purpose. When sketches were presented to his client, Kaufmann had no idea when they

might have been drawn. Nor were the sketches a dramatic “parlor trick.” Only plans and a front elevation were presented to Kaufmann to which Mosher and Tafel added a section and side elevations during lunch.¹¹

According to Mosher, when Kaufmann saw the house located not *near* his family’s favorite picnic spot but *over* it he told Wright that was not what he had expected. The architect replied that he wanted his client to live with the waterfall, not just to look at it. Kaufmann unreservedly accepted the plans, and although subsequent drawings (naturally) included more detail, the basic design changed little. There is a persistent but unsubstantiated myth that Frank Lloyd Wright named the house Fallingwater (*FaLLingWater*) to incorporate his initials. Work on the house began in April 1936.

A WORK OF ART BEYOND ANY ORDINARY MEASURE OF EXCELLENCE

Architecture, of course, can be heard as well as seen. In a talk to the Taliesin Fellowship in May 1955, Wright called Fallingwater “one of the great blessings to be experienced here on earth,” explaining that because “nothing yet ever equalled the coordination, sympathetic expression of the great principle of repose where . . . all the elements of structure are combined so quietly that really you listen not to any noise whatsoever although the music of the stream is there . . . you listen to Fallingwater the way you listen to the quiet country.”

Donald Hoffmann observes that Wright “appreciated the powerful sound of the falls, the vitality of the young forest, the dramatic rock ledges and boulders [as] elements to be interwoven with the serenely soaring spaces of his structure.” He continues,

But [he] understood that people were creatures of nature, hence an architecture which conformed to nature would conform to what was basic in people. . . . Although all of Fallingwater is opened by broad bands of windows, people inside are sheltered as in a deep cave, secure in the sense of hill behind them. Their attention is directed toward the outside by low ceilings; no lordly hall sets the tone but, instead, the luminous textures of the woodland, rhythmically enframed. . . . Sociability and privacy are both available, as are the comforts of home and the adventures of the seasons.¹²

Fallingwater beggars all attempts at description, whether in prose, poetry, or even images. Echoing the Pottsville sandstone ledges around the waterfall, its four levels—they have been described as concrete “trays”—step back into the wooded hillside as they rise. Wright perceived the engineering principle of the cantilever in the rock outcroppings and even in the rhododendron bushes; thus Fallingwater’s concrete cantilevers echo those in the landscape, while complementing the verticality of the waterfall itself. Although it stands high above Bear Run, the house’s horizontality—Wright’s “line of domesticity”—is

achieved primarily by the terraces (almost the same in area as the inside of the house) and flat roof. It is further emphasized by low ceilings and full height window-walls that provide spatial continuity between interior and exterior. Visual counterbalance is provided by a four-story sandstone chimney, laid in roughly dressed shallow courses whose “irregularities [mirror] the randomness of nature as opposed to man-made precision.”

Architectural historian Spiro Kostof, in explaining how Wright “[sent] out free-floating platforms audaciously over a small waterfall and [anchored] them in the natural rock,” comments that “something of the prairie house is here still.” That is hardly surprising; Wright insisted that throughout his long career he never saw the need to revise the philosophy so clearly expressed in his 1905 essay, “In the Cause of Architecture.” Put simply, he believed that a house was “a single living space and everything about it grew from a plan that expressed the owner’s individuality. . . . Openness was achieved by exploiting technology [that is, by using central heating]. . . . Through sensitive use of materials, the spaces became a whole whose external masses, expressing what was within, existed in harmony with each other and the earth itself.” So, although coming 30 years after his “prairie houses” and employing constructional materials and techniques different from theirs, in its essence Fallingwater was connected closely to them. In his Unity Chapel in Oak Park, Illinois, Wright had pioneered the architectural use of reinforced concrete as early as 1904. In 1938, emphasizing “for the first time in my practice, where residence work is concerned,” he insisted that the material “was actually needed to construct the cantilever system of this extension of the cliff.”

In harmony with the natural stone walls, chimney, and floors, Wright adopted contemporary and synthetic materials (including steel-framed windows) for what has been described as a “futuristic house of tomorrow”—a philosophical paradox, which we have no space to discuss here. Fallingwater also incorporated a kitchen with a table and counters covered with plastic laminate; it also had an AGA cooker, Cherokee-red linoleum floors, and pale-yellow steel cabinets. The walls and floors of the bathrooms were cork-paneled, and the fluorescent lighting was also “innovative and modern.”

Carried on four stone stub walls, the lowest occupied level (although there is a cellar), was almost entirely taken up with a south-facing living space, flanked by terraces on the east and west. Inside and out, the floor was paved with random-shaped, slightly uneven sandstone flags; inside, it was waxed to a high gloss (“for cleanliness”), evoking the wet rocks in the stream. Kaufmann suggested that the hearthstone—the great boulder that had been his “favorite spot for lying in the sun and listening to the falls”—not be leveled. Wright agreed, and it erupts through the floor; unwaxed, the “heart” of the room—indeed of the whole house. It has been observed that the hearth had always been more than a psychological center for Wright; in the open plans of his houses, although they were usually centrally heated, it was a physical center that expressed “otherwise intangible values and ideals about family and

family life” and with the kitchen formed a central core around which the house was built. That was doubly paradoxical, considering the repeated and dramatic disruptions to his own family life; and the parlous state of Edgar and Liliane Kaufmann’s marriage, described variously as “troubled,” “complex,” and “hollow.” As someone has said, “It is a stretch to think that a house created by the libidinous Wright for the libidinous Kaufmann could reflect the strengthened American family of the 1930’s, but icons need not be true: they only have to look true.”

Steps from the east terrace led down to a 4½-foot deep plunge pool. The west terrace soared over the boulders flanking the waterfall. Inside the living room another stair led under the house, finishing just above the surface of the water. Access to the kitchen was in the diagonally opposite corner, beyond the hearth. The joinery was fashioned from North Carolina black walnut, and the window frames were painted Cherokee red—a favorite of Wright’s.

Drawing upon the natural colors of the rocks and trees on the woodland site and (as always) the building materials Wright, in keeping with his deep belief in organic and integrated architecture, employed a limited palette of color lifted with accents in bright furnishings, “like wildflowers or birds outside.” Liliane Kaufmann took a particular interest in the interiors. The WPC notes that her “sensibilities and attention to detail . . . brought elegance to a mountain retreat.” In June 1937 she began choosing elegant furnishing fabrics, under Wright’s jealous eye. Reviewing samples, he wrote to her in June 1937 that he found “the red color too heavy but the grey and white good” but otherwise imposed his opinion with uncharacteristic gentleness:

[I] have the feeling that something less strident in pattern, (in fact no pattern at all), some coarse texture of the weaving—blue or yellow or warm grey with a bright thread woven into it, would be more in our thesis—“the nature of materials” and better for the house itself. . . . Because the environment is so rich and lively the detail of the furnishings can be merely tributary . . . the furniture units and pillows should run the gamut of color— in variety—from mercury red to cream or tan color, blue-green, yellow in between. But I am afraid of more pattern as we have already put so much design into the thing.¹³

He custom designed no less than 169 pieces of freestanding and built-in furniture for Fallingwater. Much of it—tables, chairs, stools, desks, and even lamps—was manufactured by the Gillen Woodworking Co. of Milwaukee and employed marine-quality plywood (because of the dampness of the site) veneered with black walnut. Always anxious to retain control, he called that attention to detail “client-proofing.” But Edgar and Liliane added hundreds of items from their extensive eclectic collection: antique and contemporary; American, Asian and European; paintings, furniture, sculpture and *objets d’art*.

As to the “nonpublic” parts of the house: the master bedroom on the second level opened onto an expansive south-facing terrace twice its area,

cantilevered over Bear Run. There was also a dressing room and a guest room, each with its own smaller terrace, and three bathrooms. The third level—more than half of it is a south-facing terrace—was occupied by another bedroom (a “bed space”), a study, and a bathroom. Those are the bald facts. They cannot convey any idea of the complex and subtle spatial relationships—level to level and inside to outside—of this unique house. But the subtlety, if people search for it, goes deeper. A recent visitor, pointing out that “as opposed to visual elements that occupy space, auditory experiences occupy time and move forward in a linear manner,” observed that the location of Fallingwater made the house into “a commentary on the passage of time.”

The Kaufmanns moved into their summer house in November 1937. The original budget of \$40,000 would have seemed extortionate at a time when an average four-bedroom brick house could be built for one-tenth of that amount. But the difficulty of finding skilled labor, the access problems associated with the remote site and its terrain and not least the “endless wrangling between a determined Wright and an equally willful Kaufmann” inflated the final cost (according to some sources) to \$155,000, equivalent to about \$2.2 million today.” Other sources place the estimate at \$30,000 and the final cost at an undefined figure “over \$70,000.”

Whatever it cost, the house was worth every penny!

A “GENTLE NOD TO THE INTERNATIONAL STYLE” —NOT!

In 2007 the AIA inaccurately characterized Fallingwater as “Wright’s gentle nod to the International style.” But none of the gestures that Wright made to European Modernism—and they were often repeated—could be called a gentle nod. Quite the contrary. As Joseph Connors points out, the house was Wright’s “polemic response to modernism” that sprang from “ideas and imagery that flowed in such profusion from his pen and pencil in the years around 1900.”

What *was* his attitude to Modernism? He fired his first salvo against it as early as 1928, in a review of the English translation of Le Corbusier’s manifesto, *Vers une Architecture*. And when Wright’s “Show” traveled in Europe in 1931 he accused the Modernists “in the land of the Danube and the Rhine” of denying their personalities and surrendering their individual freedom in the quest for internationalism—something that he refused to do. Although he admitted that their pragmatic architecture may have satisfied social and material needs, he accused them of forsaking human spirituality and promised: “What you have seen from my hand is not yet finished.” He wrote in *An Autobiography*, published a year later, “I find myself standing now against . . . the so-called international style.”

In February to March 1932, New York’s Museum of Modern Art mounted the International Exhibition of Modern Architecture. The show introduced

the work of Walter Gropius, Ludwig Mies van der Rohe, Le Corbusier, J.J.P. Oud, and other European modernists to the American public. Overlooking the philosophical and artistic differences between them (which were as significant as the similarities), the curators Philip Johnson and Henry-Russell Hitchcock lumped those architects together and conjured the myth of an “International Style.” Under the patriotic title “Of thee I sing” Wright reviewed the exhibition in Buckminster Fuller’s *Shelter Magazine*. He asked whether “any aesthetic formula forced upon [America] can do more than stultify [the] reasonable hope for a life of the soul?” and pronounced in cumbersome prose and political confusion,

A creative architecture for America can only mean an architecture for the individual. The community interest in the United States is not communism or communistic as the internationalists’ formula for a “style” presents itself. Its language aside, communistic the proposition is. . . . We are sickened by capitalistic centralization but not so sick [that] we need confess impotence by embracing a communistic exterior discipline in architecture to kill finally what spontaneous life we have left. . . .

Wright never recanted. After World War II, in the draft of a letter to Wijdeveld (never sent) he complained that America, which in the 1930s had become the home of many European architects fleeing Hitler’s Germany, was “overfilled with Leftwing Modernists.” Naming many of them, he wrote, “The breach between myself and these men has widened; their apostasy has only served to betray the cause of an organic architecture in the nature of materials which I believe to be the architecture of Democracy.” He believed that their “leftwing” architecture was—paradoxically—“distinctly Nazi.”

Wright scholar Donald Leslie Johnson has remarked that besides Fallingwater, several of Wright’s works of the 1930s—Ocotillo Camp, the Johnson Wax administration building, the Rose Pauson house, and Taliesin West—are “among the most important architectural works of the century, each remarkably and naturally different.” He added that comparison is inevitable. Although Wright excepted the German Pavilion at the Barcelona World’s Fair (1929) and the Edith Farnsworth house in Plano, IL (1945–1951), both by Mies, he believed that the white boxes of the “predatory internationalists” were “naive, puerile, conceptually sterile, and unnecessarily repetitive.”

Someone has written that Wright perceived European Modernism as a “threat to his significance as an influential architectural force” because “a new generation of modernist architects was taking over that regarded [him] as a traditionalist and a has-been.” Wright had never, in neither life nor art, been traditionalist. And Fallingwater proved that he was no has-been. Anyway, the question also must be asked, “What significance?” After all, he had built little for a decade.

Some architecture critics have suggested that Wright embraced the foreign style. In 1986 Paul Goldberger wrote in *The New York Times* that with

Fallingwater Wright “cast his net wider, integrating European modernism and his own love of nature and of structural daring, and pulled it all together into a brilliantly resolved totality.” About a decade later Hugh Pearman claimed that the house blended “Wright’s broad-brimmed Arts and Crafts-influenced Americanism with the white horizontality of the European modernism he professed to despise.” Yet another writer contends that

Fallingwater shared some aspects with the modern style of architecture. The flat, horizontal bands that created floating and overlapping planes in space is the most obvious similarity. . . . His use of concrete bears a similarity to the contemporary International Style but Wright used it in a more complex manner. . . . The open interior plan of Fallingwater is reminiscent of the ‘free plan’ used by International Style architects.¹⁴

There was little wonder in any of that. Many of the characteristics of twentieth-century European architecture (especially in houses)—open plans designed to fit the occupants’ lifestyle, ranges of windows, horizontality, straightforward expression of materials—had all *originated* with Wright. Europeans had adopted (at best, or worse, simply copied) those elements from him in the first place, elements that he had initiated and refined before 1910. In the Bear Run house Wright saw no need to change his architectural philosophy; he was simply responding to new materials. His architecture was unique. So was Fallingwater in any way a response to international Modernism? No. What does it owe to international Modernism? Nothing—not even a “gentle nod.” On the contrary, as Richard Lacayo wrote in *Time*, “the European Modernists . . . owed a lot to his rethinking of architectural space, a debt they generally acknowledged.”

A FALLING FALLINGWATER

A 1937 article in *St. Louis Dispatch* article painted a romantic picture:

Walking over the ground with his client, Wright said: “You love this waterfall, don’t you? Then why build your house miles away, so you will have to walk to it? Why not live intimately with it, where you can see and hear it and feel it with you all the time?” Had Edgar Kaufmann been the sort of man who couldn’t understand that idea, he would have contested the point. . . . As it was, he objected only that this would be an impossible engineering feat. “Nature cantilevered those boulders out over the fall,” the architect answered. “I can cantilever the house over the boulders.”¹⁵

But from the very beginning, Fallingwater was falling down. The lower concrete terrace, jutting 15 feet over the stream, immediately sagged. That was caused by the failure to provide enough steel reinforcing in the cantilevered

inverted T-beams that supported the slab, “despite strong admonitions to do so.” Some have attributed Wright’s reluctance to his “lifelong aversion to being told what to do.” That is a little unfair; for structural advice (as all architects do) he depended on a civil engineer—in Wright’s case, Mendel Glickman of Milwaukee. Moreover, the innovative design stretched conventional builders and—perhaps most significantly of all—Wright was not often on site and his instructions were sent from Taliesin by surface mail. In such circumstances mistakes were inevitable. In Wright’s absence Metzger-Richardson, the Pittsburgh firm that supplied the steel, urged Kaufmann and his contractor Walter J. Hall, to double the amount of reinforcing in the beams. They did as he suggested. Wright, who thought—incorrectly, as it happened—that the extra steel would do no more than increase the load on the beams, was irate. At the end of August, he wrote to Kaufmann:

My dear E.J.: If you are paying to have the concrete engineering done down there is no use whatever in our doing it here. I am willing you should take it over but I am not willing to be insulted. . . . I don’t know what kind of architect you are familiar with but it apparently isn’t the kind I think I am. You seem not to know how to treat a decent one. I have put so much more into this house than you or any other client has a right to expect that if I haven’t your confidence—to hell with the whole thing.

The client, who could be relied upon to give as good as he got, wittily replied by return mail:

Dear Mr. Wright: If you have been paid to do the concrete engineering up there is no use whatever of our doing it down here. I am not willing to take it over as you suggest nor am I willing to be insulted. . . . I don’t know what kind of clients you are familiar with but apparently they are not the kind I think I am. You seem not to know how to treat a decent one. I have put so much confidence and enthusiasm behind this whole project in my limited way, to help the fulfillment of your efforts that if I do not have your confidence in the matter—to hell with the whole thing.

P.S. Now don’t you think that we should stop writing letters and that you owe it to the situation to come to Pittsburgh and clear it up by getting the facts?¹⁶

As soon as the formwork was stripped, even with the extra steel the living room terrace sagged 1½ inches. Cracks opened in the parapet walls of the bedroom terrace. Some of the deflection was due to the engineer’s failure to allow for the weight of the concrete when it was still wet, but most resulted from inadequate reinforcement. Metzger-Richardson wanted to fix permanent steel bracing in the creek bed, but Wright dug his heels in. “I have assured you, time and again, that the structure is sound,” he told Kaufmann in January 1937. Kaufmann sided with him, and the bracing was not deployed. But as the years passed, the problem became worse.

Kaufmann recorded the deflection periodically until 1955. He and his son had agreed that Fallingwater should someday be placed in public ownership, and it was entrusted to the WPC in 1963. Only a couple of measurements were taken in the 40 years after Kaufmann Senior's death, so in 1995 the WPC commissioned the structural engineers Robert Silman Associates to conduct a thorough survey. They discovered that the lower terrace had deflected up to 7 inches in the southwest corner; and, if left, it was in danger of complete collapse. Analysis of the entire structure revealed that the main cantilever beams were failing under their own weight and that of the lower terrace; they were also supporting the weight of the upper terrace, transmitted through the mullions of the living room windows. The solution was to posttension three of the four beams.

In 2001 the Conservancy, with private, corporate and government funding, launched an \$11.5 million project to preserve Fallingwater and its site. The work included the major structural repairs described, restoring wooden furniture and steel window- and door frames, installing an on-site sewage treatment plant system, undertaking extensive landscaping, and waterproofing the terraces and the built-up flat roofs. Kaufmann Senior had described Fallingwater as "a seven-bucket building." Measures were taken to reduce dampness and mold inside the house, caused by its unique location above a waterfall in a humid forest—for that reason its owner had jokingly named it "Rising Mildew." The structural repairs were completed in March 2002.

Despite the sometimes uncomfortable client–architect relationship, Wright has given other commissions at Bear Run—that is always a clear sign of client satisfaction—and E.J. and the tetchy old designer remained firm friends. The only *realized* project was a separate guest wing further up the hillside, reached by a path with a stepped vaulted canopy. It was built in 1938–1939; an addition followed 10 years later. Wright also designed a gate lodge and a "farm unit" for Fallingwater in 1940 and an addition to the house in 1947.

In 1935 Wright's Broadacre City model was displayed in Kaufmann's department store. During the 1940s Kaufmann "drew Wright into his urban renewal plans for Pittsburgh. As a civic leader [he] envisioned a rebuilt downtown core and . . . he advanced the work of the new agencies to create a 'Pittsburgh Renaissance.'" But nothing was built, "despite the time, energy and money spent on them."

Early in the 1950s Edgar and Liliane separated, and in September 1952 she died at Fallingwater from an overdose of sleeping pills. Just about then Wright was designing the pyramidal Rhododendron Chapel at Bear Run for her and Edgar Junior, and "Boulder House" in Palm Springs, for her. Neither was ever built. Edgar Senior married the publicist Grace Stoops in September 1954. He died at Palm Springs in April 1955. An obituary in *The Jewish Criterion* celebrated his philanthropy: "Look about you and you will see imperishable proof of Mr. Kaufmann's regard for the warmer, gentler side of life. Brilliant merchant he was, but that is not how his name will be cherished wherever

people gather to laugh or relax or cry. As the tiller of the soil who brought it to blossom and fruit—that is how Edgar Kaufman inscribed his name on memory’s ageless tablets.” There was no mention of Fallingwater.

Edgar Junior said of his parents’ woodland retreat, “It has served well as a house, yet has always been more than that, a work of art beyond any ordinary measure of excellence. Itself an ever-flowing source of exhilaration, it is set on the waterfall of Bear Run, spouting nature’s endless energy and grace.”

NOTES

1. Gangewere, R. Jay, “Merchant Prince and Master Builder,” *Inside Carnegie* (March-April 1999), 1.
2. Green, Robert Miller, “Frank Lloyd Wright: Architecture. Design, Style.” www.modusmodern.com/robertgreen/fallingh20a.asp
3. Burns, Ken, “The Master Builder,” *Vanity Fair*, 459(November 1998), 302–318.
4. Langmead, Donald, and Donald Leslie Johnson, *Architectural Excursions: Frank Lloyd Wright, Holland and Europe*. Westport, CT: Greenwood, 2000, 154.
5. “The Family.” www.paconserve.org/fallingwater/family/edgar_sr.htm
6. “The Significance of a Stream in the Overall Scheme.” *Conserve*, 19(Spring 2007). www.paconserve.org/e-conserve/spring-07/stream.htm
7. Toker, Franklin, *Fallingwater Rising: Frank Lloyd Wright, E.J. Kaufmann, and America’s Most Extraordinary House*. New York: Knopf, 2003.
8. Gill, Leonard, “The Wright Stuff—Mr Kaufmann Builds His Dream House,” *Memphis Flyer* (November 7, 2003). www.franklintoker.com/reviews.html
9. Pearman, Hugh, “How Many Wrights Make a Wrong?” *Sunday Times Magazine* (June 12, 2005), 1–2.
10. For a transcription of Burns’ lecture see www.artsusa.org/events/2005/hanks/transcript.asp#ken
11. Cusack, Victor, “A View from a Former Apprentice,” *Taliesin Fellows Newsletter* (October 2003), 5.
12. Hoffmann, Donald, *Frank Lloyd Wright’s Fallingwater: The House and Its History*. New York: Dover, 1993, introduction.
13. Wright to Liliane Kaufmann, June 1937. www.wpconline.org/fallingwater/building/chronology.htm
14. Cueto, Ruben, “Fallingwater: Uniqueness and Innovations.” www.rubencueto.com/Site/Writings8.html
15. Puezal, Max, “A House that Straddles a Waterfall,” *St. Louis Post-Dispatch Sunday Magazine* (March 21, 1937), 1.
16. The exchange is reported in Gangewere, “Merchant Prince and Master Builder.”

FURTHER READING

- Boulton, Alexander O. *Frank Lloyd Wright: Architect: An Illustrated Biography*. New York: Rizzoli, 1993.
- Cannon, Patrick F. *Hometown Architect: The Complete Buildings of Frank Lloyd Wright in Oak Park and River Forest, Illinois*. San Francisco: Pomegranate, 2006.
- Cleary, Richard L. *Merchant Prince and Master Builder: Edgar J. Kaufmann and Frank Lloyd Wright*. Pittsburgh, PA: Carnegie Museum; Seattle: University of Washington, 1999.
- Futagawa, Yukio, and Bruce Brooks Pfeiffer. *Frank Lloyd Wright: Fallingwater*. Tokyo, Japan: A.D.A. Edita, 2003.
- Gill, Brendan. *Many Masks: A Life of Frank Lloyd Wright*. New York: Putnam's Sons, 1987.
- Hoffmann, Donald. *Frank Lloyd Wright's Fallingwater: The House and Its History*. New York: Dover, 1993.
- Kaufmann, Edgar, Jr. *Fallingwater, a Frank Lloyd Wright Country House*. New York: Abbeville, 1986.
- Langmead, Donald, and Donald Leslie Johnson. *Architectural Excursions: Frank Lloyd Wright, Holland and Europe*. Westport, CT: Greenwood, 2000.
- Lemly, Brad. "How a High-Tech Fix Kept Frank Lloyd Wright's Masterpiece from Tumbling Down." *This Old House* (January-February 2003).
- McCarter, Robert. *Fallingwater: Frank Lloyd Wright*. London: Phaidon, 1994.
- Menocal, Narciso G., ed. *Fallingwater and Pittsburgh*. Carbondale: Southern Illinois University Press, 2000.
- Secrest, Meryle. *Frank Lloyd Wright: A Biography*. New York: Knopf, 1992.
- Stoller, Ezra. *Frank Lloyd Wright's Fallingwater*. New York: Princeton Architectural Press, 1999.
- Toker, Franklin. *Fallingwater Rising: Frank Lloyd Wright, E.J. Kaufmann, and America's Most Extraordinary House*. New York: Knopf, 2003.
- Waggoner, Lynda S. *Fallingwater: Frank Lloyd Wright's Romance with Nature*. New York: Fallingwater, Western Pennsylvania Conservancy; Universe, 1996.
- Weintraub, Alan, Alan Hess, and John Zukowsky. *Frank Lloyd Wright: Mid-Century Modern*. New York: Rizzoli, 2007.
- Weiss, Norman, et al. "Fallingwater (part 1): Materials—Conservation Efforts at Frank Lloyd Wright's Masterpiece." *APT Bulletin*, 32(no. 4, 2001), 44–55. See also Pamela Jerome et al., (part 2), *APT Bulletin*, 37(no. 2–3, 2006), 3–11.
- Wright, Frank Lloyd. *An American Architecture*. San Francisco: Pomegranate, 2006. Edited by Edgar Kaufmann Jr.
- Wright, Frank Lloyd. *Writings and Buildings*. New York: Horizon, 1960. Selected by Edgar Kaufmann Jr. and Ben Raeburn.



Courtesy Library of Congress

Golden Gate Bridge, San Francisco, California

"The biggest thing of its kind"

The Golden Gate Bridge, internationally recognized as “an icon of striking grace and beauty,” spans the mile-wide opening into San Francisco Bay from the Pacific Ocean and connects San Francisco and the Marin County headlands, near the town of Sausalito. Joseph Baermann Strauss, the chief engineer, aspired to construct “the biggest thing of its kind that a man could build.” Randal Brandt writes that it

continues to astound and inspire. Some believe its soaring grace and sublime elegance enhance the beauty of its site as few man-made structures do. Considered an Art Deco sculpture and a symphony in steel, the bridge has always inspired artists, poets, writers, and filmmakers. It has also become a symbol for communication, for the portal to the Pacific . . . and for San Francisco.¹

It was a brilliant response to what many saw as a plethora of insoluble problems. Its towers were the tallest, its main suspension cables the thickest, and its submarine foundation the largest ever built. One of its piers stands in 100 feet of open sea, assailed by 7½ knot currents, and its roadway soars across a canyon swept by 75 mph winds. For 27 years, with a center span of 4,200 feet and a total length of nearly 9,000 feet, it was the world’s longest suspension bridge until New York City’s Verrazano Narrows Bridge—60 feet longer—was opened in November 1964. In July 1981 the record passed to the Humber Bridge in England; in 1998 the Great Belt East Bridge in Denmark, with a main span of 5,328 feet; and Japan’s Akashi-Kaikyo Bridge, with a span of 6,532 feet, were completed.

Yet biggest is not necessarily best. Now over 70 years old, the Golden Gate Bridge, in terms of its structural design and its aesthetic appeal, remains among the world’s most stunning examples of bridge engineering. *Frommer’s Travel Guide* calls it “possibly the most beautiful, certainly the most photographed, bridge in the world. With its gracefully swung single span, spidery bracing cables and zooming twin towers, [it] looks more like a work of abstract art than one of the twentieth century’s greatest practical engineering feats.” Over 10 million tourists visit it each year.

Prestigious awards began the year after it was completed and keep coming. In 1938 the American Institute of Steel Construction hailed the bridge as “the most beautiful steel bridge built in the United States last year.” In 1984 the American Society of Civil Engineers (ASCE) named it a National Historic Civil Engineering Landmark and 10 years later counted it among seven wonders of the modern world. Three months earlier the Society of American Registered Architects—for the first time honoring a structure other than a building—had given it a Distinguished Building Award in recognition of “enduring excellence in design” and its “impact on the city, design, economic value, cultural statement, engineering accomplishment and contribution to the overall furtherance of the region.” In March 1999 CONEXPO-CON/AGG, a construction industry trade show, awarded it second position (after

the Channel Tunnel joining France and England) in the Top 10 Construction Achievements of the Twentieth Century. That was small beer compared to the ASCE's May 2001 accolade: a Monument of the *Millennium*. In 2007 a popular survey of America's favorite architecture, conducted by the American Institute of Architects (AIA), placed the bridge in fifth position.

Thanks largely to the pervasiveness of the American film industry, the bridge was established internationally as a popular icon even before it was completed. In pretelevision days most cinemas began their programs with newsreels; the nation and the world saw what was happening in San Francisco. Feature films also showed the bridge; among the first was *Stranded*, (according to *Time*) an "eminently unimportant little fabrication" released in 1935 whose unlikely hero was "*the* foreman" of the Golden Gate building team. In 1936 RKO released *Night Waitress* that used background scenes of workers on the bridge (Anthony Quinn had a bit part), and First National Pictures released *China Clipper*, a "thinly disguised fictionalized story" of Pan-Am Airways in which the flying boat is seen above the unfinished bridge. Many more appearances were to follow.

FINDING THE GOLDEN GATE

In June 1542 the Portuguese-born Juan Rodríguez Cabrillo embarked upon the first European exploration of North America's Pacific Coast, possibly reaching as far north as what is now Oregon. Sailing on the *San Salvador* from Navidad, New Spain (now Mexico), on a quest for gold and a connection between the Pacific and the Atlantic oceans, he failed to sight San Francisco Bay. Sixty years later another Portuguese, Sebastian Vizcaíno, led an ill-fated fleet—the *San Diego*, *Santo Tomás*, and *Tres Reyes*—which in December 1602 discovered a bay that he named after the Count of Monte Rey. In 1769 Gaspar de Portolá, governor of Baja California, led an overland expedition to locate Vizcaíno's find and in October discovered San Francisco Bay.

It was not until the night of August 5, 1775, that Lieutenant Juan Manuel de Ayala sailed the Spanish naval vessel *San Carlos* from the Pacific through the 3-mile "hidden strait which navigators had passed by for two centuries [with] a gap barely a mile wide at the narrows" into San Francisco Bay. The following morning he named the place for the little willow trees (*saucelitos*) on its shores, and for 6 weeks he mapped the Bay. The survey completed, as the *San Carlos* sailed outward on the tide she was caught in the currents between the cliffs and her rudder was damaged as she was driven onto rocks near Point Cavallo on the north shore. The experience was prophetic of the difficulties that would confront the builders of the Golden Gate Bridge 150 years later. But we anticipate.

In March 1776 a small expedition under Lieutenant Colonel Juan Bautista de Anza Bezerra Nieto determined potential sites for *El Presidio Real de San*

Francisco (The Presidio) and the *Mission San Francisco de Asis*, and 6 months later Lieutenant José Joaquín Moraga built the military outpost. Padre Junípero Serra and others from the third Spanish Franciscan mission in a chain extending from San Diego began Christianizing the local Indians and at Yerba Buena Cove settlers from Monterey founded the tiny community that would become the city of San Francisco.

After a decade of conflict Mexico won its independence from Spain in 1821. Three years later the Mexican Republic was founded, and California remained its remote northern province for 24 years. Then in 1845, hearing of America's annexation of Texas, Californians grew "suspicious of the intentions of the growing number of American settlers"; the settlers, for their part, were afraid that the Mexicans would oust them. Lieutenant John Charles Frémont of the U.S. Army Topographical Engineers increased tensions during his third exploration of Alta California; early in March 1846 he built a log fort near Monterey and raised the American flag. Two months later the United States' "quest for new territory and its ambition to stretch coast to coast" prompted it to declare war on Mexico. War-time events in California and Frémont's belligerence are not germane to this essay; suffice it to say that due in part to his imprudence, the Americans took California by force when a political solution was close at hand. The Treaty of Guadalupe Hidalgo ended the war in February 1848. It was Frémont who named the entrance to San Francisco Bay. Believing that one day it would be commercially important, in 1846 he pronounced, "To this gate I gave the name of *Chrysopylae*, or Golden Gate; for the same reasons that the harbor of Byzantium [now Istanbul] was called *Chrysoceras* or Golden Horn."

MEANWHILE, ACROSS THE WATER . . .

In June 1841 William Richardson, an English-born Mexican citizen, took possession of a 19,500-acre peninsula—he named it *Rancho Sausalito*—on the north side of the Golden Gate, that had been granted to him in 1838; it represented about 6 percent of present-day Marin County. It had a safe anchorage—Whaler's Cove—and abundant fresh water springs. Richardson's "fortunes waxed and waned": he sold water and supplies to visiting ships, established a regular "tank boat" service to transport passengers and water from his springs at Sausalito, raised cattle, dealt in otter pelts, and traded along the northern coast. Following the American conquest, he was made captain and collector of the Port of San Francisco.

On January 24, 1848, James Marshall found gold at Sutter's Mill, 50 miles northeast of Sacramento, setting off the Gold Rush. San Francisco's population mushroomed from under five hundred in 1847 to around one hundred thousand by the end of 1849. California attained statehood in 1850.

Despite Richardson's expectations of untold wealth, during the Gold Rush his land was squatted on, his herds were rustled, and his harbor was

supplanted by a new port at Yerba Buena. More business disasters followed, and early in 1856, “ailing and in financial straits,” he filed for bankruptcy. When he died in April “the shambles of [his] debt-ridden former *rancho* [in Marin County] were gobbled up by ambitious entrepreneurs.” Local railroads were built by 1864, and on May 10, 1869, the Central Pacific and Union Pacific railroads met at Promontory Summit, Utah, forming a transcontinental link. Throughout the rest of the nineteenth century San Francisco’s metropolitan area underwent major growth; by the 1880s, the population would reach 274,000.

The post-Gold Rush boom showed speculators the potential rise of land values in Marin County, were it more accessible to San Francisco. In 1868 a group of nineteen San Francisco businessmen formed the Sausalito Land and Ferry Company. Some of them saw Sausalito’s potential as a permanent town and land was surveyed, and roads constructed; a ferry service to San Francisco was inaugurated on May 10; the side-wheeler *Princess* made five round trips daily. In 1871 the Company contracted with the newly incorporated North Pacific Coast Railroad to extend its narrow-gauge line to Sausalito, to connect via ferry to San Francisco. From a pier at Sausalito, the line followed the shore of the bay and by 1875 served Marin County as far as Tomales; by 1886 it was extended through San Anselmo to Cazadero in Sonoma County’s timber lands. Although it was established to transport lumber to San Francisco, its existence gave better access to Sonoma and Marin Counties, pushing up real estate values. The oil-fuelled wooden-hull side-wheeler *Sausalito*, launched in 1894, and *Cazadero* and *Tamalpais* were typical of the earlier ferries crossing the Gate. Many others were built. Until the declining service was discontinued at the end of February 1941 they carried freight cars as well as passengers.

Early in the twentieth century, San Francisco’s population, at “an all-time high and rising” (by more than 20 percent between 1910 and 1920), was congesting the urban space limited by geography. But the *rate* of growth was declining. Los Angeles, the city’s southern rival with plenty of land, was prospering. Historian Kevin Starr observes, “San Franciscans were beginning to realize that there was a vast northern and interior empire that had to be integrated into [their] economy and transportation and travel network” if they were to survive.² But the sparsely populated counties across the Golden Gate could be reached only by ferry. When beaches, amusement parks, and other diversions across the Bay became popular attractions, on Sunday nights Sausalito was choked with traffic, as cars queued up to return to San Francisco. Certainly a bridge to Marin County would relieve many of the city’s problems.

A BRIDGE—TOO FAR?

There is a compelling and amusing story about the first mention of a bridge. In 1853, bankrupted by an abortive attempt to corner the rice market, the

San Francisco entrepreneur Joshua Norton had sought refuge in insanity. On August 18, 1869, he “decreed” in the *Oakland Daily News*:

Now, therefore, we, Norton, *Dei Gratia*, Emperor of the United States and protector of Mexico, do order and direct, first, that Oakland shall be the coast termination of the Central Pacific Railroad; secondly, that a suspension bridge be constructed from the improvements lately ordered by our royal decree at Oakland Point to Yerba Buena [San Francisco], from hence to the mountain range of Saucilleto [*sic*], and hence to the Farallones, to be of sufficient strength and size for a railroad; and thirdly, the Central Pacific Railroad Company are charged with the carrying out of this work, for purposes that will thereafter appear. *Whereof fail not under pain of death.* [emphasis added]

The noted engineering academic Henry Petroski opines that Norton, in proposing a bridge that would have combined the San Francisco, Oakland Bay, and the Golden Gate Bridges, was relaying the ideas of contemporary engineers: ideas that were ahead of their time. Whatever its source, the notion was held up to ridicule; nevertheless, crazy or not Norton “saw the future in linking the growing city of San Francisco [to] the wide open lands of Marin County . . . and the ‘Redwood Empire.’” In 1872 a bridge was again proposed by Charles Crocker, cofounder of the Central Pacific Railroad; naturally, he wanted to build a structure that would carry his trains into San Francisco. Nothing came of it.

The issue was resurrected in July 1916. James Wilkins, a journalist trained in structural engineering, used a *San Francisco Call Bulletin* editorial to assert that it was possible “to bridge San Francisco Bay at various points.” He added, “But at only one point can such an enterprise be of universal advantage—at the water gap, the Golden Gate, giving a continuous dry-shod passage around the entire circuit of our inland sea.” Wilkins realized that the development of Marin was dependent upon its relationship to San Francisco.

[He] lived across the Bay but worked in San Francisco [and] he could no longer tolerate the delayed time it took a ferryboat to cross . . . when an automobile could transport a man 20 miles in a half an hour. He pointed out that more than 200,000 people lived in the Northern Counties with no direct access to San Francisco, and decried the inconvenience and delay that travelers from the north had to endure. Wilkins estimated the costs for the bridge at about \$10 million by comparing his plans to the costs of other bridges of that type.³

For 10 years San Francisco’s chief engineer, Michael M. O’Shaughnessy, had been rebuilding the urban infrastructure—a sewerage system, firefighting mains, aqueducts, and a cable-car network—destroyed by the 1906 earthquake. In 1919, perhaps rising to Wilkins’ challenge, and certainly mindful of the urgency of expansion, O’Shaughnessy canvassed engineers nationwide about the feasibility and cost of bridging the Golden Gate. The choice of site

held no appeal for pragmatists: some said that the span was too great; others that the fogs, high winds, and turbulent ocean currents presented insurmountable problems; and still others said that the bridge would be too close to the notorious San Andreas Fault, just 7 miles to the west, and the Hayward Fault, about 10 miles to the east. Moreover, it was claimed that it would cost too much—some predicted \$100 million.

On June 28, 1921, the Chicago engineer Joseph Baermann Strauss presented O'Shaughnessy with preliminary designs for a bridge with an estimated cost of \$27 million. As an undergraduate at the University of Cincinnati, Strauss had been enthralled by John A. Roebling's Cincinnati-Covington suspension bridge, then about 25 years old. It awoke in him a passion for bridges, and his senior thesis proposed an "outside-the-square" railroad to bridge the 60-mile-wide Bering Straits. His realized output, though important, was much less spectacular. Following his graduation in 1892, he worked as a draftsman for the New Jersey Steel and Iron Company and lectured at his alma mater before moving to the Lassig Bridge and Iron Works in Chicago. In 1899 he was engaged as principal assistant in the office of Chicago engineer Ralph Modjeski, where he developed his "pattern" design for a counterweighted drawbridge. Falling out with Modjeski in 1902, he formed Strauss Engineering Corporation and 2 years later changed its name to Strauss Bascule Bridge Company; almost all the four hundred structures that his firm built throughout the world were drawbridges, many of which were "downright ugly."

The critics were unkind to Strauss' initial cantilever-cum-suspension design for the Golden Gate Bridge. One described it as "an upside down rat trap"; another called it a "hybrid monstrosity with little but functionality to recommend it." Although he admits that there was some doubt over how much credit for the elegant final design is deserved by Strauss, Petroski acknowledged in that he was at least "the entrepreneurial driving force behind its construction."⁴ Starr agrees: Strauss was "an archetypal American kind of personality, who comes to fruition mythically in the Wizard of Oz behind the curtain . . . the man who is constantly dreaming dreams and promoting big projects."⁵ More of that later.

In 1922 O'Shaughnessy and Strauss, with Edward Rainey, secretary to San Francisco's Mayor James Rolph Jr., proposed forming a special bridge tax district. On January 13, 1923, a meeting of representatives from twenty-one affected counties at Santa Rosa in Sonoma County formed the Association of Bridging the Gate and soon drafted the *Golden Gate Bridge and Highway District Act*. Passed by the State Legislature on May 25, it gave counties the right to organize as a bridge district that could borrow money, issue bonds, construct a bridge, and collect tolls. The proposal met with strenuous resistance from "well-financed special interest groups," collectively dubbed the "Old Guard." Their antagonism would be sustained until construction began. Strauss would call his fight for the bridge "a thirteen years' war . . . a long and torturous march."

Many engineers doubted that a bridge could be built in such a “notoriously violent” environment, scoffing that “Strauss will never build his bridge, no one can bridge the Golden Gate because of insurmountable difficulties which are apparent to all who give thought to the idea.” The San Francisco Board of Supervisors, doubtless with an eye on reelection, worried about taxpayers’ reaction to being saddled with some of the cost. The conservationist Sierra Club believed that the bridge would spoil the beauty of the Bay (ironically, the Bay Area chapter’s Internet site now carries the bridge as its banner). Shipping agents, expectedly taking a short-term view, feared that constructing the bridge would slow their trade.

And ferry companies, especially the influential Southern Pacific Railroad’s lucrative Golden Gate Ferries, anticipated that their profits would be eroded. They launched a belligerent—and temporarily very successful—campaign against the bridge, using the main (and specious) argument that “the 30-minute ferry ride across the strait was a time for people to mingle and receive a break in their day.” But as congestion worsened, that relaxing trip was transformed into an “over-stuffed journey that left riders annoyed and frustrated.”

There was other resistance, too. The U.S. War Department feared that if it were bombed in a conflict—although in 1923 none was on the horizon—the bridge could collapse and block the harbor. Because it controlled any construction works that could affect shipping and seaward defenses anywhere in the United States (and because it owned the coastal land on both sides of the Golden Gate), the Department had to authorize the bridge project. In May 1924 Colonel Herbert Deakyne conducted a hearing to consider the financial feasibility and strategic implications of the joint San Francisco-Marin County application to build the bridge. Just before Christmas, in what has been described as “an atmosphere of overwhelming support” for the project, the secretary of war signed a provisional permit, pending the submission of more detailed plans.

Since 1922 and on his own initiative, Strauss had energetically lobbied civic organizations and addressed public meetings throughout Northern California. In the face of the concerted propaganda described, not all residents were comfortable with the proposed bridge. Although its potential benefits—increased property values, tourism revenues, and economic development—were undeniable, some had been convinced that the expensive project might also inflate property taxes. In the event, out of twenty-one counties that had shown initial interest, only San Francisco, Marin, Sonoma, Del Norte, and parts of Mendocino and Napa joined the Bridge and Highway District. The others withdrew in 1926. When the San Francisco Board of Supervisors opposed Strauss’ plans (it has been claimed that) he hired a political fixer named Harry H. “Doc” Meyers to bribe Board member Warren Shannon, “who would come to the Strauss offices and be given a sealed envelope with a \$100 bill inside, which he either kept for himself or distributed to the necessary supervisors to bring them on board.” The outcome was that “magically, San Francisco’s resistance evaporated.” Despite being “damned by a thousand

hostile sneers,” on December 4, 1928, the District was established. Its board of seven directors from San Francisco, two from Marin and one from each of the other participating counties first convened on January 23, 1929.

Eleven engineering firms submitted proposals for the Golden Gate Bridge. When the board began to lean to other more experienced tenderers, Strauss showed that he was prepared to do “all that it takes” to secure the contract. He agreed to engage two of his rivals as consultants, to almost halve his fee, and even to discard his own initial design. But he was adamant that he should be recognized as the designer and builder of the Golden Gate Bridge. On August 15, 1929, he was appointed chief engineer; Leon S. Moisseiff, Othmar Hermann Ammann, and Charles Derleth, Jr. were named consulting engineers.

About a year later the War Department issued its final permit for a suspension bridge with a vertical midspan clearance of 220 feet. On August 27, 1930, 2 months behind schedule, Strauss submitted his final plans to the District board.

The Hoover administration provided no funding for the bridge; neither was the State of California willing to finance it. The San Francisco–Oakland Bay Bridge, which was also then being promoted, “had already received the limited funds available.” Money would have to be raised locally. In October 1929 Wall Street crashed, and within months the United States began slipping into the Great Depression. It was hardly the psychological moment to ask the electorate to bankroll a major construction project, and opponents of the District’s proposed \$35 million bond were not hard to find. The Southern Pacific Railroad mounted another legal challenge, and advertising campaigns condemned the timing of a bond issue during the Depression as economically reckless. In those circumstances it is the more remarkable that on November 4, 1930, over three-quarters of the eligible voters, convinced that the bridge represented employment opportunities, approved the issue. They were prepared to offer their houses, commercial properties, and farms as collateral.

In the straitened climate, banks would not accept the bonds. In fall 1932 Strauss approached the visionary Amadeo P. Giannini, founder of the Bank of America. When Strauss and the directors confronted Giannini with their problem, he is said to have responded, “We need the bridge. We’ll take the bonds.” He bought \$6 million worth, and in November contracts totaling almost \$24 million were awarded.

“WITH A LITTLE HELP FROM MY FRIENDS [?]”

The inscription on Frederick W. Schweigardt’s statue of Strauss at the San Francisco end of the bridge hails him as “the man who built the bridge,” and attests—not without hubris—“here . . . is the eternal rainbow that he conceived and set to form, a promise indeed that the race of man shall endure unto the ages.” Because he was obsessed with getting the credit, Strauss

underemphasized the crucial roles played by mathematician Charles Alton Ellis and engineer Leon Moisseiff, who together solved the Golden Gate Bridge's complicated practical problems. Moisseiff had developed a new theory of suspension bridge design, but it was Ellis' job to apply that theory in practice.

Ellis graduated from Wesleyan University in June 1900, and after working in various capacities for the American Bridge Company he was appointed assistant professor of civil engineering at the University of Michigan in 1908. Following a brief engagement (1912–1914) as design engineer for the Dominion Bridge Company, he joined the University of Illinois as professor of structural and bridge engineering. He received his C.E. degree in 1921—the year in which Strauss offered him the post of vice president in charge of development and design of the Golden Gate Bridge. Strauss found in Ellis the credible engineering expert that he needed, and as often as he could, he name-dropped his colleague's qualifications in business meetings. There is little question that Ellis' mathematical analysis of the Golden Gate towers, published in January 1934, was the “outstanding achievement of his professional career.”

Through him, Strauss recruited Moisseiff to his board of consultants. When asked to evaluate Strauss' design, Moisseiff tactfully focused on the cost, which he pronounced as “about correct and may be exceeded by not more than \$2,000,000.” Strauss, acutely conscious of time and finance pressures, was persuaded by Moisseiff to abandon his original design in favor of a pure suspension bridge, which would use less steel and be faster to build. In March 1930 Ellis began the preliminary design and estimate, completing the work in just 4 months; it was endorsed by the three consulting engineers, and the Bridge District board accepted it in August. On the other hand, Strauss' own belated report of March 1931 was not favorably received, and when Ellis declined to comment on it Strauss concluded—unjustifiably—that Ellis was trying to undermine him with the directors.

Besides writing the specifications which underlay the ten separate construction contracts, Ellis communicated by telegram from his Chicago office with Moisseiff in New York, consulting over “the thousands of detail calculations involving suspension ropes, decks, floor beams, highway track, cables, towers, and more.” The careful, time-consuming work annoyed Strauss, who (it seems clear) did not really appreciate the complexity of the task. In October 1931 he urged Ellis to finish. When the mathematician insisted that he needed more time, Strauss instructed him to take an immediate vacation, which he began early in December. Three days before he was due to return to work he received a letter of dismissal from Strauss, stating that the bridge design was “nothing unusual and did not require all the time, study, and expense which [Ellis] thought necessary for it.” He was replaced by Clifford Paine, Strauss Engineering Corporation's managing engineer.

Ellis was shocked. He had poured his entire being into the bridge for three years. . . . Harsher realities soon set in [and he] had trouble finding steady work

during the Great Depression. . . . Forced into semi-retirement, Ellis revisited the computations [for the towers]. . . . Investing about 70 hours per week, he executed a complete review of the numbers in five months, working unpaid.⁶

Moisseiff, however, was convinced that the original calculations had been correct and convinced that the towers would stand, the bridge's consulting engineers gave permission for the work to commence. When the bridge opened in 1937 many people—Strauss, his assistants, consultants, District directors, and others—shared the credit for it. But although the bridge design was “almost single-handedly his own,” Ellis was not mentioned; all record of him had been stricken from the bridge documentation. The first time he was publicly acknowledged as the bridge's designer was in an obituary published late in 1949, and it was not until May 10, 2007 that, after several writers had proved his authorship, the District admitted that “the record clearly demonstrates that Charles Ellis] deserves significant credit for the suspension bridge design we see and cherish today.”

Strauss' other “helper” was Irving Foster Morrow, then a relatively obscure San Francisco architect. Architectural historian Alan Temko asserts that “Strauss hired him . . . because he thought he could master him.” He and his architect wife Gertrude Comfort Morrow designed the streetlamps, railings, pedestrian walkways, and the crisply modeled faces and details of the towers, classified by some critics as “a stylized geometry in the Art Deco style.” Temko explains that, because the chief engineer “had the stupidest ideas of what a bridge could look like,” Morrow, who seems to have had the ability, persuaded Strauss “to see the drama of the bridge” and managed to turn the open spaces “in the original architectural treatment into . . . giant portals framing the sky. And he [incorporated his] signature vertical fluting . . . so that the bridge catches the light and changes with the sun. . . . [In that way he] had turned it into a sculpture.”⁷

The Morrows also chose the distinctive International Orange paint for which the bridge is famous. As early as 1919 Irving had poetically observed that the Golden Gate was “caressed by breezes from the blue bay throughout the long golden afternoon, but perhaps it is loveliest at the cool end of the day when, for a few breathless moments, faint afterglows transfigure the gray line of hills.” Although other paint colors were proposed—aluminum, gray, or (as seriously suggested by the Navy) yellow and black stripes—the Morrows believed that orange would harmonize with that spectacular landscape and would be more visible in the sea fog for which the Bay Area is notorious. Moreover, they offered practical justification for using it: “Incidental to its color is the fact that this paint is extremely durable under adverse exposure conditions. It is made of basic lead chromate . . . and [remains] bright and free from fading for a long time.” For the next 27 years, only touch-up would be required. In April 1936 Strauss also accepted Morrow's recommendations for a lighting design—usually the province of electrical engineers—for the bridge.

"I BEEN AN IRONWORKER ALL MY LIFE."

Complete with marching bands, groundbreaking ceremonies, "the like of which for pageantry and enthusiastic support of the citizenry had never before been witnessed in the bay region," were held on February 26, 1933, at the Presidio's Crissy Field. Representatives of all the western states took part, and President Herbert Hoover announced the occasion on a national radio broadcast from Washington, D.C. But in fact the ground had already been broken. On January 5 the first workers had begun excavations for the twelve-story high concrete anchorage structures, designed to resist twice the pull of the main cables. They were completed in February 1936.

The Golden Gate Bridge rose above the Bay in the years when unemployment in America stood at 25 percent. As the country began to sink into the Great Depression, membership in labor unions continued to decline; in the preceding years the union movement had failed to organize the large number of workers in the major growth industries. But just as the bridge was started the tide changed, partly due to the F. D. Roosevelt administration's pro-union stance and the *National Industrial Recovery Act* of 1933. The bridge contractors were obliged to hire labor through Local 377 of the Bridge, Structural and Ornamental Iron Workers Union. It is no longer known how many men worked on the project; as the Bridge District later pointed out, it was built by ten different primary contractors and their subcontractors who were no longer in business. The District did not have their employment records.

There were then few steel workers living in San Francisco. As word spread that jobs were available, desperate itinerants bought addresses and Social Security numbers from San Franciscans so that they could meet residence qualifications for employment. Overnight, cowboys, clerks, and cab drivers miraculously became high steel men. The son of one such worker recalls that when an individual was asked, "Have you ever been an ironworker?" he'd reply, "Yeah, I was born an ironworker. I been an ironworker all my life." One source notes that union wages ranged between \$4 and \$11 a day; workers clocked in when they reached their work locations, and the climb to get there—sometimes taking up to 40 minutes—was on their own time. Despite the obvious risks, employment on the bridge was very desirable, and there "was always somebody waiting at the base of the tower for someone to fall off so they'd get a job."

In 1932, to the great annoyance of the Bridge District board, Strauss went missing for 6 months. It remains unclear where he was: some sources say he was in the Adirondacks, recovering from a nervous breakdown; others that he was "recuperating" on a Panama Canal cruise. He finally wired from New York to say he promised to "return to San Francisco by leisurely stages." In the interim, he had left May, his wife of 37 years, to marry a much younger widow, Ethelyn Hewitt. Back in San Francisco, he withdrew to his apartment on Nob Hill and oversaw the construction at a distance, visiting the bridge only occasionally over the next two years.

In the first half of 1933 the concrete pier under the north tower was built on the Marin County coast. That was relatively straightforward. But the south pier was founded on the sea-bed, “full in the face of the . . . sometimes raging Pacific,” over 350 yards from shore. The enormous engineering problem was solved by building a fender—a great sheath to facilitate construction of the pier and to protect it from the sweep of heavy seas. One contemporary account calls it a “marvel of construction”; with 40-foot-thick concrete walls, and enclosing an elliptical area 300 feet long and 155 wide. It extended 100 feet below, and reached 15 feet above the average high water mark. When it was complete, seawater was pumped out while the concrete pier was poured. The south pier and both approach trestles were completed by December 1934.

The 745-foot steel towers, composed of massive 42-inch square, 35-foot high prefabricated “cells” were made in New Jersey, Maryland, and Pennsylvania by the McClintic-Marshall Corporation, a subsidiary of Bethlehem Steel. They were shipped to storage yards in Alameda from East Coast seaports through the Panama Canal before being taken by barge across the Bay to the construction site. The steelworkers were amazed at the way that they could be stood temporarily in place without a single rivet. Teams of riggers and riveting gangs assembled them. A “heater” made each rivet red-hot in a forge and used tongs to toss it to a “catcher,” who caught it in a funnel shaped can and placed it, still red-hot, into a predrilled hole in the structural joint; a “bucker-up” located it while a “gunman” flattened it with a compressed-air hammer. The north tower began to rise on the Marin shore in November 1933 and took 11 months to finish; the south tower was started in January 1935 and completed by the end of June. Then workers built catwalks and started spinning the cables.

The Golden Gate was spanned using loom-type spinning carriages devised by John A. Roebling’s Sons, builders of the Brooklyn Bridge. The New Jersey firm was contracted to spin the two main cables on site. Begun in October 1935, the cables were completed in March 1936—almost 8 months ahead of schedule. Just over 3 feet in diameter, each consisted of 27,572 galvanized steel parallel wires of pencil thickness, compressed into sixty-one 452-wire strands and wrapped in steel wire. Passing over steel saddles at the tops of the towers, they were secured in the massive anchorages. Within each anchorage a device called a strand shoe was used to secure the “dead wire” while a spinning wheel pulled a “live wire” across the bridge. Once it reached the opposite anchorage, the live wire was secured, and the wheel returned with another loop of wire to repeat the process. Thus, strand by strand at 650 feet a minute, the cables were spun from side to side—1,000 miles of wire placed in every 8-hour shift. Steel clamps around the main cables anchored the vertical suspension cables supporting the steel frame of the road deck, which was completed by November 1936. Commenced in the following January, the flexible 7-inch thick *in situ* concrete road was finished by April 1937.

“THE HALFWAY TO HELL CLUB”

There were no fatal accidents on the Golden Gate Bridge site until October 21, 1936, when a worker named Kermit Moore was crushed by a falling beam. By then, twenty-four men had died on the San Francisco–Oakland Bay Bridge—only one third of the one-life-per-million-dollars statistic that California’s Industrial Accident Commission seems to have thought acceptable.

Believing that any workplace could be a safe environment, Strauss insisted upon rigorous safety practices. Medical staff were on call at a field hospital near the Corporation’s Fort Point site office. It has been suggested, cynically, that he acted out of concern for his image—efficiency was paramount. But whatever his motive, he acted. Russell Cone, the bridge’s resident engineer, monitored a matrix of safety procedures. Because of danger from falling rivets, workers wore “hard-boiled hats” made from steamed canvas, glue, and black paint that had been developed by the Sausalito-based safety equipment manufacturer, E. D. Bullard. Although the Golden Gate project was not the first on which hard hats and safety lines were mandatory, it was the first to sanction failure to use them with the threat of dismissal. There were other safety measures too. All riveters were required to wear respirators, and provisions were made so hands could be kept clean to prevent hand to mouth infection. Because steel components needed to be sandblasted before painting, Bullard’s company also designed a “sand-blast respirator helmet.” Workers were supplied with antiglare goggles and antisunburn cream. “Drinking alcohol or stunting—at any height”—also meant immediate sacking. Indeed, “special diets were prescribed for high steel workers to counteract dizziness. Men with hangovers were required to drink down a cure of sauerkraut juice.” And because of the confined space within prefabricated cells, the painters were regularly checked for lead poisoning. As a result of tests on the Marin Tower the base of the paint on the splices of the San Francisco Tower was changed from red lead to iron oxide.

Strauss believed that “men performing without fear would work faster and more surely, thereby trimming costly days off the length of the job.” So in June 1936, when progress was delayed, he invested over \$130,000 in “the most expensive, elaborate safety device ever conceived for a major construction site”—a huge manila rope net of 6-inch-square mesh hung hanging down about 60 feet under the part of the structure where the men were working. Manufactured by the J. L. Stuart Company, it was secured to outriggers and cantilevered 10 feet beyond the bridge either side and 15 feet past the length of the road deck framing. As Strauss predicted steelworkers, now feeling more secure on the sometimes slippery beams, built the bridge floor in a little under 5 months. The net also saved the lives of nineteen men, who styled themselves the “Half-Way-to-Hell Club.” One writer comments that it became such a morale-booster that workers had to be restrained from jumping into it on purpose. But the best-laid plans. . . .

On the morning of February 16, 1937, an eleven-man crew was stripping concrete formwork near the north tower when a trolley wheel casting broke. Their mobile scaffold gave way and slipped from the bridge. Momentarily it teetered before falling with its occupants into the net, which ripped under the 5-ton load. One worker managed to grab a beam and was rescued. The others and two men who already were working in the net plunged 220 feet into the icy waters of the Bay. Only two survived. Of course, accusations flew, including many directed at Strauss. But a very prompt inquest conducted by the San Francisco coroner, Dr. T. B. W. Leland, laid no blame. When the bridge opened 3 months later, a San Francisco newspaper, observed that “in the midst of the gaiety many paused in their merrymaking to stand silently before the temporary wooden memorial honoring the men who died in the construction of the bridge.”

“OPEN UP THAT GOLDEN GATE!”

Although the lyric from the song *California, Here I Come!*, popularized by Al Jolson, had nothing to do with the bridge—it was written and recorded in 1924—the two have become popularly associated ever since the great span was opened to pedestrian traffic on Thursday May 27, 1937. A few days later *Time Magazine* diffidently reported, “They opened another bridge in California last week.” On the ground the scene on “Pedestrian Day” was different and excited. Most schools, offices, and stores were closed for the day; those that remained open were run by a skeleton staff. From early in the morning crowds—an estimated eighteen thousand people—gathered at either end of the bridge, anxious to cross and glad to pay the five cents to do it. At the stroke of six o’clock, “foghorns gave great blasts, the toll gates opened and the earliest and eagerest arrivals—most of them high school students—ran or walked out onto the bridge.”

By evening, an estimated two hundred thousand had crossed. Donald Bryan from San Francisco Junior College was the first person to cross the entire span. Had the *Guinness Book of Records* existed, many eccentric citizens would have found their way into it, and as “firsts,” would still be there: a first roller-skater, a first stilt walker, a boy who walked backwards, a tap dancer, a tuba player, a man pushing a pill box with his nose, and even a woman determined to be the first to cross with her tongue out!

Strauss made a speech. It was reported that, “His hands trembling, Strauss spoke in a low voice: ‘This bridge needs neither praise, eulogy nor encomium. It speaks for itself. We who have labored long are grateful. What Nature rent asunder long ago, man has joined today. . . .’” He then recited the poem he had written, which begins “At last the mighty task is done;/ Resplendent in the western sun/ The Bridge looms mountain high;/ Its titan piers grip ocean floor;/ Its great steel arms link shore with shore,/ Its towers pierce the sky.”

The joyous occasion introduced a week-long Golden Gate Bridge Fiesta, with a nightly pageant at Crissy Field, fireworks, parades, tournaments, and all sorts of entertainment. The following day the Golden Gate Bridge was opened to vehicles when President Franklin D. Roosevelt pressed a telegraph key in the White House, flashing a green light to announce the event to the world and “sending 100 skyrockets aloft in San Francisco.” Then

car horns, sirens, bells, whistles, cannon and other sounds of celebration filled the air around the bridge. Approximately 400 Navy biplanes from three aircraft carriers thundered overhead, a parade of official cars, flags flying, crossed the span, and a huge fleet of 19 battleships and heavy cruisers, plus three carriers and hundreds of other ships, sailed beneath the bridge into San Francisco Bay.

By the end of the day, 32,300 vehicles and 19,350 pedestrians had paid tolls and crossed the bridge.

“PLANNING FOR THE BIG ONE . . .”

As noted, some doomsayers had expressed early doubts about the bridge’s stability in earthquakes. Bailey Willis, a geology professor at Stanford, was so convinced that the south tower’s rock foundation was seismically unstable that he actually engaged in a fist fight over the question. *Time Magazine* reported in June 1937 that Willis’ opinion was “overwhelmed by numbers,” remarking that only a major earthquake could settle the question. In 1929 Charles Ellis confidently had told the National Academy of Sciences that in an earthquake the safest place in San Francisco would be in a hammock slung between the towers of the bridge. Strauss’ team believed that their bridge could survive a recurrence of the 1906 earthquake, with a hurricane thrown in.

On the evening of October 17, 1989, the Golden Gate Bridge was put to the test when the Bay Area was devastated by the 15-second Loma Pieta earthquake. Measuring 7.1 on the Richter scale, with an epicenter 56 miles south of San Francisco, it was the worst quake since 1906; for weeks, hundreds of aftershocks followed. The bridge was undamaged. Nevertheless, for safety’s sake the Bridge District immediately undertook a “vulnerability study.” In 1990 its consultant, T. Y. Lin International, reported that an earthquake of a Richter magnitude between 7.0 and 8.0 with an epicenter near the bridge would cause enough damage to force extended but temporary closure, while a stronger quake would create “a substantial risk of . . . collapse of the San Francisco and Marin approach viaducts and the Fort Point arch, and extensive damage to the remaining bridge structures, including the main suspension bridge.”

The District understood that retrofitting the bridge was much less costly than replacing it—at the time, an estimated \$128 million compared to \$1.4

billion. But it was not until 1996 that a three-phase construction strategy—to withstand an 8.3 earthquake—was in place. The first phase addressed the Marin approach viaduct. The second retrofitted the San Francisco approach viaduct, the southern anchorage housing, Fort Point arch, and two southern pylons; in April 2007 it received the ASCE’s Outstanding Civil Engineering Achievement. Phase 3, scheduled for completion in 2009, was to modify the main suspension bridge and the northern anchorage housing. By 2000, the estimated cost had grown to \$297 million, and to \$405 million by April 2006. The Bridge District reassured the public that the work was “far enough along that the Bridge no longer faces the potential for collapse [but] until the entire retrofit is completed, the risk of significant damage to the main suspension bridge remains.”

“BEAUTY THAT TAKES LIVES BECOMES UGLINESS”

In celebrating such an icon as the Golden Gate Bridge, it seems morbid to turn to the subject of suicide. But the two *are* associated in the public mind. Journalist Tom McNichol wrote in 1991:

California is also home to the most powerful suicide magnet in the Western world, the Golden Gate Bridge. . . . [Its symbolic power] is a strong draw, located about as far West as one can go, in a city Jack Kerouac once described as possessing an “end-of-land sadness.” Aesthetics also seems to play a role in Golden Gate suicides. Five times as many people have committed suicide from the Golden Gate as from the comparatively frumpy Oakland Bay Bridge.⁸

Recognizing the possibility of suicides, the diminutive Strauss had designed 5-foot-6-inch high railings (about 6 inches taller than he was). He boasted in the *Call-Bulletin* that the bridge was “practically suicide-proof” because the guard rails were “so constructed that any persons on the pedestrian walk could not get a handhold to climb over them.” He also asserted that the “telephone and patrol systems will operate so efficiently that anyone acting suspiciously would be immediately surrounded” before rashly claiming, “Suicide from the bridge is neither possible nor probable.”

But as Edward Guthmann explained in *The San Francisco Chronicle* in October 2005, “By the time the bridge opened . . . Strauss’ promise had evaporated. It’s unclear when the plans were modified, but at some point architect Irving Morrow [reduced the guardrails] to four feet, and in doing so created a stage for decades of self-slaughter.”⁹ Between 1937 and 2005 there had been 1,218 *reported* suicides. The first leap was made fewer than 3 months after the bridge opened, and average of nineteen followed each year. In 1977, there were forty. It seems that the problem is increasing: the *Chronicle* reported that at least thirty-four people had jumped in 2006, adding that the bodies of four

others seen jumping had not been recovered and that seventy attempted suicides—twenty more than the annual average—had been restrained.

Three-quarters of the jumpers were men. Eighty-seven percent came from the Bay Area, overturning the myth that most victims travel to San Francisco to carry out their tragic intention. Richard H. Seiden, professor of behavioral science at UC Berkeley, in a 1978 study of over five hundred people who were prevented from jumping, identified five causes of the bridge's "mystical allure": accessibility; finality; "suicide contagion," often spread by media coverage; the attraction of "seeing for the last time something that is truly beautiful"; and "joining the herd."

As early as 1948 the Golden Gate Bridge and Highway District briefly entertained (but rejected) the idea of building high fences and electrified guardrails to act as suicide barriers. Electric fences again were considered 3 years later but dismissed because of the hazard to bridge workers. In 1953, despite an informed claim that adding 3 feet to railing heights—at a cost of only \$200,000—would not affect the bridge's stability; nothing was done. The following year the District experimented with barbed-wire fencing, but once more the issue of workers' safety (and of course workers' compensation) put to rest that idea.

In 1970, following the *coincidental* antisuicide effect of a 9-foot "litter-proofing" chain link fence—is a falling bottle more important than a falling person?—above Fort Point, the District commissioned San Francisco architects Anshen and Allen to design suicide barriers, only to reject all eighteen of the alternatives that they suggested. The preferred solution never reached even a final design stage, in part (according to one of the architects) because the District wanted them "to agree that if someone was able to scale the barrier and commit suicide, the architects rather than the district would be held liable in lawsuits." Late in 1973 plans were announced for a \$1 million barrier. *The New York Times* reported that "public opinion was strongly opposed . . . objecting that it would be ugly, ruin the view, or be ineffective on the basis that people would simply kill themselves elsewhere." That view was demolished by Seiden's study: only about 6 percent of his subjects had tried later to commit suicide in some other way. In 1998 the Bridge board considered a 7-foot high "Z-clip" barrier, originally designed as a livestock fence. Although the cost would have been under \$3.5 million, once again the design was rejected.

Guthmann's article launched a seven-part *Chronicle* series, "Lethal Beauty." Together with Jenni Olson's January 2005 film, *The Joy of Life*, which dealt in part with the history of the Golden Gate Bridge as a suicide landmark, and the imminent release of Eric Steel's controversial documentary movie *The Bridge*, which secretly shot several actual death leaps, the essays were pivotal in renewing debate about a suicide barrier and moving the District's directors—after their earlier futile gestures—to address the crucial issue.

In May 2007 the Oakland engineering/architectural firm DMJM Harris undertook a \$1.78 million Golden Gate Bridge Suicide Deterrent System

Study for the District. Because any barrier must prevent suicides without endangering the bridge structure in high winds the smallest design details needed to be resolved. The first phase of the study, scheduled for completion in spring 2007, was to report on wind tunnel testing of “generic suicide deterrent concepts”; the second, to be finished by spring 2008, would “take the . . . generic concepts that passed the wind test and develop potential alternatives for further evaluation” in engineering and environmental contexts. The District seems to be more conscious of the latter: “The Bridge, which is eligible for inclusion in the National Register of Historic Places, is afforded protection under both state and federal historic preservation laws”; so any alternative systems “must satisfy applicable state and federal requirements regarding projects that impact historic resources.”

If present trends continue, seventy more people will die before the District even decides what kind of suicide barrier it should build. The question is, “What should be done when faced with a choice between life and beauty?” In August 2005 Dr. Mel Blaustein, chair of the Psychiatric Foundation of Northern California’s Golden Gate Bridge Task Force, wrote that the “Golden Gate Bridge with its 4-foot railing is clearly a lethal solution to temporary problems.” Before telling the tragic story of how

Mary Zablotny’s 18-year-old son, . . . a senior at the French American School in San Francisco, with . . . no psychiatric history and an expected enrollment in Reed College, suicided on February 1. In her testimony before the bridge board of directors [his mother] said, “I’m an artist, and aesthetics are important to me. But beauty that takes lives becomes ugliness.”

STAR OF THE SILVER SCREEN

The New York Times travel writer James Martin claimed in 1990, “San Francisco’s biggest movie star is undoubtedly the Golden Gate Bridge.” It was inevitable that directors would use the distinctive monument as an “establishment shot” just as the Eiffel Tower has become visually synonymous with Paris, and the Statue of Liberty with New York. Except for its hilly streets, San Francisco has little else. Martin continues, “. . . there you are, dwarfed by one of the world’s most beautiful man-made achievements: the Golden Gate Bridge. With its magnificent setting, burnt-orange color and Moderne towers, the 52-year-old span has appeared in countless films.”¹⁰

Well, hardly *countless*, but in a good many. And mostly in the background. For example, in some of the *Star Trek* cult movies Starfleet Command Headquarters, the Star Fleet Academy, and the chambers of the Federation Council are located (albeit with geographical license and probably annoyingly for San Franciscans) at various sites around the bridge. In a few films it has been integral to the plot, or at least provided a platform (in some cases literally) for the

action. For example, the climax of *A View to a Kill* (1985) sees the indefatigable Agent 007 grappling at the top of the bridge with the insane Max Zorin, who plans to corner the microchip market by destroying Silicon Valley.

James explains that in the movies “the bridge is a metaphor for man’s achievements over nature and, in the visual language of the cinema, that metaphor has often been twisted around to remind us that there are forces far greater than man.” Thus, while in Stanley Kramer’s 1959 adaptation of Nevil Shute’s novel *On the Beach* it survives a nuclear war that devastates the northern hemisphere and eventually destroys humanity, it does not fare so well in other disaster movies. For example, it is destroyed by a giant six-tentacled—perhaps the studio’s low budget could not stretch to eight—octopus in Columbia Studios’ 1955 *It Came from Beneath the Sea*; in *Superman: The Movie* (1978) the man of steel saves the roadway from collapse when the evil villain Lex Luthor nukes the San Andreas fault; and in the second most unlikely scenario of all, in *The Core* (2003) solar microwaves melt the suspension cables (but somehow not the automobiles on the bridge), and hundreds of people are plunged into the boiling sea. But the audience’s credulity is stretched to snapping point when at the noisy climax of *X-Men: The Last Stand* (2006) computer-generated images allow the villains to relocate the structure to reach Alcatraz.

Naturally, The Golden Gate Bridge has appeared in several television series set in San Francisco. The earliest was the soap opera, *Love Is a Many Splendored Thing* (1967–1973) in which it was included in the opening sequence of each episode. The opening title of *Monk*, first aired in 2002, is against a fixed aerial shot of the bridge, which (frustratingly) doesn’t quite fit on a normal aspect format TV screen. Other shows include the ABC sitcom *Full House* (1987–1995); the Fox production of *Sliders* (1995–1997); *Nash Bridges* (1996–2001); *Charmed* (began 1998); *Half and Half* (began 2002); and The Disney Channel’s *That’s So Raven* (began 2003). Also in the sphere of entertainment, the bridge features in video games and video music clips, as well as on album covers.

Fiction writers have also embraced the bridge. It has a major role in George R. Stewart’s frequently reprinted sci-fi novel *Earth Abides*, first published in 1949, and of course most of Alistair MacLean’s thriller *The Golden Gate* (1976) is set on it. Some minor works have unlikely plots: Mike Dolinsky’s *Golden Gate Caper* (1976) revolves around an attempt to steal the bridge; *Modesty Blaise: The Night of Morningstar* (1982) by Peter O’Donnell, has the comic-book heroine foiling a plot to destroy it. Archivist Randal Brandt has produced a bibliography of almost fifteen hundred mystery, detective, and crime fiction titles whose plots, or parts of them, are set in the Bay Area; many illustrate the bridge on their dust jackets.

The Golden Gate Bridge is an international icon at the popular level, but it also enjoys a place in the realm of high art. Interviewed in the 2004 PBS TV-movie, *Golden Gate Bridge* the historian Kevin Starr, observing that “great

works of art encode within themselves messages that are at once transcendent and enigmatic, mysterious,” asked, “What does the Parthenon mean? What does Beethoven’s Ninth mean? What does Hamlet mean?”

The Golden Gate Bridge means many things. It means the victory of San Francisco over its environment. It means San Francisco remains competitive. It means that people can cross the channel more easily. But it also means something else. It celebrates in a mysterious way man’s creativity and the joy and wonder of being on this planet.

Someone writing in a totally different context once said, “The light that shines the farthest abroad, is the light that shines the brightest at home.” And though the bridge, universally recognizable and admired, belongs in one sense to the whole world, it belongs especially to residents of the San Francisco Bay area, who

feel this bridge as an entity and have a section for it. They admire its living grace, and its magnificent setting. They respond to its many moods—its warm and vibrant glow in the early sun, its seeming play with, or disdain of, incoming fog, its retiring shadowy form before the sunset, its lovely appearance in its lights at night. To its familiars it appears as the “Keeper of the Golden Gate.”¹¹

NOTES

1. Lowell, Waverly, and Linda Vida, “Bridging the Bay: Bridging the Campus.” www.lib.berkeley.edu/news_events/bridge/gate_6.html
2. Halpern, Dan, “A Serviceable Icon,” *Architect Magazine* (October 1, 2007). www.architectmagazine.com
3. Beyer, Sandra, “The Bridge That Couldn’t Be Built.” <http://content.grin.com/data/4/22383.pdf>
4. Petroski, Henry, “Art and Iron and Steel,” *American Scientist*, 90(July-August 2002), 313.
5. Hartlaub, Peter, “Steel, Concrete and Poetry: The Making of a Bay Area Landmark,” *San Francisco Chronicle* (May 1, 2004). www.sfgate.com/cgi-bin/
6. “Golden Gate Bridge” [PBS]. www.pbs.org/wgbh/amex/goldengate/peoplevents/p_ellis.html
7. “Golden Gate Bridge” [PBS]. www.pbs.org/wgbh/amex/goldengate/filmmore/pt.html
8. McNichol, Tom, “Choosing Death,” *Los Angeles Times* (October 13, 1991), 25.
9. Lifson, Thomas, “Saving People from Themselves,” *American Thinker* (October 30, 2005). www.americanthinker.com

10. Martin, James A., "Golden Gate, Silver Screen," *New York Times* (January 7, 1990),.
11. Anon., Cited John Bernard McGloin, *San Francisco, the Story of a City*. San Rafael, CA: Presidio Press, 1978.

FURTHER READING

- Adams, Charles Francis. *Heroes of the Golden Gate*. Palo Alto, CA: Pacific Books, 1987.
- Brown, Allen. *Golden Gate: Biography of a Bridge*. Garden City, NY: Doubleday, 1965.
- Burgin, Victor. "The Bridge." *Creative Camera* (April 1984), 1334–1345.
- Cassady, Stephen. *Spanning the Gate: The Golden Gate Bridge*. Mill Valley, CA: Squarebooks, 1986.
- Cowan, Sam K., ed. *Gold Book: Official Guide and Directory, Golden Gate Bridge Fiesta*. San Francisco: Franklin Johnson, 1937. See also Angelo J. Rossi, et al. *Official Program: Golden Gate Bridge Fiesta, San Francisco May 27 to June 2, 1937*. San Francisco: Golden Gate Bridge and Highway District, 1937.
- Crosbie, Michael J. "The Background of the Bridges: Two Famed Spans Raced for Records in the Depths of the Depression." *AIA Journal*, 74(March 1985), 150–157.
- Dillon, Richard H. *High Steel: Building the Bridges across San Francisco Bay*. Berkeley, CA: Celestial Arts, 1998.
- Fincher, Jack. "The 'Impossible' Bridge that Spans the Golden Gate." *Smithsonian*, 13(July 1982), 98–107.
- Friend, Tad. "Jumpers. The Fatal Grandeur of the Golden Gate Bridge." *New Yorker* (October 13, 2003).
- Guthmann, Edward. "Lethal Beauty. The Allure: Beauty and an Easy Route to Death Have Long Made the Golden Gate Bridge a Magnet for Suicides." *The San Francisco Chronicle* (October 30, 2005). See also the following six editions of the newspaper.
- Horton, Tom. *Superspan: The Golden Gate Bridge*. San Francisco: Chronicle Books, 1983.
- Lewis, Karen R., comp. *Building the Golden Gate Bridge: A Directory to Historical Sources*. San Francisco: Labor Archives and Research Center, San Francisco State University, 1989.
- McGloin, John Bernard. *San Francisco, the Story of a City*. San Rafael, CA: Presidio Press, 1978. See especially chapter, "Symphonies in Steel: Bay Bridge and the Golden Gate."
- Meiners, William. "Credit where Credit was due: Charles Ellis, a Purdue Civil Engineering Professor from 1934 to 1946, is Finally Being Recognized as the True Designer of the Golden Gate Bridge." *Purdue Engineering Extrapolations* (Summer 2001), 6–11.
- Morrow, Irving F. "Beauty Marks G.G. Bridge Design: Some Notes on Architecture of Structure." *Architect and Engineer*, 138(March 1937), 21–24.

- Petroski, Henry. "Art and Iron and Steel." *American Scientist*, 90(July–August 2002), 313 ff.
- Schock, Jim. *The Bridge, a Celebration: the Golden Gate Bridge*. Mill Valley, CA: Golden Gate International, 1997.
- Strauss, Joseph Baermann. "Here's Your Bridge, Mr. O'Shaughnessy." *Saturday Evening Post* (May 29, 1937), 20, 90, 92–94.
- Strauss, Joseph Baermann. *The Golden Gate Bridge: Report of the Chief Engineer to the Board of Directors of the Golden Gate Bridge and Highway District, California*. San Francisco: Golden Gate Bridge and Highway District, 1938. Reprinted 1987.
- Wilson, Neill Compton. *Here is the Golden Gate: Its History, Its Romance and Its Derring-do*. New York: Morrow, 1962.
- Zee, John van der. *The Gate: The True Story of the Design and Construction of the Golden Gate Bridge*. New York: Simon & Schuster, 1986.
- Zee, John van der, and Russ Cone. "The Case of the Missing Engineering." *Image: The Magazine of Northern California* (May 31, 1992), 6–11.



Courtesy Getty Images

Graceland Mansion, Memphis, Tennessee

"Love me, love my house."

Elvis Presley's remarkable career began in 1954. Many musicologists and social historians place him among the most culturally significant figures of twentieth century America, if not of the entire world. The Elvis Presley International Fan Club Registry lists ninety-five member groups in North and South America, western Europe and Australasia, but another source identifies over three hundred fifty, including some in eastern Europe, India, Sri Lanka, Hong Kong, The Philippines, and Japan. Yet another claimed in 2007 that there are over five hundred active official Elvis Presley fan clubs in the United States and forty-five other countries. Elvis is still known internationally by his first name alone. It has been observed that his carefully constructed image as a "hillbilly rube, notorious rock 'n' roll rebel, American movie idol, and international superstar" eclipsed the reality of his persona, and since his death in August 1977 at age 42 that image has stretched to legendary proportions, so that Elvis has continued as a twenty-first-century American cultural icon.

In the popular mind there is absolute fusion between the performer Elvis Presley and Graceland Mansion, his home for 20 years (1957–1977). The house is an icon because its owner is one. Media studies expert Gilbert Rodman writes in *Elvis after Elvis* that Graceland is "so widely recognized, so famous for being famous, as to have become effectively invisible: though signs about Graceland are familiar sights on the U.S. cultural terrain, what we typically see in such signs is not Graceland, but Elvis." He explains that the house "gave Elvis something no other U.S. celebrity of the twentieth century had; a permanent place to call 'home' that was as well known as its celebrity resident."

It gave his stardom a stable, highly visible, physical anchor in the real world . . . which has been linked in the public eye with Elvis and his stardom from the day he bought it . . . until the day he died there . . . and beyond. . . . Elvis was associated with a very specific site on the map (i.e., not just a region or a city, but an actual street address) in a way that no other star ever was—or has been since—with the longstanding connection between these icons working to transform the private, domestic space of Elvis's home into a publicly visible site of pilgrimage and congregation.¹

ELVIS THE PELVIS

Elvis Aron (Aaron) Presley was born on January 8, 1935, in the depths of the Great Depression, to Vernon Elvis Presley and his wife Gladys (nee Smith). His identical twin brother, Jesse Garon, was stillborn. The family lived in a 450-square foot self-built shack in East Tupelo, Mississippi, about 80 miles southeast of Memphis; the two-room building had no indoor plumbing, and the Presleys could not afford electricity. When Elvis was age 3 his father was jailed for 8 months on a forgery charge; unable to repay money owed on the house, Gladys was evicted and moved in with her husband's family. In the first

of sixteen relocations, and over the next nineteen years the Presleys would live mostly in rented public housing (the longest stay was for 3 years), boarding houses, and even shanties.

When he was age 10 or so, Elvis began to sing at the Pentecostal First Assembly of God church in Tupelo, at school, and on a Saturday talent show sponsored by the local radio station. He was given his first guitar for his eleventh birthday. Chasing opportunities for employment, Vernon Presley moved his wife and son from time to time, eventually arriving in Memphis in 1948. They stayed in boarding houses until fall 1949, when they moved to Lauderdale Courts, a large public housing project at the north end of the city. During his years at Humes High School Elvis and four other boys from Lauderdale Courts formed a band. Upon leaving high school in July 1953 he worked at M. B. Parker Machinists, although he already was reaching for a musical career.

During that summer he paid the Memphis Recording Service a few dollars to record two songs (“My Happiness” and “That’s When Your Heartaches Begin”), and the following January he made a second recording. In the spring his auditions for the Songfellows, an amateur gospel quartet, and a professional band were unsuccessful. But in late June, the Memphis Recording Service invited him to come to the studio. After listening to a number of songs, the music producer Sam Phillips set Elvis up with Scotty Moore and Bill Black, who styled themselves the Starlite Wranglers, and on July 5 the three young men—Moore was 4 years older than Elvis and Black was then age 28—went to the now-famous Sun Studio so that Phillips could “hear them on tape.” The session was less than exciting until, during a break in recording, Elvis began toying with “That’s all Right,” a 1946 blues number. That very week Phillips arranged for the song to be played on a popular Memphis radio show. Public reaction was immediate and overwhelmingly positive, and the disc jockey replayed it several times that night. When the record was released 2 weeks later there were already six thousand local orders for it.

Elvis made his first major public appearance with the Blue Moon Boys—Moore, Black, and D. J. Montana—at Memphis’s Overton Park outdoor theater on July 30. Sun Studio released his second record in late September, and Phillips arranged a guest appearance to a “polite, but somewhat tepid, reception” on the *Grand Ole Opry* on October 2. Two weeks later a rival program, *Louisiana Hayride*, broadcast a guest appearance to twenty-eight states, and the band was signed to a 1-year contract on the show. Elvis and the Blue Moon Boys became virtually full-time professional entertainers. Besides their weekly spots on *Louisiana Hayride*, for the next year they toured almost continually, beginning with civic clubs and school functions in Arkansas and Mississippi and eventually performing almost every night. In November and December, they played in Houston, Texas and appeared elsewhere in Texas and Missouri in January 1955. Presley sang for the first time at Memphis’s Ellis Auditorium on February 6, and a week or so later the Blue Moon Boys

were booked as part of a Hank Snow/Jamboree Attractions package tour that began in Roswell, New Mexico.

In March Elvis went to New York City to audition (albeit unsuccessfully) for *Arthur Godfrey's Talent Scouts*, a weekly CBS network program that had recently migrated from radio to television. Another 3-week, twenty-city tour with Jamboree Attractions began on May 1, and through the late summer and fall Elvis was touring again. According to one oft-quoted source, audiences were astounded by the “ferocity of his performance; Elvis caused a great commotion wherever he went, with girls screaming and fainting and chasing after him throughout the South.”

From mid-1954 Sam Phillips had set about promoting Presley's records. At first the young singer was dismissed as a mere regional sensation, but by summer 1955 many major record labels—and others—were showing interest in his work. In August Vernon and Gladys signed a contract (still under 21, Elvis could not sign for himself) appointing the musical impresario “Colonel” Tom Parker (born Andreas Cornelis van Kuijk) as “special adviser to Elvis Presley.” Country music historian Colin Escott writes,

Elvis was already starting to show signs of breaking out of the country market when his [Sun Records] contract was sold to [RCA Victor] in November 1955, a deal masterminded by his new manager. . . . Parker persuaded RCA to pay an unprecedentedly high \$35,000 for . . . a singer of virtually untested appeal outside the country market. RCA . . . was able to catapult him into the national marketplace via television and concentrated promotion. By the end of March 1956, his first RCA single became both a figurehead for rock and roll and a lightning rod for all those who despised it. In his dress, his stage moves, and his few stage-managed interviews, he projected an image that was at once threatening and vulnerable.²

By the end of 1956 Elvis had become “a national and international phenomenon.” In that year, his first two RCA albums were both million sellers. In April he signed a 7-year contract with Paramount Pictures, making his movie debut in the Civil War drama *Love me Tender*. Reviewer Hal Erickson notes, “Naturally, Elvis is afforded plenty of opportunities to sing; the scene in which he launches into an anachronistic hip-swivelling performance at a county fair is one of the high points of mid-1950s kitsch.” By the time that the movie was released in November, Elvis had appeared often on the small screen; indeed, he made eleven national television appearances in 1956. Between January and March he was a guest on six episodes of CBS's *Dorsey Brothers Stage Show*. Then in June forty million viewers saw him on Milton Berle's *Texaco Star Theatre*, when his gyrating hips earned him the nickname “Elvis the Pelvis.”

Newspaper reviews most often labelled these television “guest spots” as “lewd,” “nasty,” or “appalling.” One critic wrote, “Presley is mostly nightmare. On-stage his gyrations, his nose-wiping, his leers are vulgar.” Some

journalists compared his act to a striptease. John Crosby of *The New York Herald Tribune* condemned Elvis as “unspeakably untalented and vulgar,” and Jack Gould declared in *The New York Times* that he had “no discernible singing ability.” The critiques moved parents, the Parent-Teacher Association, and many conservative religious groups to condemn Elvis and his music by identifying both with increasing juvenile delinquency. Certainly, as one writer points out, he “outraged adults, mesmerized the teenagers of the new youth generation, and . . . brought shock, outrage, and nationwide controversy.” But he soon became “the leader of the cultural revolution sweeping across the country.”

Elvis’ appearance on *The Steve Allen Show* in July attracted an audience that challenged the extremely popular *Ed Sullivan Show*, then considered unbeatable in the ratings war. Sullivan had publicly declared that he would not have Presley as a guest. But business being business, he relented. On September 9 over 80 percent of America’s viewing audience watched the first of three appearances for which Sullivan paid Elvis \$50,000—a deal that created national headlines. According to Ron Simon, curator of the Museum of Television and Radio, “The sexual energy of Presley’s first appearance . . . jolted the staid . . . conformism of Sullivan’s audience. By his third and final appearance, Elvis was shot only from the waist up.”

Whatever. When compared to the on- and offstage behavior of some later rock bands, or the obscene lyrics and foul language of recent performers, Elvis was mild indeed—and a *real* musician. Estcott asserts that he was “indisputably the most influential performer in the history of rock and roll” and acknowledges that though he amalgamated country music with rhythm and blues, he also “embraced black and white gospel, mainstream popular music, light opera, and more.” Jody Cook, in a summary of Presley’s career in the National Historic Landmark Nomination of Graceland, adds,

Presley’s roots in the Deep South, his love of all kinds of music, and his extraordinary talent as a gifted musician were key elements in the birth of the new music eventually known as rock ‘n’ roll, a gumbo of southern musical styles. His unique contribution was to unite and fuse all kinds of musical influences—gospel, country, blues, honky-tonk, rhythm and blues, and popular—in the creation of a new American music. From romantic, sentimental ballads and religious songs to blistering rock ‘n’ roll, Elvis Presley could make any kind of song his own.³

Although the media dubbed him “the king of rock and roll”—later, simply “The King”—Elvis believed that the title properly belonged to Antoine Dominique “Fats” Domino.

On the strength of their gifted son’s meteoric success, in 1956 the Presleys purchased a modest ranch-style house on Audubon Drive, east Memphis. A year later Elvis would buy Graceland.

MOVIES, MILITARY, AND MARRIAGE

Elvis made two movies in 1957. *Loving You*, described by one critic as “a streamlined and sanitized retake” of his own life story, was released in July. It was followed in November by the black-and-white *Jailhouse Rock*, of which one reviewer wrote, “seldom would Elvis be so well showcased in the future.” But “showcasing” was the whole point: the films were vehicles for his songs, and lucrative soundtrack albums were also produced. Presley was drafted into the U.S. Army in December 1957, when the Cold War was at its height. Before his induction, he filmed and recorded the soundtrack of *King Creole*, a musical adaptation of Harold Robbins’ novel *A Stone for Danny Fisher*, that some critics believed to be “probably” his best movie.

In March 1958 he entered Fort Hood, Texas, for 6 months basic training. Soon after, Gladys Presley, suffering from acute hepatitis, was hospitalized in Memphis; Elvis was granted compassionate leave to visit her in mid-August, shortly before she died of a heart attack. He was very deeply attached to his mother, and the loss was a “devastating experience” for him.

About a month later, he was assigned to the 32nd Tank Battalion of the Third Armored Division and shipped out to Friedberg, West Germany. He was promoted to sergeant in January 1960 before being discharged early in March. The previous November at Weisbaden, Germany, Elvis had met and fallen in love with 14-year-old Priscilla Ann Beaulieu (he was 24), the stepdaughter of a U.S. Air Force captain. Gossip about their relationship has been well aired and no doubt well distorted; besides, it is none of our business. Suffice it to say that following a Christmas 1962 visit to Graceland, Priscilla moved into the house in early 1963 and completed her senior high school year in Memphis. Elvis later told his friend, British journalist Derek Johnson, “After a lengthy infatuation with Priscilla, I have now found true love with her. Parker has been on at me for some months to get married because it would be good for my image, and that’s been one of the few things I’ve ever agreed with him.” On May 1, 1967, Priscilla and Elvis married in Las Vegas. The following February their only child, Lisa Marie, was born.

ELVIS IS BACK

Despite fears that his prolonged absence in the army would dent his popularity, “great anticipation and large crowds” had greeted Elvis’ return to the United States. Two months after his discharge from the military, he began work on his fifth Paramount film, *GI Blues*, the first of nine to be produced by Hal Wallis. Featuring ten new songs, the soundtrack album—in terms of weeks on the Billboard charts, Elvis’ most successful to date—had been recorded a month earlier. On May 8 ABC’s *The Frank Sinatra Timex Special*, called *Welcome Home, Elvis*, went to air and attracted two-thirds of the national television audience. That was ironic, because only 3 years earlier

Sinatra had accused rock and roll of “[smelling] phony and false.” Ol’ Blue Eyes had vitriolically added, “It is sung, played and written for the most part by cretinous goons [read, ‘Elvis’] and by means of its almost imbecilic reiterations, and sly, lewd, in plain fact, dirty lyrics . . . it manages to be the martial music of every sideburned delinquent [read, ‘Elvis’] on the face of the earth.” Presley was paid \$125,000 for singing just one song on Sinatra’s show.

He returned to moviemaking in 1960, at first taking serious roles. Twentieth Century Fox’s *Flaming Star* was critically praised as “a western starring young Presley in a surprisingly well-cast role. . . . This lean frontier drama . . . offers one of his most impressive performances.” But Fox followed with *Wild in the Country*, whose script “looked good on paper but when it came time to produce it, things came apart more than they came together.” It seems that Elvis fans were not interested in his dramatic skills. They wanted his music. When both films flopped at the box office (which is after all what counts), in 1961 Paramount returned him to a “vehicle tailored to his singing talents:” Wallis’ *Blue Hawaii*, filmed partly on location on Oahu and Kauai in the spring of 1961. It was his top-grossing film to date, and the soundtrack album was on the Billboard chart for 79 weeks, 20 of them at the top; more than two million copies were sold. Throughout the 1960s Presley made no fewer than twenty-seven formula movies for various studios—Paramount, Twentieth Century Fox, MGM, Allied Artists, and Universal among them. But despite being “frothy and inconsequential” they succeeded at the box office, and most of his albums of the decade were of their soundtracks. But by the late 1960s his career was in trouble. Because they had displaced live appearances, the movies and the accompanying soundtracks “had almost destroyed his reputation.” In 11 years he had given only two concerts, both in 1961: one for charities in the Memphis area and the other on March 25, when he starred in a benefit concert in Honolulu to raise funds for the USS *Arizona* Memorial at Pearl Harbor.

Then in June 1968 he recorded a show for NBC “that did much to restore his credibility.” The Singer Sewing Machine Company at first proposed a Christmas television special, *Singer Presents Elvis*, but Presley indicated that he wanted to do a show that he wanted to “proclaim, through his music, who he really was” and that he was able to sing all kinds of American music. The production was retitled *Elvis—The ‘68 Comeback Special*; aired in December and attracting a staggering 42 percent of the national television audience, the “astonishing triumph” gave NBC its biggest overall ratings victory of the year and won critical acclamation. It ushered in the third phase of Presley’s career.

VIVA LAS VEGAS!—AND ELSEWHERE

In the first 2 months of 1969 Elvis recorded at American Sound Studios in Memphis his first studio albums of other than a soundtrack or gospel music: *From Elvis in Memphis* and *Back in Memphis*. In March he returned to Universal Studios to make his last acted film, the “box-office bomb” *Change of Habit*.

One critic wrote, “convincing yourself that Elvis Presley is a doctor at a free New York City medical clinic is like trying to imagine Arnold Schwarzenegger as a rabbi.”

On July 31 Presley launched a now-legendary, month-long series of concerts—usually two shows a night—at the International Hotel (later the Hilton) in Las Vegas. The sophisticated production that, like the 1968 NBC special, ran the whole gamut of American music, incorporated a rock and roll band, an orchestra, and two backing quartets—the black female Sweet Inspirations and the white male Imperials. It broke attendance records for Las Vegas shows and received outstanding critical reviews. Elvis returned for more sold-out shows at the International in August and September 1970, with even larger audiences. Including his final appearances in December 1976 he would entertain an estimated 2.5 million people at the venue. In fall 1970 he began a concert tour of Detroit, Michigan, Miami, Florida, Mobile, Alabama, Phoenix, Arizona, St. Louis, Missouri, and Tampa, Florida setting a pattern for the next several years and giving over one thousand concerts. Although he never appeared live outside the United States, his January 14, 1973, show at the Honolulu International Center Arena was watched live via satellite by as many as 1.5 *billion* viewers in forty countries.

Elvis and Priscilla separated in February 1972, agreeing to share custody of Lisa Marie. They divorced in October 1973. Soon after, Elvis was hospitalized in Memphis with serious health problems including pneumonia, pleurisy, hepatitis, and prescription drug dependency. Although they recurred over the next 3 or 4 years, he maintained his rigorous schedule of Las Vegas engagements and concert tours, giving his last live performance at the Market Square Arena, Indianapolis, Indiana, on June 26, 1977.

Elvis Presley died alone in his bathroom at Graceland on the morning of August 16, 1977. He was only 42 years old. Although one medical report gave the cause as “heart attack,” conjecture persists. Elvis’ biographer Peter Guralnick comments that “drug use was heavily implicated in this unanticipated death of a middle-aged man with no known history of heart disease,” explaining that three independent reports stated “a strong belief” that the primary cause of death was the use of multiple medications. One analysis showed the presence of “fourteen drugs in Elvis’ system, ten in significant quantity. Codeine appeared at ten times the therapeutic level, methaqualone . . . in an arguably toxic amount, three other drugs appeared to be on the borderline of toxicity” and concluded that “the combined effect of the central nervous system depressants and the codeine had to be given heavy consideration.”⁴

Fans transformed Elvis’ death into a “populist event of unique scale and significance.” Tens of thousands of them flocked to Memphis until his funeral was over, almost paralyzing traffic in the city. Some of the more passionate among them entered a state of denial, and for years to come there would be frequent reports of “Elvis sightings.” Indeed, they continue still. But a Gallup poll in 1997—20 years after his death—revealed that only 4 percent of

Americans believed that Elvis was alive; 93 percent were convinced that he was dead, but the remainder was uncertain. The same poll found that almost half of Americans—mostly baby boomers—still considered themselves Elvis fans. He lived on, but only in America's collective memory.

THE SINGER, NOT THE SONG

Soon after Elvis' death, American music critic Dave Marsh wrote,

If any individual of our time can be said to have changed the world, Elvis Presley is the one. In his wake, more than music is different. Nothing and no one looks or sounds the same. His music was the most liberating event of our era because it taught us new possibilities of feeling and perception, new modes of action and appearance, and because it reminded us not only of his greatness but also of our own potential. But it's just as unquestionable that the kind of rock and roll we have—a music of dreams and visions, not just facts and figures or even songs and singers—was shaped by him in its most fundamental features.⁵

In January 2004 the Recording Industry Association of America (RIAA) officially recognized Elvis as the number one solo recording artist in U.S. history, having won more of its awards than anyone else in the world. His album sales exceeded 120 million, among them ninety-seven Gold, fifty-five Platinum, and twenty-five Multi-Platinum releases. He also had fifty-one Gold, twenty-seven Platinum, and seven Multi-Platinum singles—more than any artist or group in history. One writer notes that besides these “extra-ordinary sales achievements, Presley's first Gold single ‘Hard-Headed Woman’ was the first certified Gold rock and roll record—a landmark in the history of American music.”

In January 1971 the U.S. Junior Chamber of Commerce honored Elvis as one of Ten Outstanding Young Men of 1970. In summer 1971 the City of Memphis renamed the section of Highway 51 South in front of Graceland to Elvis Presley Boulevard. He also received, at the age of 36, the Lifetime Achievement Award of the National Academy of Recording Arts and Sciences (NARAS), an honor that acknowledged “creative contributions of outstanding artistic significance to the field of recording.” The citation read in part that it was for “his artistic creativity and his influence in the field of recorded music upon a generation of performers and listeners whose lives and musical horizons have been enriched and expanded by his unique contributions.”

Elvis remains the only performer to be inducted into three music Halls of Fame: Rock and Roll (in 1986, the inaugural year), Country (in 1998), and Gospel (in 2001). In 1984, he received the W. C. Handy Award from the Blues Foundation and the Academy of Country Music's inaugural Golden Hat Award; 3 years later he was the first posthumous recipient of the American Music Awards' Award of Merit. Presley was nominated for fourteen

Grammies, the recording industry's most prestigious annual tribute, presented by NARAS. He won three, all for his recordings of gospel music, the first in 1967 for Best Sacred Performance of "How Great Thou art." But then, he had often claimed that gospel was his favorite music.

According to the National Historic Landmark Nomination of Graceland,

Before Elvis . . . the music business primarily revolved around songs, not singers, and sales of sheet music drove the business. But [he] broke the hold that Tin Pan Alley had on the industry—it changed course, and the new focus was the singer, not the song. . . . His unique talent and style propelled the reinvention of America in the 1950s and 1960s on the home front and internationally, and assured the breakdown of traditional barriers of race, class, region, and gender that had defined and maintained the social order for generations.

GRACELAND: LIFE BEFORE ELVIS

Graceland Mansion crowns a hill beside Elvis Presley Boulevard (formerly Highway 51 South), at Whitehaven, about 10 miles south of downtown Memphis. In 1939 Ruth Brown Moore, the socialite granddaughter of Memphis publisher Stephen C. Toof, and her husband, urology professor Dr. Thomas D. Moore, built the mansion and outbuildings on land owned by her family since the mid-1890s. Ruth had indirectly inherited one-third of the 480-acre farm from her aunt Grace and named it Graceland in her honor. The Moores commissioned local architects Furbringer and Erhman (see sidebar), to design the thirteen-room house to flaunt the musical talents of their teenage daughter, Ruth Marie, who later became a harpist with the Memphis Symphony Orchestra. The local press confided that Mrs. Moore had said that the house had been designed "with an eye for future musicales and space was essential . . . not only for seating purposes, but for tone volume" and explained, "the rooms along the entire front of the house, which she called 'the dining room, reception hall, drawing room, and solarium' could be opened up to seat five hundred people for a musical event."

It seems fitting that a house that (it might be said) was born of music would later become the home of Elvis Presley. Elvis expressed that he was pleased that music played a major role in the lives of the Moore family, and on his first inspection of the property he sat down and began playing Mrs. Moore's piano, although it was in need of tuning.

A pin oak-lined driveway curves up the hill from the road to the west front of the two-story mansion, which follows no architectural rules. Standing in a grove almost in the middle of the property, the gable-roofed house with double-hung small-paned windows is a stylistic mishmash, parodying the antebellum mansions of the Old South. Categorized by some writers as "Greek," "Classical," or "Georgian," Graceland is in none of those styles—unless it is

George VI, who reigned 1937 to 1952. The principal façade's main feature is a pseudo-classical portico with paired giant nearly-but-not-quite Corinthian columns. The portico is flanked by two bays of incongruently rusticated Tishomingo, Mississippi, limestone. Beneath it, a central door is surrounded by uninformed quasi-Tuscan detail: an ill-proportioned entablature crowned with a broken segmental pediment supported by very plain engaged columns, and all framed by giant pilasters of the same indeterminate order as the front columns. The rear wall of the central pavilion and those of the single-story south wing are stuccoed brick. Robert Schmertz, a Pittsburgh architect and songwriter, once described houses with this kind of pretentious frontality as "Queen Anne front and Mary Ann behind."

The layout was originally cruciform, entered through a spacious central hall leading to an ascending stairway in the northeast corner. "Tall, wide, elliptical-arched openings" between them allowed the hall, the living room (on its south side), the dining room (on its north), and the parlor to be opened, as noted, to form a 75-foot long reception space across the entire west front. The internal plaster moldings and details were "classical." Besides that, said the realtor's advertisements, "a big kitchen, pantry, butler's pantry, utility room, one bedroom and a bath and a half [were] on the ground floor. Upstairs [were] four bedrooms and three baths." The basement contained a timber-paneled den and a playroom. The house stood on almost 14 acres of "beautifully wooded and planted land" with magnolias, sycamores, sweet gums, and willows.

WHERE ELVIS LIVES

In May 1956 the Presleys had moved into the first home that they owned, bought with money from Elvis' first movie deal—a pale green timber-frame ranch-style house with black shutters, brick trim, and a gray tile roof at 1034 Audubon Drive in an upper-middle-class Memphis neighborhood. It may have been the fulfillment of a dream, but life there became difficult soon enough. Art historian Karal Ann Marling writes,

When Elvis was home [the fans] came by the hundreds, at all hours of the day and night. Vernon never had to mow the lawn. The girls plucked it out, blade by blade, for their scrapbooks. They tiptoed up the driveway when nobody was looking and pressed their ears to the green siding, hoping to hear a snatch of "Hound Dog" through the walls. Elvis put up a fence, a low brick wall with wrought-iron spikes on top. But the fence didn't keep anybody out. . . . Vendors sold hot dogs and popcorn on the street. The city posted [No parking, loitering or standing] signs.

The fans ignored the signs. When Elvis wasn't home, they yoo-hoed out by the fence until Mrs. Presley came down to visit. Could she rub Elvis's Cadillac with this Kleenex, please? Would she take this paper cup and dip some Elvis

water out of the swimming pool? Could we stand in the carport if we're real quiet? The family treated the invaders with grave country courtesy. When Elvis came home for the Fourth of July in 1956, there were Elfans in the carport and the driveway, fans out by the fence, fans cruising down the street, honking and waving and taking pictures. Fans in the bushes with their noses flattened against the windows. . . .

The hillbillies had taken over Audubon Drive. The neighbors were beside themselves . . . ⁶

After her divorce in 1952, Ruth Moore had allowed a local Disciples of Christ congregation to meet in her house until they could build a church on the adjoining land. In mid-March 1957, returning from visiting Elvis on the set of *Loving You* in Hollywood, Vernon and Gladys began searching for a larger house at a more private location. They soon called their son to tell him they had found a likely place. He was instantly taken with Graceland—the church had moved and there was vacant possession—and 9 days later he closed a deal with Ruth Moore. He paid \$102,500 for the property, topping an offer from the Memphis YMCA by about \$65,000. He paid half in cash; Mrs. Moore accepted the Audubon Drive house as the balance. One writer notes that Graceland had been vacant when Elvis first saw it and he had no problem with the church being next door; Mrs. Cobb (formerly Ruth Marie Moore) recalled that as one reason why her mother chose him as the buyer over other offers. Another reason that cannot be discounted, of course, was the inflated price that he offered.

At the end of March Elvis began a personal appearance tour. In his absence painters started redecorating the house interiors and began work on a 6-foot masonry wall along the road; the rest of the boundary was fenced. The contractors expected to finish in 3 weeks, and the Presleys planned to move in on April 15. But issues over nonunion labor halted progress, so that Vernon, Gladys, and Elvis' paternal grandmother, Minnie May, took possession a month late. The singer was in Hollywood, filming *Jailhouse Rock*.

Graceland's décor went through many changes over the 20 years that Elvis Presley lived there, in response to his shifting aesthetic preferences (the word *taste* sticks in the throat). Marling comparts the successive interior schemes as follows: the Elvis and Gladys Phase or "purple with clouds" period (1957–mid-60s—actually, dark blue walls and a deep red carpet); Elvis's Swingin' Bachelor Phase (1964–68—red drapes and white carpets à la *Viva Las Vegas*); the Domestic Phase (1967–72, during which Elvis added touches of light blue to the first floor rooms); and the Red Phase (1973–77); in 1974, Elvis and his girlfriend Linda Thompson redecorated in blood-red shag and velveteen. The press unkindly dubbed the latter the "antebellum bordello red period." Marling adds another: "the Posthumous Phase" (1981–82), noting that "before being opened to the public, Graceland [was] tastefully refurbished in cobalt blue and white." That was the work of Priscilla Presley.

THE ELVIS AND GLADYS PHASE

Some obsessive fans insist that though he was assisted by Gladys and the interior decorator George Golden, “the King had final say in all work done on his castle” during the first phase of Graceland renovations. That is inconsonant with Golden’s own recollection, who claimed in 1993 that Elvis’ parents invited bids from him and his two female rivals—there were then only three decorators in Memphis. As the selected tenderer, he remembered being allowed free rein to decorate Graceland any way he saw fit. Golden “avoided turning Graceland into the last word in interior decoration, circa 1957”; rather

he opted for a hodgepodge of styles, ranging from contemporary suburban ranch house to something best characterized as Late Fifties Lush Life. The latter . . . was most visible in Graceland’s dining and living rooms, two lavish (if small-ish) chambers awash in chandeliers, gold-on-white trim and swagged draperies. In their 1987 book *Elvis World* . . . Jane and Michael Stern [assert], “You have seen this place before, but not in the real world [but] in the movies . . . it says “rich person’s home.”

Elvis told Golden that he wanted “the darkest blue there is for my room with a mirror that will cover one side of the room. I probably will have a black bedroom suite, trimmed in white leather with a white rug.” What he actually got was “adorned with pink, flowered bedspreads, red telephone and a stuffed hound dog—more like a teenage girl’s boudoir than sleeping quarters for the King of Rock n’ Roll. Elvis also wanted stars and clouds painted on the entrance hall ceiling; for the downstairs reception rooms he ordered purple walls and white corduroy drapes. Gladys preferred the lighter colors and that’s what Gladys got.”⁷

Outside, Elvis’ changes were just as uninhibited—the gauche opulence of a *nouveau riche*, and a young one at that. At night, he had the mansion floodlit with blue and gold. It was approached along a driveway “strung with blue lights like an airport runway,” through purpose-made double wrought iron gates in the pink Alabama fieldstone wall. Closed, the gates simulated sheet music, decorated with musical notes and stylized rock guitarists. A large sunken stone-paved patio surrounded a new swimming pool—kidney-shaped, of course—at the southwest corner of the house. The Moore’s four-car garage was extended to house Presley’s ten vehicles. In August 1957 he imported two white marble lions (unmatched) to flank the approach to the front door. “Design coordination” does not spring readily to mind when evaluating the 1957 renovations to Graceland.

ELVIS’S SWINGIN’ BACHELOR PHASE

Presley initiated several projects in the 1960s. Besides minor works, he enclosed a patio between the swimming pool and Graceland’s single-story south

wing, creating an approximately 80- by 16-foot room joined to the house by a covered link. It originally housed an expansive slot car racetrack but was later remodeled as a trophy room for Elvis's awards and other memorabilia.

He also converted another patio on the east side of the mansion into a 14- by 40-foot den. Tour guides later dubbed this the Jungle Room, because of its ultra-lurid kitsch furnishings—green shag carpets on the floors and ceilings, wood paneling on the walls, and a mixed bag of pseudo-Polynesian furniture with wooden arms carved in animal and totem figures and upholstered in *faux* fur. Bernard Grenadier, a local designer and builder (some sources generously call him an architect), later completed a stone wall with a waterfall for the room. He also remodeled and furnished the master bedroom and bathroom.

FROM A MEDITATION GARDEN TO A MECCA

Probably most significant among Grenadier's additions was the Meditation Garden near the pool area south of the mansion. His son recalled, "In 1966, Elvis hired my father to design and build a meditation area. [It] was dedicated to the memory of Elvis' mother. . . . This would be a place that Elvis would go to be alone in his thoughts about his mother and his twin brother, who was stillborn, without having to leave Graceland." The Garden has been described as "a smallish open-air sanctuary beset [yes, *beset*] with Italian marble statues and an ornate fountain that features underwater lights and fourteen different sprays." The NPS provides a little more detail: "It includes a circular pool containing circular fountain jets, and a semi-circular pergola of Ionic columns on the south side of the pool, with fountains. A stepped brick wall with four arched openings containing stained-glass panels curves to follow the pergola and encloses the . . . south end."

Three days after he died, Presley's body was interred at Forest Hill Midtown Cemetery in Memphis. As a consequence of a macabre attempt 10 days later to steal the body, on October 2 Elvis and his mother were reburied side by side in the Meditation Garden; the marble monument from the Forest Hill family plot was relocated. Vernon Presley died on June 26, 1979, and was buried next to his son; Minnie May Presley followed in 1980. Opened to the public in 1978 the garden has become a Mecca for Elvis pilgrims, especially on the anniversaries of Elvis' death. Commenting that the response to celebrities "often expresses itself in ritual patterns reminiscent of the veneration of saints," Stephen R. Reimer writes,

Up to 50,000 visitors descend on Memphis every year for the week [before] the anniversary of Elvis Presley's death. . . . Officials at Elvis Enterprises call this "Elvis International Tribute Week," while the locals call it "Death Week." [The night before] there is an elaborate candlelight vigil at the gravesite within the

Memorial Gardens . . . during which the pilgrims carrying candles file past Elvis's grave while Elvis songs are played over loud speakers. [They] come to pay their respects, to give thanks to Elvis for helping them, and to leave a gift at his grave. . . .

For Elvis . . . there is the sacred place of Graceland (both his house and his gravesite), sacred times (. . . "Death Week"), where offerings are left (flowers and teddy bears), relics are displayed and traded (including hair and toenails [and] collectibles), and the story of his life is retold as a legend which may bear little resemblance to historical truth. . . . This legend becomes a sort of divine truth which is not subject to verification or falsification; it cannot be contradicted by mere facts. The "scandal mongers" . . . say that he died a fat pill-popping has-been, but true believers know the truth and must preserve the sacred memory of Elvis against those who speak scandal.⁸

THE RED PHASE

The last time that the house was redecorated for Elvis was in 1974, in "a fit of gaudiness" on the part of Bill Eubanks of McCormick-Eubanks Interior Design, with input from Elvis and beauty queen Linda Thompson, his live-in girlfriend since mid-1972. She would remain at Graceland for about 3½ years.

Mirrors were added to the walls along the stairs to the basement, and the whole entire east wall of the living room, including the fireplace. The opening between the living room and the music room in the south wing was fitted with a sturdily framed stained glass wall. The sidelights of a central doorless opening featured stylized peacocks; matching colors were used in the transom. At the same time the sidelights and transom of Graceland's front door were also "enhanced" with stained glass. Eubanks designed a television room in the southwest corner of the basement. Its walls, ceiling, fireplace, and bar were fully mirrored, visually destroying the shape of the space. The south wall had three built-in television sets—one for each network in those pre-cable days—as well as a stereo sound system, and cabinets for Presley's record collection; the blue-and-yellow graphic on the west wall echoed the "taking care of business in a flash" personal logo that Elvis adopted in the 1970s. The poolroom in the northwest corner of the basement had walls and ceiling covered in hundreds of yards of pleated red paisley cotton. What the guidebooks call a "Tiffany-style" stained glass light—although Louis Tiffany would spin in his grave—illuminated the pool table. There were red Louis XV reproduction chairs in the corners of the room and busily patterned overstuffed sofas and cushions, leaving not a single spot for the eye to rest.

Eventually boasting twenty-three rooms, while in Elvis' ownership Graceland grew in area from just over 10,000 square feet to 17,500 square feet. Media studies expert Mark Crispin Miller writes that eventually "Elvis carefully

tended his little world with such costly cosmetic touches, living as the retired spectator of his own things. He would spend hours in his bedroom, watching his property on closed-circuit television.” He suggests that Elvis may have “wanted to bedeck himself into oblivion; his career was a long process of accretion, at home and onstage. Shortly before he died, he started carpeting the ceilings.”⁹

Although lengthy, the following summation by architectural historian Camille Wells is invaluable:

The look of [Graceland’s] interior at any one time is difficult to grasp—changes occurred often—but generalizations are possible. For each component . . . Elvis retained conventional room designations with their customary formal or casual qualities. Furthermore, every phase of interior treatment shares richly colored assemblages of thick carpet, costly fabrics, large-scale furniture, complicated lamps, and novelty accents. . . . Elvis’s rise to fame and fortune was dizzyingly swift, at times overwhelming. Along the way, he snatched what he could learn about wealthy living from lavishly appointed theaters and auditoriums, luxury car and tour-bus interiors, Hollywood sets, and Las Vegas suites. Then he brought it all back to the house he proudly owned. As one analyst put it, Graceland is how a poor boy lives rich.

Although Elvis discovered soon and under piteous circumstances that chilly-eyed observers thought his house was in staggeringly bad taste, he continued to decorate Graceland as he pleased—adding a new defiant edge and a willingness to embrace the outrageous. His choices also manifest an evolving sense of Graceland as a haven—even a fortress—rather than a showplace. . . . This muffling of Graceland is only the most obvious expression of the isolation and embattlement that accompanied his unparalleled stardom and threatened at last to engulf him.¹⁰

“ELVIS HAS LEFT THE BUILDING”

Elvis’ will named his father as executor and trustee; the beneficiaries were Vernon, Lisa Marie, and Minnie Mae Presley. Vernon was authorized to provide funds to other family members if needed. As noted, he died in 1979 and Minnie Mae in 1980, so Elvis’ daughter soon became the sole heir. Her inheritance was to be held in trust until her 25th birthday, and Vernon’s will in turn appointed three cotrustees—her mother Priscilla, Elvis’ accountant Joseph Hanks (who retired in 1990), and the National Bank of Commerce in Memphis.

Although Elvis Presley’s estate dwindled to about \$5 million, its cash flow problems were exacerbated by the cost of Graceland’s maintenance and taxes, running into half a million dollars a year. Priscilla spent \$500,000 restoring the house, replacing the garish red color scheme with blue, gold, and white. In late 1981 the executors engaged Kansas City investment adviser Jack Soden

to facilitate opening the mansion to the public. Tours began in June 1982; there were over three hundred thousand visitors in the first year; by the turn of the century that number would double (since then it has peaked at seven hundred thousand), and the estate would be worth \$200 million.

In 1983 Elvis Presley Enterprises (EPE) acquired the suburban shopping center—an “unsightly blemish of tacky Elvis souvenir shops”—across the street from Graceland, began policing the sales of items not licensed by the Presley Estate, and began a makeover. When all the existing leases had expired, by about 1987 EPE began major renovations, purchasing the property, rebadged as Graceland Plaza in 1993.

When the original trust was dissolved on February 1, 1993, the Elvis Presley Trust was established, with Lisa Marie and the Bank as cotrustees, to manage the estate; she was president and chair of the Board. Her mother assumed an advisory position. As the enterprise continued to grow, so did the attractions. In fall 1997 Graceland bought Graceland Crossing, an independently owned shopping center just north of Graceland Plaza. The next major development was the purchase and makeover in 1999 of a nearby hotel. Renamed Heartbreak Hotel, it has 128 rooms and several appropriately garish suites—the Graceland, the Hollywood, the Gold and Platinum, and the Burning Love—decorated in appropriately bad taste.

On November 7, 1991, Graceland was placed on the National Register of Historic Places; on March 27, 2006 it was designated a National Historical Landmark. The NPS claims that before the site opened to the public, tourism in Memphis was minimal; now Graceland’s annual contribution to the local economy is estimated at \$300 to \$400 million. “A major part of that impact is that most Graceland visitors come from outside the city. Further benefiting the city is the intense worldwide publicity that Graceland and the Elvis Presley phenomenon continually bring to Memphis.” EPE employs about 350 people part-time and full-time over the whole year, and up to 450 in the summer season.

In August 2005 Robert Sillerman of the entertainment company CKX, Inc. paid EPE \$114 million for an 85 percent interest in Graceland, including its physical and intellectual properties. Lisa Marie Presley retained the remainder and (with Priscilla as adviser) continued to be involved. Lisa is the sole owner of the house itself, its original grounds, and her father’s costumes, wardrobe, awards, furniture, automobiles, and so on. She has made it all permanently available for tours of Graceland and for use in all of EPE’s operations, which include “worldwide licensing of Elvis-related products and ventures, the development of Elvis-related music, film, video, television and stage productions, the ongoing development of EPE’s Internet presence, the management of significant music publishing assets and more.”

In February 2006 Sillerman announced a 3-year project to overhaul the tourist complex and build a 500-room convention hotel, a high-tech museum, and a visitor center “as large as a football field.” Travel writer Suzaan Laing remarks that the expanded Graceland, no longer a mansion but a theme park,

and “a mixture of solemnity and Disneyfication . . . is overwhelmed by the cult and the commerce that supports it.”¹¹

GRACELAND IN POPULAR CULTURE

It is almost superfluous to write about how Elvis Presley—and by unavoidable connection, Graceland—has been exploited in popular culture. Most critiques label Graceland Mansion and its contents, *super-kitsch*; therefore it is not surprising that the populist mementos it generates are also kitsch. The word *kitsch* (from the German *verkitschen* = to make cheap) describes “something that appeals to popular or lowbrow taste and is often of poor quality.” Another dictionary, actually citing Elvis-shaped cookie jars as an example, defines it as the “‘low-art’ artefacts of everyday life.”

In a July 2003 *Ladies Home Journal* interview, Presley’s former wife Priscilla spoke of “Elvis’s ‘guys’, his tight, macho entourage who have been peddling scandal and stolen objects for years” conducting a lively trade in Elvis souvenirs. She complained, “I’m more upset about the pictures. I took pictures all the time and had left many photos in a drawer in our bedroom when I moved out. Some I had cut in half, torn and thrown in the trash. They’re on the market now. You can see where someone put them back together. They were stolen and sold.” As a proverb from the most ancient Jewish literature says, “Wherever the victim lies the vultures gather to feast.”

Some scavenging crosses the boundaries of the bizarre and morbid. It was reported in 1999 that Athens, Georgia, sculptor Joni Mabe owns one of Elvis Presley’s toenail clippings, that she “discovered buried among the long fibers of the shag-pile carpet of the Jungle Room.” She had incorporated the little treasure as the centerpiece of a “tribute installation sculpture” titled *The Elvis Room*, together with Elvis “whisky decanters, collectors’ plates, costumes, lamps, clocks, watches, bedspreads, pillows, ashtrays, bedroom slippers, towels, knives, cologne, worn shoestrings, and generous vials of the King’s sweat.”

It seems that people need reminders of where they have been or of what they have seen that are more tangible than memories. A few years ago, an Australian tourist found a marble chip on the Athenian Acropolis, hardly bigger than a matchbook; its surface was scored by several parallel chisel marks. She kept it as a souvenir. Had every visitor done that, the Acropolis would have quickly shrunk within a few decades. Far removed from such “pieces of the true cross,” most of the EPE-endorsed souvenir trafficking at Graceland is in specially manufactured memorabilia. Otherwise, presenting the same temptations as the Acropolis (which has about 15 percent fewer visitors), the mansion would soon disappear. In the case of most of the architectural icons discussed in this book, the myriad visitors who are attracted to them, for whatever reason, become the (easy) target market for souvenir purveyors. According to Laing,

The [Graceland] visitor's centre . . . has the layout and atmosphere of a casino. Hundreds of people of every description [queue] expectantly to take the shuttle bus that starts the [tour] . . . bearded men in "Elvis Lives" t-shirts, women in tight sweatpants with baby prams. . . . The souvenir shops around Graceland again objectify Elvis. Lovers of kitsch can go to town here—clocks of Elvis with swinging hips, Elvis Christmas lights, cookbooks (*All cooked up, Are you hungry tonight?*), plates, playing cards, clothes, jewelry.

As noted, EPE secured a monopoly of the Elvis Presley memorabilia bonanza. Retail outlets at the Plaza and Graceland Crossing include Good Rockin' Tonight, selling "Elvis CDs, DVDs, videotapes, books, and more," including Follow that Dream label exclusive releases; a clothing store called Elvis Threads offering t-shirts, jackets, hats, accessories, and "other Elvis-themed apparel"; and Elvis Kids with "many special gifts for the youngest Elvis fans." There is even Gallery Elvis selling "upscale art pieces and collectibles," whatever they might be. Although the rock star and his mansion have become syncretized, there is also a range of "Where Elvis Lives" items (note, "*lives*," not "*lived*"), with specific Graceland connotations. Visitors may choose from candles, clothing, cookie tins, mugs, plates, pink Cadillac metal signs, cross-stitch sampler kits, teddy bears, automobile license plates, car window shades, wallpaper friezes, guidebooks (even a pop-up edition), tour videos, wind chimes, belt buckles, stained glass panels, and miniature replicas of the mansion. Not all are labeled "made in U.S.A."

A graphic designer (pseudonym, Evil Amy) cynically describes her descent into the kitsch of Graceland when she arrived in Memphis a couple of hours early for a "Platinum Tour Package."

Before [it] began, I went to a souvenir shop half a block from Graceland. Never let it be said that tourists don't love kitsch . . . If modern technology can put an Elvis face or signature on it, modern technology will license the rights to do so. Some of the more noteworthy items include ViewMaster reels, potholders bearing a recipe for fried peanut butter and banana sandwiches, a [BBQ] spice mixture known as "The Elvis Blend," and special edition dolls which look a lot like creepy little dwarves dressed in Elvis garb. Slightly disappointed in the lack of actual velvet Elvi (the plural of Elvis), I purchase an Elvis Christmas ornament whose hips swing back and forth. . . . As I leave the store, I notice a plexiglass guitar case in the . . . window. Patrons are invited to write a note to Elvis and slip it through a slit in the case.

She boasts, "I survived my Graceland TKO (Total Kitsch Overload). I have lived to tell the tale and have not yet covered my home in olive green shag, but beware citizens: should you visit Graceland, you just may be overtaken by kitsch."¹² But as Czech writer Milan Kundera said, "No matter how much we scorn it, kitsch is an integral part of the human condition."

A search on *eBay* in May 2008—over 30 years after his death—yielded almost nine thousand Elvis items. One off-site merchant extends the list to

embrace, *inter alia*, drink coasters; books (mostly picture books); cigarette lighters; denim bikini clip purses; diamante necklaces, rings, and pendants; fancy dress costumes (complete with Elvis wig); handbags; lunch boxes; medallions; a customized *Monopoly* game; pink computer mouse mats; purses; refrigerator magnets; “retro” and “jumbo” sunglasses; talking wall clocks; t-shirts (with a choice of legends including “The King is back,” “Love me tender,” or “Vagas [*sic*] rock star”; umbrellas; and wristwatches. And there is more—much, much more.

Paul Simon’s 1986 song “Graceland” seems to represent the house as a destination akin to the Celestial City of John Bunyan’s *Pilgrim’s Progress*: “I’m going to Graceland,/ Poorboys and Pilgrims with families/ And we are going to Graceland . . . Maybe I’ve a reason to believe/ We all will be received/ In Graceland.” Five years later, some of the lyrics of Marc Cohn’s song “Walking in Memphis” had a similar metaphysical dimension: “Saw the ghost of Elvis on Union Avenue/ Followed him up to the gates of Graceland / Then I watched him walk right through / Now security they did not see him/ They just hovered ‘round his tomb / But there’s a pretty little thing/ Waiting for the King/ Down in the Jungle Room.” In David Winkler’s 1998 movie partly shot on location in the house, *Finding Graceland*, the hero, driving to Memphis, picks up a hitchhiker in a pink jacket who tells him he’s Elvis Presley who wants to reach Graceland in time for the anniversary of his faked death. One reviewer remarks, “At times, it feels like *The Greatest Story Ever Told, Part II*.” Perhaps these are linked to the apotheosis of Elvis Presley.

A few years ago, American journalist David Pulizzi asked in an unpublished essay, “What is Elvis now, [so far] into his odd post-life existence?” He answered,

To [his now-aging fans] he remains a divine eminence. If anything, his recordings and movies have assumed an even greater poignancy since his death. They are precious reminders that the world was once a better place and they call forth an age when the fans themselves were young and carefree. Gathered in Memphis each year, . . . [they] the fans comport themselves as if they were teenagers, as if all the world was unadulterated innocence and fun. Some twisted and wholly idealized conception of Elvis resides at the center of that world. [So many] years after his death, the fans still *believe* in Elvis . . . in his essential goodness and in the majesty and transformative power of his music. And because of that unshakable faith and their willful disregard for any unpleasant facts that might taint the flawless image that they hold of Elvis in their collective consciousness, [they] are scorned and ridiculed by people the world over who just don’t get Elvis and probably never will.¹³

He concluded, “Of course even in life—at least the life that we knew—Elvis was an idealized version of himself. And no one took a more active role in the creation of the Elvis myth than Elvis himself.”

Furbringer and Ehrman, Architects of Graceland

Had Elvis Presley never bought it, Graceland would have remained an obscure suburban house—not very well designed, at that—created by obscure provincial architects.

Max Furbringer (1879–1957) studied architecture at Washington University and the Beaux-Arts Society of New York. He worked first in his native St. Louis, then in Buffalo and New York City; around 1908, he moved to Memphis, where he joined forces with local architect Walk C. Jones, Sr. (1874–1964). As a boy, Jones had worked in the office of architect Mathias H. Baldwin and (according to historian Judith Johnson) he also had been articled to Burke, Weathers, Shaw, Alsup and Hain.

Among the better-known works of the “successful” Jones and Furbringer collaboration were the Shrine Building; Temple Children of Israel synagogue (1915); the seven-story North Memphis Savings Bank (ca. 1920, said to be the first steel-framed building in the city); the C.R. Boyce residence (1919–1921, now the Junior League Community Resource Center); the University of Tennessee Medical Units (now the Health Science Center); the Hotel Claridge (1924); and several elementary schools in and around Memphis. Both men were active in community and professional affairs, at different times chairing the City Planning Commission (Furbringer for 10 years) and serving on the Housing Authority. Furbringer wrote the local building code and was a member of the City Board of Adjustment—a sort of planning appeals committee. None of these roles called for artistic creativity.

Jones’ Yale-educated son, also Walk, joined the firm in 1931 when he was 27 years old. The effect of the change can only be guessed at, but the Jones–Furbringer partnership was dissolved 4 years later, when the Joneses formed a new firm. Furbringer took Merrill G. Ehrman as a partner, and in 1938 they made preliminary designs for Graceland. Karal Marling writes, although not altogether accurately,

Furbringer had been a leading Memphis architect since the turn of the century and a specialist in gracious homes for the well-off. Before World War I, he had a hand in designing some of the earliest Colonial Revival houses in the city, using a working vocabulary of giant porticoes and dark shutters set against brick or stone. . . . a Southern Revival, which, in homes by Furbringer, echoed the great antebellum mansions of Memphis.

Little is known of the later practice. After Furbringer’s death, Ehrman undertook a much larger commission. Johnson writes,

Modernism arrived at the Mid South Fairgrounds when the Mid-South Fair Association and the City of Memphis and Shelby County

governments decided to build The Mid-South Coliseum . . . at East Parkway and Southern Avenue. . . . In the late 1950s they commissioned a plan . . . which called for a large multipurpose building to be constructed to serve various community needs including an ice-skating rink. The firm of Merrill Ehrman and Max Furbringer designed the Mid-South Coliseum, a \$4,250,000 finally building erected in 1963 and 1964 [eventual cost, \$4.7 million]. However, Max Furbringer had passed away in 1957 leaving Merrill Ehrman to design this local example of Luigi Nervi's famous Coliseum [*sic*]. The Coliseum is arguably the first local facility to be designed for integration, as there are no separate facilities labeled black or white. It was also the site of integrated events including concerts, revivals and political rallies.

NOTES

1. Rodman, Gilbert B., *Elvis after Elvis: The Posthumous Career of a Living Legend*. New York: Routledge, 1996, 99.
2. Estcott, Colin, "Elvis Presley." www.countrymusichalloffame.com/site/inductees.aspx?cid=155
3. National Historic Landmark Nomination: Graceland. www.nps.gov/nhl/designations/samples/tn/Graceland.pdf
4. Guralnick, Peter, *Careless Love: The Unmaking of Elvis Presley*. Boston: Little, Brown, 1999, 651–652.
5. Marsh, Dave, "How Great Thou Art, Elvis in the Promised Land." *Rolling Stone* (September 22, 1977), 58.
6. Marling, Karal Ann, *Graceland: Going Home with Elvis*. Cambridge, MA: Harvard University Press, 1996.
7. Webb, Dewey, "The King and I . . .," *Phoenix New Times* (July 28, 1993).
8. Reimer, Stephen, "The Cult of Celebrity: St. Elvis is still in the Building," *Edmonton Journal* (May 15, 2004). www.expressnews.ualberta.ca/article.cfm?id=5984
9. Miller, Mark Crispin, *Boxed in: The Culture of TV*. Evanston, IL: Northwestern University Press, 1988, 192.
10. Wells, Camille, "[Review]: *Graceland: Going Home with Elvis . . .*" *Journal of the Society of Architectural Historians*, 57(June 1998), 214–216.
11. Laing, Suzaan, "The Kitsch and Cult of Memphis." www.bootsnall.com/articles/06-12/
12. "Lifestyles of the Kitsch and Famous." http://evilamy.com/content/writing_kitsch.html
13. Pulizzi, David, "Finding Elvis" (August 2002). <http://davidpulizzi.com/articles/elvis.html>

FURTHER READING

- Brixey, Ken, and Twyla Dixon. *Elvis at Graceland*. Memphis, TN: Cypress, 1983.
- Chadwick, Vernon, ed. *In Search of Elvis—Music, Race, Art, Religion*. Boulder, CO: Westview, 1997.
- Doll, Susan. *Understanding Elvis, Southern Roots vs. Star Image*. New York: Garland, 1998.
- Dundy, Elaine. *Elvis and Gladys: The Genesis of the King*. London: Weidenfeld and Nicolson, 1985.
- Gillette, Jane Brown. "Elvis Lives; Architects (1939): Max Furbringer and Merrill Ehrman." *Historic Preservation*, 44(May-June 1992), 46–53, 93–96.
- Green, Margo Hoven, et al., comps. *Graceland*. Buchanan, MI: Trio, 1994.
- Guralnick, Peter. *Careless Love: The Unmaking of Elvis Presley*. Boston: Little, Brown, 1999.
- Guralnick, Peter, and Charles Hirshberg. *Elvis Then and Now*. New York: Gruner + Jahr USA, 2002.
- Guralnick, Peter, and Ernst Jorgensen. *Elvis Day by Day*. New York: Ballantine Books, 1999.
- Marling, Karal Ann. "Elvis Presley's Graceland, or the aesthetic of rock 'n' roll heaven." *American Art*, 7(Autumn, 1993), 72–105.
- Marling, Karal Ann. *Graceland: Going Home with Elvis*. Cambridge, MA: Harvard University Press, 1996. See also review by Camille Wells, *Journal. Society of Architectural Historians*, 57(June 1998), 214.
- Mason, Bobbie Ann. *Elvis Presley*. New York: Penguin Putnam, 2003.
- Rodman, Gilbert B. *Elvis after Elvis: The Posthumous Career of a Living Legend*. New York: Routledge, 1996.
- Rooks, Nancy B. *Inside Graceland: Elvis' Maid Remembers*. Philadelphia: Xlibris, 2005.
- Tracy, Kathleen. *Elvis Presley: A Biography*. Westport, CT: Greenwood, 2007.



Courtesy Library of Congress

Grand Central Terminal, New York City

Once, twice, three times an icon

When Grand Central Terminal was rededicated in October 1998, one writer commented, “If the city [of New York] could be characterized by one building, it would be Grand Central.” Not wishing to go quite as far, the National Geographic television channel, in an Internet promotion for its 2006 production, *Inside Grand Central*, called the Terminal “one of the most dramatic and enduring symbols of New York City,” claiming,

An architectural and technological marvel built almost a century ago, it has triumphed over the car and jet-age, corporate greed, the wrecking ball, even the city’s indifference. . . . Facing different challenges today, this magnificent train station is reinventing itself for the future. . . . The Beaux-Arts building, completed in 1913, [was] the epicenter of midtown Manhattan with a “Grand Central District” of office buildings and hotels built around it. . . .

Threat and survival would become themes of Grand Central in the coming decades. The onslaught of the car and jet as alternative forms of travel in the 1950s, the desire to erect a skyscraper over [it] in the 1960s, the fiscal neglect of cash-strapped New York City in the 1970s, and the growth of [its] homeless population in the 1980s each could have destroyed Grand Central, but it emerged stronger after each trial. . . . Today, the terminal is as vibrant and alive as ever.¹

Grand Central Terminal deserves iconic status for three reasons. First, it was from its inception, a symbol of corporate capitalism and the power of the railroads—as architecture critic Wolf von Eckardt hailed it as “the statement of an era, a monument to the triumph of the railroads in forging an empire out of a wilderness and creating a wealth of museum treasures, public libraries and handsome buildings.”² Second, promoted nationally and internationally in the populist media it has been for decades a critical transport hub, an icon of adventure or even of escape, a staging post to “the world beyond”; and third, since the end of the 1990s it has come to represent the social value that such architectural landmarks from the past holds for the future, a reminder of the imperative need to preserve our built heritage. When the restored building was opened in 1989, postmodernist architect Robert Stern wrote in *The New York Times* that as “a gracious gateway to one of the world’s great cities,” Grand Central Terminal was a “powerful symbol of American power, pride and know-how [whose] architects mined the architectural past to create a convincing expression of the belief that the goals of capitalism are not inimical to the enhancement of the public realm.”

In 2007 the American Institute of Architects (AIA) invited almost two thousand people across the country to name their favorite buildings. On the resulting list of 150, Grand Central Terminal was afforded thirteenth place; the AIA dismissively commented only that it was “among the most important New York City landmarks for more than 100 years.” But the building that sociologist Kurt Schlichting called “New York’s secular cathedral” “represents the ‘Age of Energy’ more than any other.” Between 1865 and the

World War I New York witnessed the construction of the Brooklyn Bridge (completed 1883) as well as its first elevated railroad (1874), its first subway, the Interborough Rapid Transit Company (1904), and skyscrapers like the Park Row Building (1899), the Flatiron Building (1902), The Times Tower (1905), and many others. None of these architectural and engineering wonders had as much effect upon the metropolis as the Grand Central Terminal did.

Although its larger contemporary, Pennsylvania Station—wantonly demolished in the 1960s—served mostly America’s East Coast, Grand Central was the terminal of the transcontinental railroads—a gateway indeed, and the gate was double-hinged. But according to Whitney Warren, one of its designers, *gateway*, suggesting a “passive orifice,” was a deficient term; rather, he saw the Terminal as a “great reciprocating engine for pumping a huge flow of pedestrians through a whole series of valves and conduits into connecting systems—trains, subways, taxis, trolleys and elevated trains. . . .” He might have added “and beyond.” Through Grand Central there passed many from Europe, traveling further westward across America to a new life on the prairies or the Pacific Coast; through it there also passed many others traveling eastward in search of adventure beyond 42nd Street, and even beyond the United States, back in the Old World.

Despite the fact that many Americans have never visited New York City, Grand Central is known throughout the nation. It has been woven into the plots of fiction, including for example, Leo Szilard’s fantasy, *Report on Grand Central Terminal* (1949) and J. D. Salinger’s 1951 classic, *The Catcher in the Rye*, as well as Sue McVeigh’s *Grand Central Murder* (1939); Arthur J. Roth’s *The Grand Central Murders* (1964), and the breathless 1977 thriller *A Stranger Is Watching* by Mary Higgins Clark. Like wines and Rubens’ paintings, some *are* better than others. Perhaps more significantly, the Terminal has become familiar in America and internationally through that most pervasive expression of popular culture, the movie.

One source lists thirty-five films shot in part on location in Grand Central; there are others. The building’s earliest screen appearance seems to have been in a 16-minute comedy, *Mr. Jones Has a Card Party*, made in 1909 by the great D. W. Griffiths, while the Terminal was under construction. Another short film, *The Breakdown*, followed in 1912. Thirty years later MGM released a B-grade film version of McVeigh’s *Grand Central Murder*. Simply because it is part of New York City, Grand Central Terminal has been and continues to be incidental to the plot in many acted movies. It was also integral to the action in many films, among them Vincente Minnelli’s 1945 wartime drama *The Clock*, Alfred Hitchcock’s classic *North by Northwest* (1959, filmed at night in the building), a 1982 adaptation of *A Stranger Is Watching*, Francis Ford Coppola’s *Cotton Club* (1984), *Midnight Run* (1988), and the bloody climax—what else?—of Brian de Palma’s *Carlito’s Way* in 1993, based on an Edwin Torres novel.

Documentary films such as *Koyaanisqatsi* (1982), *Chronos* (1985), and *Baraka* (1992) have also included it. Foreign filmmakers have shot footage there: Italian filmmakers used it in *Fuga dal Bronx* (*Escape from the Bronx*, 1983), and it featured in the East German short documentary *Großer Bahnhof* (*Grand Station*, 1990). It also had a prominent place in Karan Johar's controversial but critically hailed Bollywood drama, *Kabhi alvida na kehna* (*Never Say Goodbye*, 2006). But the relevant scenes, described in the script as taking place at Grand Central, were actually filmed in Philadelphia's 30th Street Station. That can be put down to artistic license; after all, it *was* Bollywood.

Perhaps its most stunning use as a location was in Terry Gilliam's poignant award-winning fantasy, *The Fisher King*, of 1991. To film the scene, the production company was given use of the Terminal for two nights from 11 o'clock until the commuter service commenced at 6:10 the next morning. Gilliam choreographed one thousand extras as commuters, briefly and romantically transformed into waltzers spinning around the concourse. He later explained,

The waltz is the only thing that I would claim total credit for because it wasn't in the script. . . . A scene takes place at Grand Central Station, so I was there watching the rush hour develop, watching the swarm begin. It started slowly, then the tempo increased and I thought, "My god, wouldn't it be wonderful if all these thousands of people suddenly just paired up and began to waltz?" And the producers foolishly enough said, "What a good idea!" Bingo, it's in the film.³

The result was the movie's most memorable sequence.

Hollywood has also devised a fictitious Grand Central Terminal and a virtual one—the mark of digital technology. Released in 1978, *Superman, the Movie* included scenes in arch-villain Luthor's luxuriously appointed but entirely imaginary New York headquarters, "an amusing, baroque reproduction of [Grand Central] depicted as having an abandoned section underground" but actually built on a soundstage at Pinewood Studios in London. In 2005 Dreamworks, producers of the animated feature *Madagascar*, digitally recreated the Terminal, inside and out.

To employ a cliché, the building also found its way into America's living rooms. From 1937 through 1953 the NBC Radio Blue Network broadcast *Grand Central Station*, a drama series produced and directed by Himan Brown and written by Mary Brinker Post and others. Gerald Nachman nostalgically wrote:

A tingle passed through you at the sound of trains roaring into Grand Central Station—or, as it was announced over the show's coast-to-coast loud speaker, "Gran-n-n-n-nd Cen-n-n-n-tral Station-n-n-n," with its pulsating opening: "As a bullet seeks its target, shining rails in every part of our great country are aimed at Grand Central Station, heart of the nation's greatest city. Drawn by the magnetic force of the fantastic metropolis, day and night great trains rush toward

the Hudson River, sweep down its eastern bank for 140 miles, flash briefly by the long row of tenement houses south of 125th Street, dive with a roar into the two-and-a-half mile tunnel which burrows beneath the glitter and swank of Park Avenue, and then. . . . Grand Central Station! Crossroads of a million private lives! Gigantic stage on which are played a thousand dramas daily.”⁴

Of course, when radio was overtaken by television the Terminal was featured—although it was not always accurately identified—in dramatic series, *Saturday Night Live* (as a backdrop), reality shows, and even animated cartoons. Inevitably, with the juggernaut advance of electronic technology, it now appears as a “virtual” location in video games, including *Spiderman: The Movie* and *True Crime: New York City* among others. All these transient and comparatively trivial impingements on the public consciousness create an awareness of the building, making it an icon in the sense that it is recognized by millions who have never seen it “in the flesh,” so to speak.

Perhaps most important, Grand Central Terminal’s survival of a near-death experience in 1978 and its careful restoration over the next 20 years made it into another kind of icon—internationally, it is acknowledged as “a successful urban project that gave new life to an historic building which otherwise would have been discarded and destroyed.”

MOVING THROUGH MANHATTAN

John Mason founded the New York and Harlem Railroad—the earliest to serve New York City—in 1831. At first a street railway whose horse-drawn cars with metal wheels ran on metal track, by 1834 it had its own two-track right-of-way connecting its depot at Madison Square on Fourth Avenue (later Park Avenue) and 85th Street; within another 4 years it had extended its commuter service to Harlem, which was then an affluent semirural suburb in northern Manhattan.

In 1845, at around the same time that the rival Hudson River Railroad also reached the capital, the New York State Legislature licenced northward extension to Albany. By 1850 the two services, together with the New York and New Haven Railroad, had constructed a variety of terminals, depots, freight houses, and passenger stations throughout the city. Horse-drawn extensions were amalgamated with steam-powered lines to form an unsystematic network of railways. Traffic increased as the population grew, paradoxically causing conflicts with New Yorkers who, while on the one hand demanding a transport service, understandably complained of the danger to pedestrians and horse-drawn traffic at grade-level crossings, the nuisance of noise, dirt, and fire (wood-burning locomotives threw off sparks) and the decline of real estate values along the rights-of-way. It seems that the railroads couldn’t win. But they were a necessary evil.

In December 1854 the New York City Common Council banned steam locomotives south of 42nd Street; taking effect about 18 months later, the ordinance obliged the railroads to uncouple rolling stock and tow it to Madison Square with horses. It effectively obliged them to relocate their terminals further north, where they would need turntables, worksheds, coaling stations, and other provision for their operations—in short, a new depot.

CORNELIUS VANDERBILT AND GRAND CENTRAL DEPOT

In 1810, at the age of 16, the poor but canny Cornelius Vanderbilt had bought a small two-masted sailboat and established a commuter service between Manhattan and Staten Island. During the War of 1812 he won a government contract to deliver supplies to defense posts around New York Bay; with the income from that, his regular ferry business, and the servicing of farms along the Hudson River he was able to buy two more boats for coastal trade. Often dressing in a full naval uniform, he was nicknamed “Commodore,” an epithet that he seems to have relished. In 1818 he entered the employ of Thomas Gibbons, a New Jersey steamship operator, ferrying passengers, mail, and freight between New Brunswick and Manhattan and applied himself to learning all he could about the business.

By 1828 he had saved \$35,000—enough to start his own steamship company, which over the next decade became the dominant line on the Hudson, with over one hundred vessels plying between Manhattan and Albany; he is reputed to have employed more men than any other business in the country. When his rivals combined to buy him out, Vanderbilt turned to serving Long Island and Boston. Then, after a couple of ventures into international shipping, he decided (according to an anonymous biographer) that “the wave of the future was in another direction—building a railroad empire.” During the Civil War he leased or sold most of his vessels to the Union government.

By then he was worth around \$40 million and began to acquire railroads: the New York and Harlem in 1862 and 1863 and the flagging Hudson River, which he intended to consolidate with the Harlem a year later. In 1867 he bought the New York Central Railroad, merged it with the Hudson River, and then leased the Harlem to the newly formed New York Central and Hudson River Railroad. Together with the independent New Haven Railroad, all Vanderbilt’s railroads ran steam trains into Manhattan. In May 1869 the State of New York permitted him to build a new depot that he promised would “rival the celebrated European ones.” The proposed site, on Fourth Avenue between 42nd and 44th Streets was already occupied by railroad buildings; Vanderbilt bought up adjacent land, bounded by 42nd and 48th Streets and Lexington and Madison Avenues. The foundation stone of Grand Central Depot was laid on September 12, 1869, and the whole project was completed by October 1871.

Designed in the incongruous, grandiose but nevertheless fashionable French Second Empire style by architect John B. Snook and engineer Isaac C. Buckhout, the depot was (as one critic observed) “awkwardly up-to-the-minute, more cowtown than continental.” Others claimed that it was already obsolescent. The red brick station building enclosed two sides of a 90-foot-high train shed with a glass-arched roof—at that time the largest interior space in America. In fact the train shed was the best part, but as another critic fruitfully observed, it was “ignored in favor of meritricious confection.” The basement of the main building housed four restaurants (two for both genders, and two for gentlemen only); a police station, a billiard room, and four shops. Waiting rooms, ticket and telegraph offices, dressing rooms, and newspaper stands occupied the ground floor. For some reason there were separate facilities for each line: the New York, New Haven and Hartford Railroad was located in the front part of the level, while the other lines—the New York Central and Hudson River Railroad and the New York and Harlem Railroad—had space on the New Street side. Because each maintained its own operations, traffic flow within the depot was confusing and time-consuming. Marshaling yards extended several city blocks to the north.

The self-made magnate added the Lake Shore and Michigan Southern Railroad to his empire in 1873, enabling him to provide the first rail connection between Chicago and New York, following the Erie Canal, the only flat path through the Appalachian Mountains.

Obviously, increased rail traffic made crossing Manhattan more dangerous for pedestrian and horse-drawn vehicles, and between 1873 and 1875, in exchange for a wider, four-track right of way, New York Central and Hudson River railroad invested millions of dollars to take its lines north of 50th Street below grade, partly in an open cutting, partly in a tunnel. That made life safer—albeit no more peaceful—for Upper East Side residents; nevertheless, “many people complained about the congestion, noise, smoke, and heat generated by the trains coming into the Park Avenue tunnel system.”

WEALTH FROM THE AIR

As passenger numbers swelled, Grand Central Depot became inadequate, and quite quickly at that. By the 1890s, what “was glorious in 1871 had become . . . ‘the worst station in New York,’” overtaxed by almost five hundred trains a day. Expansion and renovation was urgently necessary, and in 1898 the railroad expanded its three-story building into a six-story artificial stone and stucco-encrusted pile in the Renaissance style, designed by architect Bradford Lee Gilbert, a “driving force in the growing railroad industry.” Even after the alterations, movement through Grand Central Depot was chaotic, largely because of the inordinate complexity of its administration and organization, which remained unchanged.

In 1900 William J. Wilgus, New York Central's chief engineer for Construction and Maintenance of Way collaborated with the Philadelphia architect Samuel Huckel, Jr. to remedy the problem. Most significant, to serve the increasing number of long-distance travelers and commuters they replaced the three separate waiting rooms with The Grand Rotunda, a single 200- by 100-foot space covered by 50-foot high roof formed by a series of barrel vaults. *The New York Times* reported on October 18 that the room, with its up-to-date appointments—armchairs, open fireplaces, rocking chairs, and writing desks—and “improvements of a modern type” was complete “after many delays and postponements.” Attributed to Huckel, the rotunda (which was in fact rectangular) “was situated between 42nd Street and the concourse to serve as a transitional staging area for the crowds before they encountered the gates. Being entered through spacious vestibules and approaches from all four sides and having a marble staircase on the east end, the rotunda gathered passengers into a large, centralized enclosure before discharging them into the concourse and the space of the shed.” One historian notes that

the crowd entering the monumental space of the rotunda was also homogenized by class. An architectural description states that “an immigrant’s waiting room is provided in the basement of the building with an approach from Forty-second Street, thus entirely relieving the main waiting room of this class of passengers.” The immigrants were also provided with a separate underground tunnel that connected their waiting room to the concourse. In this way, they were invisible to the other passengers until shortly before they boarded the trains.⁵

In 1899 Wilgus had first proposed—in vain—to electrify New York Central's lines in and near New York. Even when a grand jury found, 2 years later, that the railroad had been criminally negligent in allowing the heat and smoke in the tunnels to harm its passengers' health, nothing was done to revive his idea. Then, on January 8, 1902, there was a horrific rear-end collision caused by poor visibility in the smoke-filled Park Avenue Tunnel; seventeen passengers died and thirty-eight others were injured. A week later the railroad announced its intentions to improve the tunnel and to expand Grand Central Terminal.

By the end of the year, Wilgus, by then a vice president of the company, had plans in hand to demolish the existing station and build an electrified underground system, with an upper level for long distance trains and a lower one for suburban commuter trains, and to construct an entirely new Terminal at 42nd Street. Moreover, he contended, employing electric locomotion would allow the Park Avenue rail yards to be covered, creating extremely valuable real estate in a “network of streets and buildings above them.” Thus, he said, “from the air would be taken wealth.” His proposal dealt with all the major problems confronting the railroad. On March 19, 1903, Wilgus put his visionary scheme before its president, William K. Vanderbilt. Later that year

New York State legislated to exclude “steam operation” from the Park Avenue Improvement after July 1908.

Once Wilgus’ report was accepted, four architectural firms were invited to submit design proposals for Grand Central Terminal. The railroad board’s choice of participants at first seems puzzling. Two of the competitors were—so to speak—“high-flyers”: McKim, Mead, and White of New York, just then “the largest and most important architecture office in America, if not in the world,” and Daniel H. Burnham and Company of Chicago, internationally renowned for the 1893 Columbian Exposition. Burnham and Charles Follen McKim were at that time members of the prestigious McMillan Commission, responsible for the development of Washington, D.C.

The other firms were not in the same league: one was Samuel Huckel, Jr., who after completing the 1900 renovation of Grand Central Depot had returned to Philadelphia to form a partnership with Frank R. Watson and specialize in designing churches. The second was the firm of Reed & Stem of St. Paul, Minnesota, who won the competition. They had a great deal of experience in railroad architecture and had already undertaken work for New York Central. Not insignificantly, Reed’s sister was Mrs. William Wilgus, a fact that one might cynically expect may have played some role in the selection. The *ostensible* if somewhat flimsy reason given for Reed & Stem’s success was that their scheme “called for an elevated driveway around the Terminal.” Anyway, Reed went to New York in 1901 to commence preliminary work on Grand Central.

But more irregularities were to follow. According to the Terminal’s “official” history, having won the lucrative commission, “Reed & Stem could not have been ready for the end run that was about to occur.” After the competition had formally closed, New York-based architects Warren & Wetmore submitted a proposal. The Paris-educated Whitney Warren was a cousin of the railroad’s president. In February 1904 Warren & Wetmore agreed to collaborate with Reed & Stem on the Terminal. It might be asked, what choice was there? The New York firm was responsible for the “broad outlines of design and the general aesthetic treatment” of the terminal; Reed & Stem took charge of the execution—the “engineer-architect” aspects—of the contracts. Reed was made executive head of the ponderously titled firm, New York Central and Hudson River Railroad Company Architects, an office he held until his death in November 1911, 15 months before Grand Central was officially opened. Architectural historian G. E. Kidder Smith summarized the professional tangle: “According to Carl Condit, William K. Vanderbilt more or less forced his cousin Whitney Warren [and his partner] Charles D. Wetmore, onto the Reed & Stem design team, and when Reed died in 1911, Warren & Wetmore took over and considerably altered the original plans, moreover taking credit “as sole architects of the terminal” (Stem, adds Condit, sued for damages and collected \$400,000).”⁶

Although demolition of the old depot and excavation for the new had started, the plans for the Terminal were not submitted to the appropriate

authorities until December 23, 1904, 6 months later. The overall scheme was to provide an innovative efficient circulation system between streets, trains, subways, and the “El”—so-called Terminal City, the core of a “city within a city” that linked the great transport node with the changing needs of adjacent commercial and residential buildings. It began to take form between 1913 and 1917 as the Yale Club, the Biltmore Hotel, and two office buildings were constructed on railroad property across Vanderbilt Avenue. Throughout the 1920s, skyscrapers appeared on East 42nd Street, and apartment blocks began to rise on Park Avenue “air rights” tracts. Warehouses were replaced by the towering Chanin and Lincoln buildings and the seventy-seven story Chrysler Building, the second tallest skyscraper in the world. The Hotel Commodore (now the New York Grand Hyatt) opened on Lexington Avenue in 1919, and the Eastern Offices Building (aka the Graybar Building); each had a direct passageway connection to Grand Central’s Main Concourse.

Added in the 1920s, a viaduct surrounding the station linked Park Avenue North and South. Terminal City also included the Roosevelt Hotel, the Biltmore Hotel (now the Bank of America), and the New York Central Building (now the Helmsley Building), straddling Park Avenue. Because the station was envisioned as the centerpiece of Terminal City, the original proposal included, to be constructed later, a thirty-story office tower rising directly above the concourse, “whose four corners actually were designed to support it.” Despite later schemes, outlined below, that tower was never built. Early alternative façade designs for this never-realized building reflected the architectural style of terminal itself, notably, a Beaux-Arts proposal that was probably the work of Warren & Wetmore. Later proposals, driven by economic rationalism “to expand its functional and financial contribution,” called for the demolition of the terminal.

WHAT ABOUT THE ARCHITECTURE?

It seems that the design of the terminal building did not “firm up” until the end of 1910; before that, the architects were probably preoccupied with the project’s largely unseen but complex railroad and engineering elements. Certainly, the configuration of the main concourse remained undecided as late as September 1909; then, an “artist’s impression” published in *The New York Times Magazine* showed a vaulted space with a vast central circular dome supported on pendentives—nothing like the concourse as built. It was not until January 14, 1911, that the newspaper announced that “fifty-five elaborate drawings” for the main section of the terminal had been filed with city authorities. They showed a building, parts of which were up to eight stories high. The paper confided that “architecturally, as well as in size, the building will be one of the most imposing in the city. . . . The façade will be of brick, granite, and limestone, with massive Corinthian columns and large allegorical

figures carved in stone above the bays on the Forty-second Street side.” If that description was accurate, it is possible that even then the façade design (at least) was open to change.

Fitch and Waite commented in 1974 that “stylistically, the Grand Central Terminal was notable for its consistency and . . . remarkable for its sobriety and simplicity. The idiom [it employed] was that of the *École des Beaux Arts* in Paris and was characterized by rationality in plan but flamboyance in elevation and ornament.”⁷

The Beaux-Arts style was born in France’s *Académie Royale d’Architecture* that was founded (together with the *Académie Royale de Peinture et Sculpture*) in 1648. Louis XIV’s chief minister Cardinal Jules Mazarin was given a huge budget and a brief to make France “best nation” in the arts. The academies were reorganized by Jean Baptiste Colbert after 1661; and following the Revolution, Napoléon III made them independent from state control, to become *L’École Nationale Supérieure des Beaux-Arts* in 1863. The pedagogy that replaced hands-on training with ateliers and theoretical lectures squeezed the essential virtue out of the arts, and regurgitation of professorial proclamations ensured professional success; virtuosity was discouraged; and in the case of architecture, eventually idealized design was divorced from the realities of actual construction. There would be no major changes to that system until students rebelled in 1968.

David Garrard Lowe, president of New York’s francophile Beaux-Arts Alliance, explained in 1998 that the *École’s* professors’ endorsement of classical Greek and Roman models extended to Italian and French Renaissance architecture, because it was logical that “the proportion and forms of the classical were the eternal norms of architectural design.” Yet (he said) the *École* “never advocated copying the structures of the past. . . . If in aesthetic theory [it] looked back to the classical for inspiration, on its practical side it boldly embraced the future, accepting every new material and technique of construction.”⁸

Beaux-Arts architecture had five main characteristics: eclecticism (the versatility and flexibility to work in any number of historical styles or a combination of them); symmetrical floor plans and elevations; a hierarchy of spaces, descending from ostentatious public rooms to utilitarian ancillary ones; a profusion of meticulously designed and archeologically accurate details; and the use of polychromy. For all its formality and ostentation it was generally user-friendly, and no matter how large they were, buildings were easy to navigate.

Although many European architects chose to study at their own national academies (mostly modeled on the *École*, anyway) the Paris school attracted architecture students from the United States, where there was no home-grown institution. Richard Morris Hunt was the first in 1846, followed about 20 years later by McKim and then a dozen or so more. Promoted by these men and patronized by the captains of commerce and industry, the Beaux-Arts fashion in architecture flourished in America between 1885 and 1920. It was

given tremendous impetus by Chicago's World's Columbian Exposition in 1893. Daniel Burnham oversaw the general design of the pavilions; the fourteen main buildings surrounding landscape designer Frederick Law Olmsted's waterway system were in the Beaux-Arts manner, which became the preferred style for government buildings, court houses, and museums—and of course railroad terminals. Throughout the Gilded Age it held irresistible appeal to the *nouveau riche* as they built their mansions. The Columbian Exposition also encouraged America's City Beautiful movement, characterized by symmetry and vistas terminated by monuments.

American Beaux-Arts declined toward the middle of the twentieth century. The great Chicago architect Louis Sullivan, who had studied at *L'École*, would assert that the preeminence of its forms at the Columbian Exposition had set American architectural thought back 40 years. And in his seminal 1908 *Architectural Record* essay, "In the cause of architecture," Sullivan's protégé Frank Lloyd Wright disparagingly wrote:

Our aesthetics are dyspeptic from incontinent indulgence in "Frenchite" pastry. We crave ornament for the sake of ornament; cover up our faults of design with ornamental sensualities that were a long time ago sensuous ornament. We will do well to distrust this unwholesome and unholy craving and look to the simple line . . . the old structural forms which up to the present time have spelled "architecture" are decayed. Their life went from them long ago. . . .

Yet as late as 1998 David Garrard Lowe asserted that Beaux-Arts exponents "found New York a city of sooty brownstone and left it one of bright marble, furnished it with palaces and galleries, caravansaries [now, there's a romantic synonym for 'railroad terminals'] and public monuments." Of course, that included Warren & Wetmore's contribution to Grand Central Terminal.

THE MAIN CONCOURSE: HEART OF THE TERMINAL

Even while Grand Central was in the course of construction, several professional journals, including the British *Town Planning Review*, acknowledged it as the greatest railway terminal in the world. At its center and masterfully articulated to all its parts, the Main Concourse—275 feet long by 120 feet wide and rising to a 125-foot high arched ceiling—was the largest space by far and the building's showpiece. It gave access to the "long distance" platforms at a slightly lower level. The "suburban" concourse, beneath the main one, was much shallower, parts of it roofed with Guastavino vaults of interlocking terracotta tiles; the suburban platforms were at the lowest level. Pedestrian traffic between all these spaces was via ramps, rather than stairs. One contemporary description notes that the building was "replete with amenities for the traveler—commercial establishments, a police station, changing rooms, private offices [at the concourse's four corners] and apartments."

Warren & Wetmore's architecture—inside and out—was cosmetic, merely surface dressing for Reed & Stem's brilliant circulation plan. That is best demonstrated by considering the Main Concourse, which was reached directly from Manhattan's streets by entrances and the eastern and western ends, and on the south through the impressive waiting room (now known as Vanderbilt Hall). Journalist Jeffrey Hart claims that "no one can pass through this space without experiencing the presence of a powerful architectural will, a will analogous to that of the men who built the great railroads."

The Concourse walls were faced with simulated Caen stone (a fine-grained, light-colored limestone quarried in Normandy, France). The dados and dressings were of cream-colored marble imported from northeast Italy. The floor was paved with Tennessee pink marble. The architects originally intended to have a marble bifurcated stairs at each end—reputedly modeled on the Paris Opera House's grand staircase but sadly missing the mark and turning out rather plainer—"sweeping up" from the Main Concourse level to the east and west entrances. For whatever reason, only the west one was built, compromising the Beaux-Arts symmetry. In daytime, the vast space was naturally lit by three 60-foot high arched windows at the ends and large clerestory lunettes along each side. At night illumination was provided by gold-plated chandeliers—some weighed more than a ton—and thousands of points of light in the ceiling.

The Concourse's most striking element was the mural painted on the low elliptical vault of the ceiling. That vault, too, was surface dressing—merely plaster supported on a steel frame. The artist was the Frenchman Paul César Helleu, better known for his portraits, and the theme was the Mediterranean night sky with twenty-five hundred stars painted in gold on cerulean ground; each star was lit with a 40-watt bulb (they have since been replaced with fiber optics). Soon after the Terminal opened, one commuter noticed that the section of the zodiac shown in the mural was in fact reversed. One explanation among the many offered for the aberration is that Helleu based his composition on a medieval manuscript, made when cartographers traditionally portrayed the heavens as they would have been seen from outside the "celestial sphere." When the plaster ceiling began to disintegrate in the late 1930s the original painting was replaced.

GATEWAY TO THE CITY

Of course, the Terminal's exterior was as equally as grand as the interior. The limestone-clad south façade, oriented toward 42nd Street and the "better" part of early-twentieth-century New York, is said to have been envisioned as a "gateway to the city." One writer, reiterating an often-repeated very early report in *The New York Times*, called it "a Roman triumphal arch . . . its pairs of Corinthian columns flanking three enormous arched windows." Well,

the description is accurate in places. The orders *were* Corinthian, of a sort; but the coupled columns were not fully detached from the walls behind them and are more accurately described as deep pilasters; those at the end were not *quite* a pair. All stood, not with their bases on the ground, but upon an inordinately high plinth. Generally, the squat proportion of the composition was unlike any triumphal arch from antiquity. An attic story above the cornice, terminated by escutcheons, only added to the incongruity. So, in true Beaux-Arts manner, Warren & Wetmore profusely used “meticulously designed details” with little thought for—or perhaps little knowledge of—correct architectural grammar. In Umberto Eco’s insightful thriller *The Name of the Rose* it is said of the demented monk Salvatore that he “spoke all languages, and no language . . . and yet, one way or another, I did understand what Salvatore meant, and so did the others.” The analogy with Warren & Wetmore’s architecture is clear.

The center of Grand Central’s inventive south façade was crowned by the 50-foot high, 60-foot wide sculptural group, *Transportation*, carved from 1,500 tons of Indiana limestone and set in place a year and a half after the terminal was opened. The French sculptor Jules-Felix Coutan shipped his quarter-size plaster models from his Paris studio to New York, where sculptor John Donnelly made the final version from separate stones. William Bradley and Son of Long Island completed the work in 6 weeks. In the center of the grouping stands Mercury, god of commerce, travel, speed, and the messenger of the gods, flanked on his right by Hercules (symbolizing strength) and on his left by Minerva, goddess of wisdom. Behind them is an American eagle with outspread wings. The trio surmounts an enormous clock in Tiffany glass—13 feet in diameter, surrounded with cornucopias, symbolizing abundance.

The construction of Grand Central Terminal took almost 10 years—from June 1903 to February 1913. The attenuation of the work is accounted for by the need to maintain uninterrupted railroad services on a site that was already in use, at a time when traffic volume was rapidly increasing—halfway through the project sixty-five thousand passengers were passing through the station every day. On Sunday, February 2, 1913, the terminal, although unfinished, was formally opened to the public. The next day *The New York Times* reported:

More than 150,000 persons . . . visited the new Grand Central Terminal between midnight yesterday when the doors were opened to the public, and at 7 o’clock last night . . . was made up principally of people from Manhattan, Brooklyn and the Bronx. Hundreds of people remained in the great concourse through the early morning hours, and from 8 o’clock yesterday morning until 5 in the afternoon the main floor of the concourse and the galleries were packed with the visitors. . . . It was a curious, good-natured throng, and reached its height at 4 o’clock, when the great structure was so crowded that persons found difficulty in moving. . . . The great throng . . . was lavish in praise.

BY THE SKIN OF ITS TEETH

In 1947 more than 65 million people passed through Grand Central Terminal—equivalent to 40 percent of the nation’s population. But even then the role of railroads in America’s long-distance transportation system was waning rapidly, displaced by intercity airplane services, highways, and automobiles. That decline would accelerate in the 1950s. New York Central Railroad sought ways to optimize its considerable real estate assets in midtown Manhattan, and the Chairman Robert Young attempted to increase revenues by redeveloping the property around Grand Central Terminal. He invited developers William Zeckendorf and Erwin Wolfson separately to present schemes for commercial buildings either above the Terminal or directly north of it. In 1954 Zeckendorf suggested replacing Grand Central with an 80-story, 4.8 million square-foot office tower, 500 feet taller than the Empire State Building, and architect I. M. Pei created a pinched-cylinder design in “the form of a glass cylinder with a wasp waist.” Thankfully, the plan was abandoned.

A year later Wolfson unsuccessfully proposed a tower to replace the original six-story office building immediately north of the Terminal. But in 1958 his revised plan was accepted, and the fifty-nine story Pan American Airlines Building (now the MetLife Building), designed by Emery Roth & Sons in association with Walter Gropius and Pietro Belluschi, came into being. Architectural critic Carter Horsley calls it “a marvel of robust engineering and circulation in its interconnections with the terminal . . . a paradigm of well-planned, impressive and very efficient public spaces” while lamenting that “its immense bulk and height . . . completely dominates and overshadows the former New York Central Building . . . designed by Warren & Wetmore as part of the ‘Terminal City’ complex.” The “mute, massive, overscaled octagonal slab” is still widely held to be the most hated skyscraper in the city, and the one that “New Yorkers would most like to see demolished.”

Around the same time as the Pan Am tower was completed in 1963, one of New York City’s finest older buildings—Pennsylvania Station, the monumental 1910 Beaux-Arts masterpiece of architects McKim, Mead and White—was leveled to make way for an office building and the “fourth incarnation” of the Madison Square Garden sports arena and entertainment.

“Penn Station,” as it was popularly known, was the paragon of American railroad architecture, a quintessential Beaux-Arts building wedded to modern technology. At the end of the nineteenth century, the Pennsylvania Railroad dominated U.S. rail transport, moving more passengers and freight than any other railroad and servicing about twenty thousand stations. In 1902 the renowned New York Beaux-Arts architects McKim, Mead, and White were commissioned to design its new York terminal; it was built from 1904 to 1910 at a cost of \$100 million, and its first year of operation over 10 million passengers were carried though it in 112,000 trains. Like Grand Central, its usage peaked toward the end of World War II, after which intercity travel

began to change as the automobile and inexpensive air travel took precedence over the train.

Covert plans to bulldoze Penn Station were being hatched as early as 1961. The company stood on the brink of financial failure, and the four city blocks occupied by the station had grown too valuable not to sell. In 1962 the owners of Madison Square Garden purchased air rights, and despite public outcry in October 1963 they began to demolish the building in what someone called an act of “economically driven barbarism.” Many suggestions were offered about saving the beloved station but greed blocked the ear of those who could act. Now, the underground section is all that remains. In “Farewell to Penn Station” of October 1963 *The New York Times* editorialized, “We want and deserve tin-can architecture in a tinhorn culture. And we will probably be judged not by the monuments we build but by those we have destroyed.”

A first positive outcome of the loss of Penn Station was the founding in 1965 of the New York Landmarks Preservation Commission (LPC), and the enacting of the rigorous Landmarks Preservation Law “in response to New Yorkers’ growing concern that important physical elements of the City’s history were being lost despite the fact that these buildings could be reused.” There was also a heightened national awareness of such a need. Thankfully, those actions led to the salvation of Grand Central Terminal, and it now stands as an icon of values greater than material wealth. In August 1967 the LPC declared Grand Central Terminal a designated historic building and the surrounding block a historic area, giving it the full protection of the law.

The following February New York Central railroad, facing bankruptcy, merged with the Pennsylvania Railroad to form the Pennsylvania and New York Central Transportation Company (aka Penn Central). The new conglomerate, hardly in better financial shape than its predecessors, almost immediately leased Grand Central Terminal to UGP Properties, Inc. and despite the LPC designation contracted with the developer to construct above the heritage building a fifty-five-story office tower, designed by Marcel Breuer and Herbert Beckhard. The design involved demolition of the Main Waiting Room and part of the Main Concourse. According to one writer, “the façade would have been preserved, but rendered virtually invisible.” The plan caused a huge controversy in the American architectural press and (more significantly) also faced wide popular resistance, a rage that would be maintained until 1978.

When the LPC disallowed the scheme, asserting that the proposal was inappropriate and that “the design seemed an aesthetic joke, one that reduced the terminal to the status of a curiosity,” Breuer and his clients tendered what Horsley calls a “Machiavellian alternative,” which would have preserved the Concourse but demolished the façade. In August 1969 the Commission rejected that scheme also and ruled that in “each case the original building would be so overshadowed by the new construction that its historical character would be lost.”

The City of New York offered to compensate the owners and developers by transferring the air rights to eight alternative sites nearby. However, the companies sued the City for \$8 million in the State Supreme Court, claiming that the LPC could not prevent them from building lawfully on the site, and that the city's designation of the terminal as historical had "constituted a 'taking' of their property" for which they should be compensated. The court found that the Landmark Preservation Law was "unconstitutional as applied to the Terminal," but when it declined to rule on the "taking" question, the plaintiffs took their case to the U.S. Supreme Court. On June 26, 1978—the first time that it had ruled on a case involving historic preservation—the Supreme Court found in favor of New York City. Six months later the National Register of Historic Places named Grand Central Terminal a National Historic Landmark.

One of the clearest voices that had been raised in defense of the Terminal had been that of Jacqueline Kennedy Onassis on behalf of New York's Municipal Art Society:

Is it not cruel to let our city die by degrees, stripped of all her proud monuments, until there will be nothing left of all her history and beauty to inspire our children? If they are not inspired by the past of our city, where will they find the strength to fight for her future? Americans care about their past, but for short term gain they ignore it and tear down everything that matters. Maybe . . . this is the time to take a stand, to reverse the tide, so that we won't all end up in a uniform world of steel and glass boxes.

When in 1970 Penn Central Transportation Company filed for bankruptcy—until then, the biggest corporate bankruptcy in American history—title to the Terminal passed to American Premier Underwriters (APU), an interest that in turn was subsumed the Cincinnati-based American Financial Group (AFG).

The Metro-North Commuter Railroad Division of the the New York Metropolitan Transportation Authority (MTA) assumed operation of the Terminal in 1983. The building was disintegrating, the result of decades of neglect: the copper roof, that had made no provision for expansion and contraction, was leaking; masonry was spalling; structural steel was rusting. There were also cosmetic problems: surfaces were begrimed and stained and "commercial intrusions" blocked out natural light.

An urgent maintenance and capital improvements program first addressed the leaking roof and skylights, but Metro-North needed a long-term strategy. In 1988 it commissioned, under the leadership of the eminently successful preservation architects Beyer Blinder Belle of New York, a team of experts that included Chicago-based architects Harry Weese and Associates (as consultants) and New York engineers STV/Seelye Stevenson Value and Knecht. By April 1990 a \$425 million Master Plan, developed in cooperation with the nonprofit Grand Central Partnership, comprising neighboring property

owners, and with the LPC, was ready. Following a public hearing, it was “adopted in concept” by the MTA. By 1992 \$160 million had been spent on structural repairs, upgraded services, and improvements to the Main Concourse; the restored 12,000-square foot former Main Waiting Room was converted into an exhibition and special events space and renamed Vanderbilt Hall.

In March 1994 MTA signed a 280-year lease with AFG, which was transferred to Midtown TDR Ventures, LLC when it bought the station in December 2006. Although this financial wheeling and dealing has little to do with any architectural consideration of Grand Central Terminal, the lease allowed MTA to sign a contract with GCT Venture Inc.—a partnership of developer LaSalle Partners of Chicago and retail specialist Williams Jackson Ewing of Baltimore—to implement a comprehensive “revitalization” program based on the Master Plan. The intention was to increase revenues from the building by restoring it to its glory days. That would involve removing the *laissez-faire* accretions of 80 years, renovating the large public spaces, building a new north entrance, and improving retail functions with an upgraded food court and mall, which would be expanded by 50 percent to about 130,000 square feet. The total cost, originally estimated at \$175 million, was about \$250 million; it was jointly met by a bond issue (paid off by rents from retailers and restaurants), the Grand Central Partnership, Metro-North’s own capital budget, and “significant funds” from the federal government.

Construction began in 1996 with the cleaning of the “sky ceiling” of the Main Concourse and culminated on October 1, 1998, with a rededication—who knows to whom?—of Grand Central Terminal before an audience of five thousand people. Michael Allen reported in *The New York Daily News*, “The technology in the terminal is new. Escalators have been added to link the lower and the main levels. Air conditioning has been added, along with new systems for sprinklers, electricity, lights, plumbing and safety. There are new train operation facilities, including indicator boards, the stationmaster’s office and a customer service area.”

A few days before the reopening, architectural critic Paul Goldberger, hailing “a triumphant moment in the modern history of New York,” wrote in *The New Yorker*,

The real brilliance of the [Grand Central Terminal]—for all its architectural glory—is the way in which it confirms the virtues of the urban ensemble. Grand Central was conceived as the monumental center of a single composition, with hotels and streets and towers and subways arrayed around it. When it opened . . . it was New York’s clearest embodiment of the essential urban idea—that different kinds of buildings work together to make a whole that is far greater than any of its parts. . . . Now that Grand Central no longer functions as a place for long-distance arrivals and departures, it is more like a town square. Its clarity and its serenity, as well as its majesty, belong to everyone, and not, as they

once did, primarily to those coming to board the Twentieth Century Limited. A transcendent experience is there for the taking, even if you're only walking through.⁹

Architecture critic Walt Lockley's on-line evaluation of Grand Central Terminal is quirky but affectionate and incisive, affirming the view of its architect, Whitney Warren,

In the middle of the Grand Central Terminal there's a big nothing—two big nothings actually, two matching nothings, one volumetric nothing suspended in mid-air, and another flat-surface nothing spread out on the pavement. Together those two nothings make Grand Central Terminal possible. All this much *nothing* in the hyperdense, viciously-warred-over, multi-stacked, priced-by-the-fractional-inch landscape of Manhattan is itself remarkable. Nothing quite gets your attention like *nothing* in this context, because you know that nothing is an expensive luxury in Manhattan.

Nothing is worthy of study because, not only is this building a Beaux-Arts masterpiece, one of the quintessential Manhattan experiences, maybe the finest and most public-spirited architectural experience available in New York City, not only is it filled with drama and life and tangible municipal history, Grand Central Terminal also happens to serve its purpose with supreme elegance and efficiency. It works. It is handsome, yes, but it's a *buono machina* as well as *bello*.

Something like 30,000 commuters arrive every day; something like half a million pedestrians pass through the building every day, with a minimum of confusion, few collisions, and a much lower level of stress than seems possible. Coming up on its 100th birthday it's a living triumph of traffic management and social engineering. . . . It works because it was made that way, made to work, by whiskered masters of the craft. Grand Central Terminal is an Edwardian ideal, a grand machine with humane purpose and no moving parts, silently explaining itself to each new stranger, using its 500,000 daily patrons' own energy to redistribute themselves.¹⁰

Reed & Stem

Charles A. Reed was born in 1858 near Scarsdale, New York. After graduating from Massachusetts Institute of Technology he moved to St. Paul, Minnesota, in 1881. Ten years later he established an architectural practice with Ohio-born Allen H. Stem (1856–1931). Stem had trained at the Indianapolis Art School, and after being articled to his father J. H. Stem, became his partner in 1880. In 1884 he conducted a practice in St. Paul with Edgar J. Hodgson as junior partner. Following Reed's death from a heart attack in 1911—15 months before Grand Central Terminal was opened—Stem continued the practice with Roy H. Haslund. Stem retired in 1920 and died in St. Paul in 1931.

Most of Reed & Stem's nonrailroad work was close to home, so to speak, including the Civic Auditorium, Athletic Club, and the Hotel St. Paul (all in St. Paul); the West Publishing Company building in Eagan; the University of Minnesota's Wulling Hall and the Yacht Club at White Bear Lake, Minnesota. Further afield, they built the Michigan City Library, the Denver Auditorium in Colorado, and the Lewis and Clark County Court House in Helena, Montana.

Reed & Stem gained national recognition for the design expertise they demonstrated in more than one hundred railroad stations throughout the United States for (among others) the Chicago Great Western, the Norfolk and Western, the New Haven, and the Michigan Central railroads. An anonymous archivist at the University of Minnesota cynically observed they were engaged to design their *magnum opus*, Grand Central Terminal, as well as "numerous other stations and structures" for the New York Central Railroad, because (in addition to their ability to capture large commissions), as noted, Reed's sister was married to William J. Wilgus, the railroad's vice president in charge of construction.

Warren & Wetmore

S. Whitney Warren was born and educated in New York. In 1887, at the age of 18, he went to study architecture at the Paris *École des Beaux-Arts* under Honoré Daumet and Charles Girault. He remained in France until 1894, forming a permanent attachment to French classicism and Beaux-Arts planning principles. On returning to New York in 1894 he established his own practice and in September his "strikingly original" entry won a competition for the design of the Newport, Rhode Island, Country Club. That gave impetus to a "long career as an architect to New York's society." In 1898 he was commissioned to design the New York Yacht Club's new headquarters, and he formed a partnership with Harvard graduate Charles D. Wetmore—categorized by one writer as a "lawyer, businessman, and real estate developer"—who had completed his architectural studies in New York in 1894.

For the first 30 years of the twentieth century, Warren & Wetmore had "one of the most successful and busy practices in the U.S., completing over 300 major projects. The charismatic Warren and the sharp-witted Wetmore read well the prevailing winds of the tastes and aspirations and their "bold and creative interpretation of classical and French styles reflected the cultural, social, and business aspirations of the country's ruling class." Among their clientele there were members of their "prominent familial and social circles" as well as hoteliers, transportation magnates, and developers. The fact that Warren was a cousin of the Vanderbilts had more than a little influence on the firm's late appointment as coarchitects of Grand Central Terminal.

That commission was followed by stations and terminals along the New York Central Line and for other railroads, such as the Michigan Central, Erie, and Canadian Northern Roads. Their practice extended to hotels: among those in Manhattan were the Ambassador, the old Belmont, the Biltmore, the Commodore, the Ritz Carlton, the Vanderbilt, and additions to the Plaza. Beyond New York, they built, among others the Ritz Carlton in Atlantic City, New Jersey, the Westchester in Rye, New York, the Belmont in Providence, Rhode Island, the Broadmoor in Colorado Springs, Colorado, and the Royal Hawaiian in Honolulu, as well as others across the United States, in Canada and in the Caribbean. Other major nonresidential works included the Seamen's Church Institute, Steinway Hall, the Heckscher building, the New Aeolian Hall, and the Chelsea Piers complex, all in Manhattan. Warren also rebuilt the Catholic University library in Louvain, Belgium (1921–1928), burnt during the German occupation in World War I; the Nazis again demolished it in 1940.

NOTES

1. National Geographic, "Inside Grand Central." <http://channel.nationalgeographic.com/channel/insidegrandcentral/showDescription.html>
2. Eckardt, Wolf, "Saving the Unfashionable Past," *Time* (February 21, 1983).
3. Stubbs, Phil, ed., "The Fisher King Production Notes," *Dreams*. www.smart.co.uk/dreams/fkprod1.htm
4. Nachmann, Gerald, *Raised on Radio*. . . Berkeley: University of California Press, 2000, 431.
5. Raynsford, Anthony, "Swarm of the Metropolis: Passenger Circulation at Grand Central Terminal. . ." *Journal of Architectural Education*, 50(September 1996), 8.
6. Smith, George Everard Kidder, *Source Book of American Architecture*. Princeton, NJ: Princeton Architectural Press, 1996, 325.
7. Fitch, James Marston, and Diana S. Waite, *Grand Central Terminal and Rockefeller Center: A Historic-Critical Estimate of Their Significance*. Albany: New York State Parks and Recreation Division for Historic Preservation, 1974.
8. Lowe, David Garrard, *Beaux Arts New York*. New York: Watson-Guptill, 1998.
9. Goldberger, Paul, "Now Arriving," *The New Yorker* (September 28, 1998), 92.
10. Lockley, Walt. "Grand Central Terminal as a Big Nothing." www.waltlockley.com/cgt/gct.htm

FURTHER READING

- Adams, Nicholas. "The Rebirth of the Grand Central Terminal, New York." *Casabella*, 62(November 1998), 36–47.
- Ballon, Hilary, et al. *New York's Pennsylvania Stations*. New York: Norton, 2002.
- Belle, John, and Maxinne R. Leighton. *Grand Central: Gateway to a Million Lives*. New York: Norton, 2000.
- "Beyer Blinder Belle: Grand Central Terminal Revitalization." *A + U: Architecture and Urbanism* (May 1999), 102–113.
- Boone, Kurt, Robert Gore Jr., and John Sarsgard. *Inside Grand Central Terminal: A Photo Essay*. Minneapolis, MN: Tasora, 2007.
- Condit, Carl W. *The Port of New York, Volume 2: A History of the Rail and Terminal System from the Grand Central Electrification to the Present*. Chicago: University of Chicago Press, 1981.
- Dean, Andrea Oppenheimer. "'Heart of the Country's Greatest City'; The Many Significances of Grand Central." *AIA Journal*, 71(October 1982), 50–55.
- Fitch, James Marston, and Diana S. Waite. *Grand Central Terminal and Rockefeller Center: A Historic-Critical Estimate of Their Significance*. Albany: New York State Parks and Recreation Division for Historic Preservation, 1974.
- "Grand Central Station, N.Y.C." *Architects' and Builders' Magazine*. 2(1900), 201–208.
- "Grand Central Terminal, 42nd Street, at Park Avenue: Reed & Stem and Warren & Wetmore, 1913." *A + U: Architecture and Urbanism* (December 1994), 90–101.
- Lowe, David Garrard. *Beaux Arts New York*. New York: Watson-Guptill, 1998.
- Middleton, William D. *Grand Central, the World's Greatest Railway Terminal*. San Marino, CA: Golden West, 1977.
- Nevins, Deborah, ed. *Grand Central Terminal: City within the City*. New York: Municipal Art Society, 1982.
- Pearson, Clifford A. "Beyer Blinder Belle's Makeover of Grand Central Terminal Involved Careful Restoration and Critical Changes. . . ." *Architectural Record*, 187(February 1999), 84–95.
- Pennoyer, Peter, and Anne Walker. *The Architecture of Warren & Wetmore*. New York: Norton, 2006.
- Powell, Kenneth. *Grand Central Terminal: Warren & Wetmore*. London: Phaidon, 1996.
- Schlichting, Kurt C. *Grand Central Terminal: Railroads, Engineering, and Architecture in New York City*. Baltimore: Johns Hopkins University Press, 2001.
- Wilgus, William J. *The Grand Central Terminal in Perspective*. New York: privately published. 1941.
- Wood, Anthony C. *Preserving New York: Winning the Right to Protect a City's Landmarks*. New York: Routledge/Taylor and Francis, 2007.

INTERNET SOURCES

Official website of Grand Central Terminal. www.grandcentralterminal.com



Courtesy Library of Congress

Hearst Castle, San Simeon, California

"Casas, casas everywhere!"

La Cuesta Encantada (The Enchanted Hill), the castle built by William Randolph Hearst, stands halfway between San Francisco and Los Angeles, 1,600 feet above the sea and 5 miles from the coast. Surrounded by 127 acres of landscaped terraced gardens with pools and fountains, the cathedral-like main house, *La Casa Grande* and its guest-houses—*La Casa del Mar* (The House by the Sea), *La Casa del Monte* (The House on the Hill), and *La Casa del Sol* (The House of the Sun), named respectively for their splendid views of the Pacific Ocean, the Santa Lucia mountains, and the sunset—dominate the landscape. British Journalist Alexander Cockburn writes,

The Enchanted Hill was long seen as an outcrop of California kitsch, Camp Gothick on Camp Hill, vulgarity on a titanic scale. Now, amid shifting tastes, Hearst's castle can be seen for what it is—as powerful an expression of the American soul as the Brooklyn Bridge, Rockefeller Center or the Ford plant on the Rouge River, and all the more striking because the dream was given concrete form by one indomitable woman, Julia Morgan.¹

The term *Gilded Age*—pointedly “gilded,” not “golden”—was coined by Mark Twain and others to describe the last decades of the nineteenth century. Other historians believe that it continued until the beginning of World War I, while still others suggest that the 1929 stock market crash brought about its demise. Whatever the case, the term conjures the captains of industry and commerce who flaunted their wealth by building ostentatious houses in imitation of European models. As John Blades of the Henry Morrison Flagler Museum observes, these *nouveau riche* “of a relatively young country found context and meaning for their lives and good fortune by thinking of themselves as heirs of a great Western Tradition. [They] traveled the world visiting the great European cities and the ancient sites of the Mediterranean, as part of a Grand Tour, collecting and honoring their western cultural heritage.” Sadly but inevitably, even families with “old money” were drawn into what has been described as a “whirlwind of architectural excesses.”

Blades, who worked at Hearst Castle for 20 years, points out the characteristics that identify it as a Gilded Age house. It was a “true estate,” designed to be self-sufficient; its owner and its architect envisioned it as a museum at the time it was built; it reflected Hearst's strong personal involvement in its design and collections; and “the antiques were blended in ways that suited the tastes of the owner and the time.” *Eclectic* and *catholic* have been used elsewhere to describe Hearst's drive for “something a little different from what other people are doing in California.” The British architectural historian Lord Norwich found the house to be “undeniably a hotchpotch, in which French tapestries rub shoulders with Dutch pictures, English furniture, Spanish tile work and heaven knows what else” but was forced to concede that the superb quality of the collection in the context of such “confident and assured” architecture made it impossible for him to be critical: going there “prepared to mock; [he] remained to marvel.”

The Hearst family gifted the castle to the state of California in 1957, and it was opened to the public a year later. The annual number of visitors has grown to about a million. Three-quarters of them are Americans; most of the others are from Asia and Europe, so that the State Parks Department, owner of the property, now publishes brochures in nine languages beside English. In 2000 a survey of international readers by *Conde Nast Traveler* magazine voted *La Cuesta Encantada* as “The Number-One Monument in the United States,” prompting hubris on the part of the local *San Luis Obispo Tribune*: “You don’t have to go to the Loire Valley or Athens or the Rhine River to see a great castle. For us, *one of the all-time magnificent edifices in the world* is just a short drive . . . from home.” [emphasis added]

William Randolph Hearst’s house is a national and international icon of American architecture. But for nearly two decades before the public were able to see it at firsthand, it had been presented to the popular curiosity, not by fact, but fiction—in Orson Welles’ classic film, *Citizen Kane*.

ORSON WELLES, ICON MAKER

A British Film Institute 2002 poll of movie directors acclaimed *Citizen Kane* as the best film of all time. Five years later the American Film Institute gave it the same rank among U.S. movies. Richard Corliss wrote in *Time* magazine in 1996, “What people know of [Hearst] today is what they remember from the movie” and pointed out that William A. Swanberg’s 1961 biography of the media magnate was titled *Citizen Hearst*. Before discussing the furore that surrounded the movie, it is necessary to sketch the plot.

Tracing the life of newspaper baron Charles Foster Kane, “whose career . . . was born of idealistic social service, but gradually evolved into a ruthless pursuit of power,” the film begins with his death at the age of 76 in Xanadu, his gloomy Gothic mansion in Florida. His single dying word is “Rosebud.” The rest of the film describes through a series of flashbacks, the attempts of a reporter, Jerry Thompson, to discover the significance of the enigmatic word. He interviews Kane’s former associates and also finds Susan, Kane’s mistress (later his second wife), now an alcoholic soubrette. She speaks of their reclusive life at Xanadu and describes how Kane, oblivious of her lack of talent, tried in vain to make her into an opera star. But none of the accounts of Kane’s personality and history reveal the meaning of “Rosebud.” At the end of the movie, Thompson and other reporters watch Kane’s art collection being packed for storage. Unobserved except by the camera, a child’s sled is tossed on a fire. It is painted with its name—“Rosebud.”

By age 23 Welles had achieved notoriety as a radio director with his 1938 CBS broadcast of *War of the Worlds*. The following year a contract with RKO Radio Pictures gave him *carte blanche* to make two movies. After a couple of cancelled projects, and working on a set that was closed even to

studio heads, he produced, directed, and played the title role in *Citizen Kane*. The project had been proposed by his cowriter Herman J. Mankiewicz. For whatever reason, Mankiewicz provided a copy of the final shooting script to Charles Lederer, nephew of Hearst's mistress, Marion Davies. It was returned, annotated, by Hearst's lawyers, suggesting that the publisher had read it. Following a preview screening of what she called "a vicious and irresponsible attack on a great man," gossip columnist Hedda Hopper immediately reported to Hearst. It has been claimed that, more than anything else in the film, he was enraged by the character Susan as—it must be said, not an altogether inaccurate—caricature of Davies. Welles later confessed that it had been "something of a dirty trick, what we did to [her]" and that he expected that it would upset Hearst. Anyway, all sorts of pressure were brought to bear on Welles and RKO. According to PBS's *The American Experience*:

Welles' huge ego and his youth [blinded] him to the extent of Hearst's power and reach; he tragically underestimated Hearst's ability to counterattack. . . . Hearst threatened to expose long-buried Hollywood scandals his newspapers had suppressed at the request of the studios. His papers used Welles' private life against him, making blunt references to communism and questioning Welles' willingness to fight for his country. Major theater chains refused to carry *Citizen Kane*.²

Before the movie was released, another gossip columnist and crony of Hearst, Louella Parsons, lobbied the governor of New York to have it banned in that state. And Louis B. Mayer of MGM persuaded other major studio heads to jointly offer \$800,000 for the negative and all prints—considerably more than production costs—so that they could be destroyed. RKO Studios were the meat in the sandwich and declined to sell; threatened with a lawsuit from Welles for his share of the profits, they released the movie in May 1941. Infuriated, Hearst ordered that none of his newspapers or radio stations should mention it, much less review it; he eventually extended the ban to other RKO productions.

Non-Hearst critics highly praised *Citizen Kane*. Red Kann's prerelease review in *Boxoffice Magazine* of April 12, 1941, called it "a milestone . . . noteworthy in its conception, its execution and, indeed, in its entire approach . . . an endeavor to be admired for the expertness and the newness of its treatment, [and] the superb characteristics of its craftsmanship." But it seems that the movie, perhaps 50 years ahead of its time, was too "arty" for cinemagoers, and box-office returns were disappointing. At the 1941 Academy Awards ceremony, although the Oscar for the best original screenplay went to Welles and Mankiewicz, the audience booed at each of their movie's nine nominations. Hearst's campaign had succeeded: the Academy had been intimidated by his advertising power, and the fear that "Hearst reporters—led by Louella Parsons—would delve into their personal lives." Following the Awards, RKO shelved the film and did not rerelease it until 1956. Welles became

Hollywood's "youngest has-been" and spent the rest of his career in Europe. But as one writer observes, Hearst's attack "backfired in the long term." The reason?—"Almost every reference of Hearst's life and career made today typically includes a reference to the film's parallel to it. The irony of Hearst's efforts is that the film is now inexorably connected to him." However, those connections are for the most part tenuous and the comparisons faulty. David Nasaw, one of Hearst's biographers, challenges them:

Welles' *Kane* is a cartoon-like caricature of a man who is hollowed out on the inside, forlorn, defeated, solitary because he cannot command the total obedience, loyalty, devotion, and love of those around him. Hearst . . . never regarded himself as a failure, never recognized defeat, never stopped loving Marion or his wife. He did not, at the end of his life, run away from the world to entomb himself in a vast, gloomy art-choked hermitage.³

That brings us to Hearst's Castle and Kane's Xanadu, the latter named after the mystical palace conjured up, probably under the influence of opium, by Samuel Taylor Coleridge. Of course, in the movie *Xanadu* was only a matte painting—uncredited—by Mexican-born artist Mario Larrinaga. A "newsreel" at the beginning of *Citizen Kane* shows it in the distance, a cluster of ominous towers and pinnacles, described by Victoria Kastner as a "dark and deserted jumble of cavernous rooms filled with meaningless junk," crowned with cranes and derricks and cluttered with scaffolding to indicate its incompleteness—just as Hearst's castle was at his death. A deep voice seriously intones in the manner of old-time newsreel narrators,

Here, on the deserts of the Gulf coast, a private mountain was commissioned and successfully built. One hundred thousand trees, twenty thousand tons of marble are the ingredients of Xanadu's mountain. Contents of Xanadu's palace: paintings, pictures, statues, the very stones of many another palace—a collection of everything so big it can never be catalogued or appraised; enough for ten museums; the loot of the world. Xanadu's livestock: the fowl of the air, the fish of the sea, the beast of the field and jungle. . . . Since the Pyramids, Xanadu is the costliest monument a man has built to himself.

In spirit at least, that described Hearst Castle. But in reality Hearst's own "Xanadu" was physically nothing like the somber pile in *Citizen Kane*.

LARGER THAN LIFE: WILLIAM RANDOLPH HEARST

Gillian Reagan wrote in *The New York Observer* in 2006 that William Randolph Hearst was the Rupert Murdoch of his day. Many Hearst biographies have presented him in widely varying lights; here it must suffice to sketch events as they relate to Hearst Castle, focussing on his wealth rather than on his political acumen and ambivalence. A former Hearst employee, John K.

Winkler, published the earliest biography, *W.R. Hearst: An American Phenomenon*, in 1928. Three more of widely varying character followed, all in 1936 when the media magnate's reputation was at its nadir. A review in *Time* magazine asserted that Ferdinand Lundberg's *Imperial Hearst: A Social Biography* "muckrak[ed its] subject with pious zeal," while *Hearst: Lord of San Simeon* by Oliver Carlson and Ernest Sutherland Bates presented "a fascist and an opportunist who placed profit above all else." The exception was Mrs. Fremont Older's *William Randolph Hearst: American*. Of the competing accounts *Time* wittily remarked, "Authors Lundberg, Carlson and Bates liberally plaster . . . Hearst with controversial tar, while . . . Older is equally generous in coating her hero with sympathetic whitewash." Winkler's rethought *William Randolph Hearst: A New Appraisal*, released in 1955, also was generous to its subject.

William A. Swanberg observed in *Citizen Hearst* (1961) that the publisher intrigued many of his contemporaries: "They were saying that he was great—somehow—but they could not explain why." That, surmised Swanberg, was because Hearst was really two people, "Prospero and Caliban shackled together in a single body." In a review of Nasaw's 2000 biography Roy Hoopes suggested that rather he was "not two men but several: Hearst the journalist, Hearst the politician, Hearst the art collector, and Hearst the man—*bon vivant*, husband, and lover— each one living a life of tremendous passions, for power, possessions, women."

Hearst was born in San Francisco in April 1863, the only child of George and Phoebe Apperson Hearst. His father was a self-made multimillionaire, who had struck it rich in California and eventually held controlling interests in some of America's richest silver, gold, and copper mines. His schoolteacher mother, the dominating figure in his life, indulged her son. With a convoy of tutors and servants, in 1873 she took him on an 18-month tour of Europe to absorb the culture of the Old World, and at that early age William developed, as Phoebe put it, a "mania for antiquities." Back in California the Hearsts were obliged to adjust their lifestyle so that George could invest as much as possible in mining ventures. They sold their large San Francisco residence and moved to a boarding house. William's childhood was therefore unsettled, and by the time he reached the age of 10 he had (according to Nasaw) "lived many different lives":

the rich boy in the mansion at the top of the hill, the new kid forced to attend public school because his father had run out of money, the pampered child who toured Europe, the boy who boarded with his mother. There was no center, no place that he could call his own. . . . School had provided no continuity, not even from grade to grade. He was shifted and shunted, withdrawn and newly enrolled in school after school. . . .⁴

In 1880 William was enrolled in St. Paul's Preparatory School in Concord, New Hampshire. Expelled "for the good of the school" 2 years later, he

continued his education at Harvard, where he enjoyed the social activities and joined a number of “prestigious organizations.” He served as business manager of the satirical magazine, *Harvard Lampoon*, increasing its circulation by 50 percent and trebling its advertising revenue. But, already on probation, he was expelled from the university in 1885, not for the elaborate practical jokes—some no doubt apocryphal—that have become part of the Hearst myth, but simply because he did not study hard enough.

In 1880 George Hearst, seeking a voice for the Democratic Party, had acquired the failing *San Francisco Examiner* and converted it to a morning paper (that he won it in a poker game is yet more Hearst mythology). Six years later, having lost his university place, William asked his father to turn control of the paper over to him; when the request was refused, William went to work briefly as a cub reporter on Joseph Pulitzer’s *New York World*. But he continued to cajole his father, and in March 1887 he returned to San Francisco and took over as “proprietor and editor” of the *Examiner*.

By 1889 he was touting the broadsheet as “the monarch of the dailies,” and boasting that as the “largest, brightest and best newspaper on the Pacific Coast [it delivered] the most elaborate local news, the freshest social news [and] the latest and most original sensations.” Circulation soared. For 8 years Hearst (although he lost an estimated \$8 million) came into conflict with the Southern Pacific Railroad and corruption in local government, commerce, and industry and “championed the oppressed.” By March 1894 the *Examiner* was selling seventy thousand copies every day.

When George Hearst died in February 1891 Phoebe inherited his entire mining, oil, and forestry fortune, then estimated at as much as \$20 million. Nasaw observes that the bequest “irretrievably compromised her future relationship with her son.” Phoebe’s former role as merely a dominant mother was “eclipsed by her position as feudal overlord of the Hearst estates.” She gave William a generous monthly allowance but continued to manipulate him. In 1895 she sold some mining interests to provide \$7.5 million for him to buy the struggling *New York Journal*. But there was a catch: to get the money, she forced him to end a relationship with Tessie Powers, a Cambridge, Massachusetts, waitress who had been his “primary companion” for 10 years. One source suggests that Phoebe even secretly bought Tessie off for \$150,000.

Within a year, by presenting investigative reporting and “lurid sensationalism” with banner headlines and lavish illustrations, William built the *Journal*’s daily circulation to one-and-a-half million. He did this, as he had with the *San Francisco Examiner*, by filling his front pages with stories devoted mostly to crime or high society scandal, emblazoned with provocative headlines and illustrated with extravagant images. One commentator writes that Hearst “depleted Pulitzer’s [*World*] staff by offering high salaries and multi-year contracts. Objectivity had no place at the *Journal*: its prototypical story featured corrupt officialdom, a victimized public, and the newspaper as rescuing hero. And it was unflinchingly Democratic. . . .”

In July 1900 Hearst added the *Chicago American* to his newspaper empire. Two years later he launched a morning edition, the *Chicago Examiner*. Bridging his other publications, the midwest papers gave him a coast-to-coast identity and a beachhead from which to gain political office. In 1902 New York elected him to the House of Representatives, a self-styled “champion of immigrants and the working class.” Although he seldom attended sittings and spoke only to further his pet projects, he was reelected in 1904. He failed to gain the Democratic nomination in a bid for the presidency, and he would fail in two attempts (1905 and 1909) to become mayor of New York City and—between them—governor of New York.

Despite his alleged shyness Hearst was quite a notorious stage-door Johnny. In April 1903, just before turning 40, he married Millicent Willson, a 21-year-old showgirl whom he had been dating since she was only 16. Of course, Phoebe disapproved. Failing to dissuade him, she took to her bed and refused to go to the wedding in New York. But Millicent, “willing to go out of her way to be attentive,” soon won her mother-in-law’s approval. Between 1904 and 1915, the couple were to have five sons: George Randolph, William Randolph Jr., John, and twins Randolph Apperson and David Whitmire.

William and Millicent had a motoring honeymoon in Europe, a trip that led to the publication of Hearst’s first magazine, *Motor*, launched in 1903. Two years later he bought *Cosmopolitan*; then he added *Motor Boating* (1907), *World Today* (renamed *Hearst’s Magazine*) and *Good Housekeeping* (both in 1911), *Harper’s Bazaar* (1912), and three British magazines. By 1919, when Phoebe died and the family fortune passed to him, he owned fourteen magazines and seventeen newspapers including, besides those already mentioned, the *Atlanta Georgian*, *Boston American*, *Boston Daily Advertiser*, *Los Angeles Examiner*, *Washington Times*, and *Wisconsin News*. In 1915 he founded King Features Syndicate to distribute newspaper columns, editorial cartoons and comic strips. By 1935, according to a *Fortune* magazine report, his assets—twenty-eight papers, thirteen magazines, eight radio stations, two movie companies, inestimable art treasures, real estate, fourteen thousand shares in the Homestake Mine, and 2 million acres of land—were worth \$220 million.

In 1915, when Millicent was pregnant with the twins, the 54-year-old Hearst met 18-year-old Ziegfeld Follies chorus girl Marion Davies, who soon became his “constant companion and confidante” (read, “mistress”) and from about 1919 they lived openly together in California. They never married and although she had other lovers, including Charlie Chaplin and 1940s movie heart-throb Dick Powell, the relationship lasted for the rest of Hearst’s life. For her part, Marion later confessed to being at first a gold digger who later had fallen in love. Unwilling to accept that although she was a very talented light comedienne, Marion would never succeed as a dramatic actress, Hearst spent a fortune to advance her career, buying film roles for her that made her look ridiculous. In 1918 she starred in the Hearst-backed *Cecilia of the Pink Roses*. Film critic Hal Erickson notes that “though most critics were

unimpressed by the film, Hearst's newspapers were 'enthusiastic to the point of lunacy.' From this point on, Davies was the most publicized actress in the world and went on to make a total of forty-six films including sixteen talkies. In 1925 she and Hearst merged their movie company, Cosmopolitan Productions, with MGM studios in California. Three years later Marion moved into the beachfront "Ocean House" in Santa Monica, the center of a five-building, 118-room property.

Also in 1925, Hearst acquired a real castle. St. Donat's, built in 1298 on an already century-old ruin, stands a few miles south of Cowbridge in South Wales. Mine-owner Morgan Stuart Williams restored it early in the twentieth century before selling it to an American, Richard Pennoyer. Hearst bought it on the basis of photographs in *Country Life*, for "about \$120,000." But he did not see it until July 1928, when he engaged architect Charles Allom—only the best for Hearst: Allom had also worked on Buckingham Palace—to make alterations. The 135 existing rooms were modernized; electricity and mains water were connected; central heating was installed, and thirty new bathrooms and a heated swimming pool were added. Hearst also bought silverware, armour and antiques, and "medieval structures from elsewhere" for St. Donat's. Some summers he and Marion would visit for a few weeks with friends and acquaintances in tow, but when the castle was put back on the market in 1938, they had occupied it for a total of hardly 4 months.

In 1926, when William's overt relationship with Davies finally became intolerable, Millicent left him to live permanently in New York; he bought her a 140-room house on Long Island, and they remained married until Hearst's death. For a few years after the separation she continued to visit The Enchanted Hill with her family and friends; as Mrs. Hearst, she even hosted important guests, including Winston Churchill. But as the years passed, her visits became less frequent.

Hearst's media empire reached its apogee about a year before the 1929 Crash. The Wall Street collapse touched *all* his business interests, but the newspapers more than any. Within a few years his shifting political stance became a major liability to the Hearst Corporation: his papers which at first had been populist, had become right-wing in the 1920s, then in the early 1930s had swung to the left, only to move to the far right a couple of years later. The economic consequence of his political bipolarity was that advertising sales and circulation declined. Nasaw writes,

The unthinkable had come to pass. For fifty years, Hearst had ruled his empire as autocratically as his heroes Julius Caesar and Napoleon Bonaparte had theirs. He had trusted no one, rejected suggestions that he share power or delegate decision-making, and refused to name a successor. At age seventy-four, he was as hearty as ever and convinced that if left alone he could once again pull off a miracle. But no one, with the possible exception of Marion, believed him capable of making the tough decisions that were necessary and cutting back on personal and corporate spending.⁵

His creditors frustrated his attempts to raise capital through a new bond issue, and he was unable to service the Corporation's debts, which ran into millions. It went into receivership and was reorganized in 1936. Forced to relinquish control, Hearst became just another employee, subordinated to a court-appointed manager. He took a cut in pay—to a mere \$500,000 dollars a year. Newspapers and other properties were sold, and his film company was closed. In April 1937 Marion “liquidate[d] her own considerable assets and, with the one million she was able to raise on the spot” from the sale of her jewelry (most of which he had given her), insisted on helping him out. Nevertheless, beginning about a year later, over 2 years half of his art collection was liquidated in a series of auctions. Sorting, cataloguing, and pricing took nearly a year. When only the less valuable pieces remained, “the trustees arranged for certain department stores in New York City to display [them] for sale to passing customers. . . . The final stitches in the garment of public humiliation hung on Hearst.” All he had left was his salary and editorial control over nineteen daily papers and twelve magazines. His enemies rejoiced. In a withering chapter titled “Farewell: lord of San Simeon” in his *Lords of the Press* (1938) George Seldes cited the splenetic words of journalist Ernest L. Meyer:

Mr. Hearst in his long and not laudable career has inflamed Americans against Spaniards, Americans against Japanese, Americans against Filipinos, Americans against Russians, and in the pursuit of his incendiary campaign he has printed downright lies, forged documents, faked atrocity stories, inflammatory editorials, sensational cartoons and photographs and other devices by which he abetted his jingoistic ends.

Defense production in World War II generated economic recovery, restoring the circulation and advertising revenues of Hearst papers, but his personal glory days “as a major independent power in American politics and culture” never returned. Those glory days, though fraught with vicissitudes, had only started following his mother's death. In 1922 he had moved to the family's 268,000-acre ranch at San Simeon and set about creating the \$37 million Hearst Castle. Commenced in that year, the main house was ready for occupancy by 1927. But it was not completed until 1947; ironically, it was time then for the aged and ailing Hearst to depart. He left his “glowering and bad-tempered retirement” to be nursed by Marion in the Beverly Hills house he had built for her when she contracted poliomyelitis. He died in August 1951, age 88.

By the mid-1930s, after a series of flops and despite all Hearst's efforts to prolong it, Marion's film career had ended. One biographer says, “With the film industry rejecting her, and the relationship with Hearst under pressure, Davies wilted and became an alcoholic”—that problem, others claim, had been incipient even in her teenage years. Ten weeks after Hearst died she eloped with a former actor, Horace Brown. Associated Press reported, “The

marriage, which caught even the immediate household of Miss Davies by surprise, came a few hours after she had settled her affairs with the Hearst Corporation. . . .” Marion died from cancer in September 1961.

“THE RANCH”

In summer 1542 the Portuguese-born navigator Juan Rodriquez Cabrillo had sailed up North America’s Pacific coast. Passing large white rocks offshore, he imaginatively named them “Piedras Blancas.” He landed at what now is the Bay of San Simeon. Sixty years later Sebastián Vizcaíno discovered another bay, which he named after the Count of Monte Rey; although Vizcaíno described upper California as “the land of milk and honey” the Spanish ignored it for another 150 years. In 1769 Gaspar de Portolà, governor of Alta California, and Franciscan missionary Father Junípero Serra undertook an overland expedition to find Monterey. In July they reached San Diego, where Serra founded a mission; by 1823 twenty more missions would follow, including Mission San Miguel Arcángel, established in July 1797 by Serra’s successor, Father Fermín Francisco de Lasuén de Arasqueta.

Mexico won its independence from Spain in 1821; the Republic was founded 3 years later. In August 1833 the Mexican Congress passed *An Act for the Secularization of the Missions of California* that provided for financing the colonization of California by selling mission property. In 1836 the government acquired San Miguel Arcángel’s coastal pasture and divided it into *ranchos*: Santa Rosa, 13,000 acres; Piedras Blancas, 49,000 acres; and San Simeon, 4,000 acres. The land was granted to Mexican private citizens.

The United States’ “ambition to stretch coast to coast” prompted its declaration of war on Mexico in 1846. The Treaty of Guadalupe Hidalgo of February 1848 allowed Mexicans to retain their Californian holdings. When severe drought in the early 1860s destroyed over two-thirds of their cattle, considering the pasture too poor for livestock, many *rancheros* sold to American newcomers, who “transformed the hide-and-tallow industry into beef-and-dairy cattle production.” In 1865 George Hearst bought Piedras Blancas, followed shortly by the other two ranches, and made them into one of the finest stock farms in the state. A San Luis Obispo County history recorded that in 1883 its chief production was butter and cheese, adding “the Piedras Blancas lands are . . . of passing richness. Corn, peas, barley, beans, and oats are raised.” George built the first San Simeon wharf in 1869, and in 1878 he constructed a 1,000-foot long deep-water pier, warehouses, other buildings, and a railway to move the products of mining and ranching to deep-draft vessels. A ranch house was built around 1878. George (and later William Randolph Hearst) subsequently acquired adjacent grazing lands until the ranch covered 270,000 acres—more than eight times the area of the County of San Francisco. In 1940, when William sold land to the U.S. government for Fort

Hunter Liggett, the Hearst Ranch was reduced to 82,000 acres, a mere two-and-a-half times the size of San Francisco.

As a child, William often camped at the ranch with his parents; they nicknamed their favorite spot—an elongated ridge with magnificent views of coast and mountains—“Camp Hill.” After he married he continued those camping vacations with his own family and with friends. Observing that “Hearst imported all the luxuries of the best European hotels to ‘Camp Hill,’” Nasaw describes how they “roughed it.” For one trip in 1915, “the cowboys had erected a small village of Venetian-style canvas tents, the size of cottages, with brightly-colored awnings. One of them was set aside for the dining room; the others, with living and sleeping quarters, were fully furnished. Oriental rugs were placed over the wooden floors.”

Tiring of such “spartan” retreats, in spring 1919 Hearst began to think about a building a house on Camp Hill. He had been cruising second-hand bookstores when he found a stack of “bungalow books”; he came across an illustration that gave “an idea of [his] thought about the thing, keeping it simple”—of what he called a “Jappo-Swisso bungalow.” Just then, a bungalow was all that he could afford. But within a month of Phoebe’s death he developed general scheme for a big master house dominating a group of three guest-houses. By August he was insisting that the site be surveyed within a month and chose a San Francisco architect, the remarkable Julia Morgan, to build his dream on Camp Hill. Her biographer Sara Boutelle justifiably asserts, “That she continued to work on it for more than twenty years . . . while maintaining a thriving practice in San Francisco, exemplifies her dauntless commitment to the project, to her career and to architecture.”⁶

JULIA MORGAN: “A REVOLUTIONARY IN A FLOWERED HAT”

Morgan scholar Karen McNeill has described the diminutive architect—she was 5 feet tall and weighed 100 pounds—as a “prim woman in drab suits, her hair pulled back in a tight bun, [whose] only apparent nod to fashion was her collection of hats, most from Paris.” But as Mark Wilson, another biographer, writes, “She was a revolutionary in a flowered hat.”

. . . a quiet feminist, who blazed a trail for women in a profession that had never allowed them to participate fully, until she came along. She was America’s first independent woman architect. . . . But most of all, she was an artist, a creator of beauty, who left us an incomparable legacy of over 700 buildings that delight the senses, and inspire the mind.⁷

Born in 1872, Julia was the second of five children—three boys and two girls—of Charles and Eliza Morgan. Her father, a mining engineer, left child-raising to his wife, who was clearly enlightened enough to allow her daughters

to choose their own courses in life. Although her sister Emma became a lawyer, Julia demonstrated a more scientific bent; after graduating from Oakland High School in 1890, she outrageously set her course toward architecture—no job, people then believed, for a woman! Because there were no architecture schools on the West Coast, Julia enrolled in civil engineering at the University of California, Berkeley (UC Berkeley). In her senior year she met the Arts and Crafts architect Bernard Maybeck, who had been hired to teach drawing. He also conducted informal seminars in architecture for his favorite students. In 1894 Julia became the second woman to receive Berkeley's BS in civil engineering. She worked for Maybeck for a while.

In 1896, encouraged by him and financed by her family, she went to Paris intent on studying at the *École Nationale Supérieure des Beaux-Arts*, the prestigious design school and exclusively male domain. Julia sat the *École's* entrance examination in 1897, only to be turned down. In a letter to a cousin, architect Pierre LeBrun, she complained that she had been excluded on the basis of gender. Again taking the examination in November 1898, she was placed in the top four percentile candidates and, commended by the French architect Jean Louis Pascal and supported by letters from Maybeck and "other important figures," became the first woman admitted to the school. She chose the atelier of François-Benjamin Chaussemiche and in 2 years in the Second Class, she was awarded seventeen mentions and two medals in architecture, design, and mathematics. From August 1900 she spent 2 years in the First Class, receiving another eight mentions and two medals. Graduating in 1901, she continued to draft for Chaussemiche; in her free time she traveled in Europe, making sketches.

When Julia Morgan returned to San Francisco in 1902 she worked for John Galen Howard, who was then designing buildings at UC Berkeley, including the Hearst Mining Building and the Hearst Greek Theater, both endowed by Phoebe Apperson Hearst. Mrs. Hearst's patronage was helpful to Morgan as she began her professional career.

In Alameda County, 250 miles south of Wyntoon, Phoebe's county estate realized by Maybeck, lay another property . . . on which, in 1895, [William] decided to raise an edifice "totally different in every way from the ordinary country home." He commissioned A.C. Schweinfurth to build the . . . *Hacienda del Pozo de Verona*, described by the architect as "provincial Spanish Renaissance." . . . Phoebe was in Europe when she was apprised of this surreptitious endeavour. She hastened west and expropriated the expropriator. Desiring to make the *Hacienda* into a home for herself, she commissioned Morgan to remodel it. Here, in 1902, Julia Morgan met William Randolph Hearst for the first time. . . .⁸

In 1904 Morgan was licensed to practice architecture in California and opened her first office. That year she built a Mission-style bell tower at Mills College in Oakland, a 72-foot high reinforced concrete structure that withstood the 1906 San Francisco earthquake. The recognition she received for

this established her practice, but the earthquake destroyed the building that housed her office. In 1907 she relocated in the Merchants Exchange Building with a partner, Ira Wilson Hoover, who had also worked in Howard's office. They had several sizeable commissions, including the Mission-style Carnegie Library at Mills College (1905–1906); structural renovation of the Reid Brothers' quake-damaged Fairmont Hotel (1906–1907); and the arts and crafts style St. John's Presbyterian Church in Berkeley (1908–1910). In 1910, ever footloose, Hoover moved back to the East Coast and the firm became simply "Julia Morgan, Architect."

She designed several arts and crafts-style residences in Piedmont, Claremont, and Berkeley. Architectural historian Elinor Richey writes that in using structure as a means of architectural expression she was a decade ahead of most Californian contemporaries and claims that her early redwood shingle houses gave rise to the Bay Area shingle style. A third of Morgan's clients were women or "increasingly active women's organizations"; from 1912 she produced nearly thirty works for the Young Women's Christian Association in Utah, Hawaii, and California, including thirteen arts and crafts buildings at Asilomar near Monterey.

Her eclectic architectural vocabulary included Classical, Gothic, Renaissance Revival, Mediterranean, Tudor, Spanish Colonial, and even extended to Islamic and Chinese styles. All grist to her aesthetic mill, they were "pieced together and overlapped with arts and crafts elements as needed." Boutelle writes,

Her primary attention was directed to the client's wishes and to the site; everything else followed from those two considerations. Before designing a house . . . , Morgan would visit the family, often sitting on the floor with the children, and make every attempt to understand what the client wanted, however quirky. . . . After this information was gathered, the plan itself became her most significant concern. . . . [She] designed each building from the inside out, with the exterior being of secondary importance.⁹

So Morgan never developed a distinctive personal style. Her clients always got what they wanted. That boded well for her working relationship with William Randolph Hearst. When he was a child, his father had once said, "There's one thing sure about my boy Bill. I've been watching him and I notice that when he wants cake, he wants cake, and he wants it now. And I notice that after a while he gets the cake."

There is a myth that Hearst "made" Morgan; that he found this relatively unknown architect to design his estate, "gambled on her qualifications and then monopolized her career." That was not the case. Morgan had been known to his mother since the turn of the century—perhaps even earlier. When she began work on San Simeon, she had already produced about four hundred fifty buildings and projects, including unrealized designs for a house in Sausalito (1912–1914), a cottage at Grandview Point near the

Grand Canyon (1914), and the *Los Angeles Examiner* building of 1915 for Hearst himself.

Throughout the three decades that *La Cuesta Encantada* occupied her weekends, Julia Morgan built other Hearst commissions: a Bavarian-style village on Wyntoon (1924–1943); Jolon, the hunting lodge at Milpitas Ranch—really an adjunct to the Castle (1926–1928); the Phoebe Apperson Hearst Memorial Gymnasium at UC Berkeley (1926–1927, with Maybeck); alterations to Marion Davies’ Santa Monica beach house (ca. 1929); and remodeling the Hearst Building in San Francisco (1937). Unrealized projects included a hotel at the Grand Canyon (1936), a Medieval Museum for San Francisco’s Golden Gate Park, and the Babicora Hacienda in Chihuahua, Mexico (both in the 1940s).

Over the same period she conducted a thriving “week-day” practice from San Francisco, continuing throughout World War II. In 1951, age 79, Julia Morgan finally retired; after years of failing health, she died in February 1957. It is outrageous that when the Enchanted Hill became the property of the State of California and was later opened to the public Morgan’s role in its creation was ignored. Visitors to the site—hundreds of thousands of them each year—see tributes to Hearst and his mother; but as Cockburn asserts, “if *La Cuesta Encantada* is the story of a dream arduously achieved, it was Morgan rather than Hearst who prevailed over the more formidable odds.”

LA CUESTA ENCANTADA

Hearst had formed a rather clear idea of what he wanted to build. In a letter to Morgan, noting that the 1915 San Diego Exposition “is the best source for Spanish in California,” he suggested that an alternative to Mission style was “to build . . . in the Renaissance style of Southern Spain. We picked out the towers of the Church at Ronda. I suppose they are Renaissance or else transitional, and they have some Gothic feelings.” Having thus marked his territory, Hearst confessed (as though it wasn’t obvious), “I am not very sure about my architecture. . . . But after all, would it not be better to do something a little different than other people are doing out in California as long as we do not do anything incongruous?” He assured the architect, “I would very much like to have your views on what we should do in regard to this group of buildings, what style of architecture we should select. . . . I do not want you to do anything you do not like.” So Spanish it would be, with variations—it might be said, “with licence.” Art historian Patricia Failing wittily categorizes the architectural style of *La Cuesta Encantada* as “Bastard-Spanish-Moorish-Romanesque-Gothic-Renaissance-Bull Market-Damn-the-Price.”

Julia Morgan described the project, “We are building . . . a sort of village on a mountaintop overlooking the sea and ranges of mountains, miles away from any railway, and housing incidentally [Hearst’s] collections as well as his

family.” The three fussily ornamented “Mediterranean revival” guest houses, with a total of forty-six rooms, were completed by 1922. Hearst lived in the first and largest until the central wing of *La Casa Grande*, the main house, was ready for occupation in 1927. At a given time over the next 28 years anything between twenty-five and 125 laborers, tradesmen, and craftsmen—masons, carpenters, concrete workers, plasterers, tilers, woodcarvers, decorators—would be employed on building the house. During the Great Depression it was the largest private construction site in California. Hearst’s financial problems hampered progress for a while after 1937; in 1946 it resumed until early 1948. But the castle was never finished.

Once *La Casa Grande* was underway, Morgan maintained an on-site studio, “the shack”—a humble wooden lean-to against the great house. On nearly 560 Friday nights between 1919 and 1939 she made a 6-hour train journey from San Francisco to San Luis Obispo, then traveled 50 miles to San Simeon by taxi, arriving at 2 A.M. After a weekend working on site she returned to her city office in time for other business on Monday morning, leaving her superintendent Camille C. Rossi in charge at Hearst Castle.

As well as the houses atop the enchanted hill, Morgan designed pools, a zoo and aviary, a poultry ranch, landscaping, greenhouses, tennis courts, and a 5-mile long pergola, tall enough for “a tall man with a tall hat on a tall horse.” She reconstructed the pier at San Simeon village—from 1919, building materials for the estate arrived by steamer—and oversaw the construction of steel-framed warehouses where those materials were stored until chain-driven trucks hauled them up the steep grade to the site. In the village, she built five Mission-style timber-framed residences for Hearst’s supervisors and a reinforced concrete warehouse to temporarily house artworks awaiting installation in the house and garden. She also assisted Hearst to appropriately distribute his vast art collection through the buildings and the gardens.

It seems that Morgan was given the final word in professional and technical matters from the outset; in December 1919 Hearst told her, “I make a lot of suggestions and if any of them are impractical or imperfect from an architectural point of view, please discard them and substitute whatever you think is better.” Almost as a matter of course, he impulsively and frequently revised his requirements, sometimes after a part of the work was finished. For example,

Following completion of a fireplace in *Casa del Sol*, Hearst decided he wanted it moved to the other side of the room. That done, he decided he liked it better the first way. After *Casa Grande*’s towers were finished, Hearst decided he wanted to have bedrooms in them. Morgan designed new towers to accommodate these “Celestial Suites.” The famous Neptune Pool evolved over twelve years from a lily pond into an Olympian terrace complete with cypress trees, a cascading fountain, marble colonnades, statues, and the facade of a Greco-Roman temple.¹⁰

Clearly, Morgan knew how to handle her ambivalent client, and the professional relationship was secure and unruffled. Over the course of the work many formally addressed letters that “focused on the details of the construction,” passed between the pair. The more than one thousand that survive are evidence of “a collaborative relationship . . . in which Morgan gave Hearst’s ideas great respect.” And more than ten thousand of Morgan’s drawings survive. She employed a woman, C. Julian Mesic, to build a model that showed progress at San Simeon; when it grew too large to ship, she mailed tinted photographs of the current state of the buildings to Hearst.

The four-story *La Casa Grande* crowned the site, its twin towers flanking a gabled pavilion around the main entrance on the west façade. As noted, Hearst had nominated a church in Ronda, Spain—the cathedral of Santa Maria la Mayor—as a model; other sources suggest the eighteenth-century Jesuit mission church of San Xavier del Bac in Tucson, Arizona. Possibly the towers were based on the Spanish cathedral and the general composition of the façade on the colonial mission church. Founded upon piers reaching bedrock and braced to resist earthquakes, the *in situ* reinforced concrete walls were clad externally with white marble. Their flamboyant ornamentation incorporated Spanish Gothic sculpture and other architectural fragments—and *fragments* is the word—from Hearst’s collection, augmented with cast reconstituted stone.

Originally, *La Casa Grande* had “about” 115 rooms including a two-story, 2,400 square foot assembly room extending across the front; a 2,000 square foot dining room; a movie theater; two libraries; a billiard room; and a beauty salon. There were twenty-six bedrooms and thirty-two bathrooms (by 1951 there were thirty-eight bedrooms and forty-one bathrooms) and fourteen sitting rooms. And there were thirty fireplaces. In addition, the main building’s service wing housed a kitchen and pantry, a servants’ dining room, twelve bedrooms, ten bathrooms, and seven other rooms used by domestic staff.

From 1927 until 1937 Hearst occupied the third-floor Spanish Gothic Suite, full of objects bought from the collection of Jose Maria de Palacio. Describing how he worked “through the night in his private office behind the Gothic study, reading his newspapers [airmailed] to San Simeon from all quarters of his empire,” Cockburn opines, “San Simeon must have seemed to him to be the final résumé: the triumph of the New World, expressed as a triumph of art and architecture imported from the Old, down the centuries from the Athens of Phidias and Pericles.” Indeed, the house’s interiors, crammed with *objets d’art*, were enriched with eclectic ornament of plaster, tile, cast stone, and carved wood, and with whole elements of buildings—doors, mantels and even ceilings—plundered from post-Great War Europe. Hearst once boasted of sending an agent “pictures of possible looking patios and cloisters, and surely some of those Signors, Dukes, etc. are hard enough up to part with one of them.” Cockburn calls Hearst’s agents, “shock troops [who] fanned across Europe in the service of his rabid collecting.” The publisher’s lasting and

particular enthusiasm for ancient Greek vases meant that they represented the most extensive part of his collection at the castle. But Hearst's vast art collection—paintings, tapestries, religious textiles, oriental rugs, antiquities, sculptures, silver, furniture, and antique ceilings—was so extensive that *La Casa Grande* housed just a tenth of it. Much of the rest was at his other properties or in warehouses on both coasts. When much of it was sold off in the late 1930s, and even at the time of his death, some had never been unpacked; some had never been catalogued, and some pieces he had seen only in photographs.

Julia Morgan was complicit in his extravagant theatricity. American writer David Peevers claims that he hired “to turn [Hearst’s] fancies into reality,” she was “continually jerked around by Hearst amongst various wings and salons. . . . As Hearst hauled in cathedral ceilings [*sic*] and Roman columns, Morgan did her best to rake his accumulation into something habitable.”¹¹ But Morgan herself had insisted, “What we would like are ceilings, especially door trims, interesting architectural motifs—not so much furniture as objets d’art” because she needed “big things to use to make settings with. . . .” *Make settings?* The expression seems to reduce the architecture, inside and out, to a mere backdrop for the great man’s accumulated artefacts.

Any essay about The Enchanted Hill must mention the pools. The first version of the Neptune Pool was a lily pond in Hearst’s proposed Temple Garden (complete with temple). In March 1924 he instructed that it be lengthened and deepened, to be used as a swimming pool by the family. Morgan redesigned it. Then in 1926 he decided that he wanted a larger pool with a cascade and more statuary; Morgan again obliged, and by 1927 she completed the second version with concrete steps at the southern side, down which water flowed from natural springs. Dressing rooms were added in 1928. The third and final version, built in 1934–1936, was over 100 feet long and 60 wide, its semicircular ends flanked by segmental classical loggias built of Vermont marble and watched over by groups of classical statuary. Its visual focus is a Roman temple portico that Hearst had purchased for his collection; a terrace opposite the portico has seventeen dressing rooms, with baths and mirrors. Reinforced concrete beams suspend the pool, so that if there were an earthquake it will sway but not break. The indoor Roman Pool and the surrounding room were built 1927 to 1934. The surfaces from floor to ceiling were decorated by Camille Solon with (mainly) blue and gold 1-inch square glass mosaics, in patterns based on the vaults of the Byzantine Tomb of Galla Placidia in Ravenna, Italy. Placed around the pool are eight marble statues, rough copies by Carlo Freter of classical works. The Roman Pool complex was intended to include sweat baths, a handball court, an exercise room, and dressing rooms.

As a general rule, Morgan was reluctant to surrender the roles of landscape architect and interior designer to another, according to her associate Walter Steilberg: “Julia had a horror of interior decorators coming in and spoiling

a house and of landscapists who were not really trained.” The landscaping of *La Cuesta Encantada*, with what Morgan called its “endless steps and terracing,” and employing Italian cypresses, Canary Island date palms, and California oaks as its vertical elements, has been acclaimed as one of America’s finest Italian and Spanish gardens. The winding “Esplanade” was bordered by colorful specimen plants including agapanthus, azaleas, camellias, eucalyptus, citrus trees, oleanders, rhododendrons, and purple lantanas. Statues, balustrades, and terraces were as important in Hearst’s garden as trees and flowers and “displayed the sparkling fountains and statuary Hearst collected from around the world.” The ornamental staircases that connected the broad sweeping terraces and the low retaining walls were draped with bougainvillea, fuchsias, lavender, star jasmines, and wisteria. The terrace in front of *La Casa Grande*’s main entrance was more formally laid out; Hearst was passionate about his roses, so roses predominated.

Away from the houses and landscaped areas at San Simeon, he established the world’s largest private zoo. He began collecting in 1923 and at its peak the grandly named Hearst Garden of Comparative Zoology held fifty species of herbivores—in all, more than three hundred animals—in fenced enclosures. White fallow deer formed the largest herd, and there were other species of deer from India, Europe, and Asia. There were also African and Asian antelope, Bactrian camels and dromedaries, llamas, ostriches, kangaroos and emus, Barbary and Alaskan big horned sheep, musk oxen, yaks, zebras, and even giraffes. Hearst wanted his guests to believe that they were driving through an area enclosing animals in their natural state. After visiting The Enchanted Hill, the English author P. G. Wodehouse, noting that “the specimens considered reasonably harmless are allowed to roam at large,” drily observed, “You are apt to meet a bear or two before you get to the house, or an elephant, or even Sam Goldwyn.” In fact, the zoo had two parts. A menagerie of less sociable creatures—at various times, bears, big cats, apes and monkeys, macaws, kinkajous, coatimundis, a tapir, and an elephant—was located about 100 yards north of the *casas* in unprepossessing “animal shelters” designed by Morgan. Like most of the outbuildings at San Simeon, they were built of reinforced concrete.

About 20 years earlier Julia Morgan had pioneered the material on the West Coast. It first had been used to make boats and garden pots in France early in the nineteenth century, employing a technique that was patented in 1867. America’s first landmark reinforced concrete building was William E. Ward’s house in Port Chester, New York by the architect Robert Mook. No doubt Morgan became familiar with reinforced concrete when in France, and her use of it for UC Berkeley’s Hearst Greek Theatre in 1903 is exactly contemporary with Auguste Perret’s celebrated apartment building at 25 bis Rue Franklin, Paris; it predates by 3 years Frank Lloyd Wright’s internationally feted Unity Temple in Oak Park, Illinois, sections of which are also in reinforced concrete. Structurally speaking, Morgan’s buildings at San Simeon

were not put to the test (as it were) until December 22, 2003. Hearst Castle was evacuated when a big earthquake rocked the region, but as the *San Francisco Chronicle* reported, “*Casa Grande* and its sumptuous outbuildings survived with no apparent structural damage.”

“THE SOCIAL LIVES OF PROMINENT PEOPLE. . . ”

In the late 1920s and early 1930s Hearst and Marion Davies threw extravagant and extended house parties at the castle for his business associates and movie stars. Some guests flew in to the estate’s airfield. Others arrived at San Luis Obispo station from Los Angeles in a Hearst-owned private railroad car to be chauffeured to the house. Wodehouse marveled that there were “always at least fifty guests. . . . The train that takes guests away leaves after midnight, and the one that brings new guests arrives early in the morning, so you have dinner with one lot of people and come down to breakfast next morning to find an entirely fresh crowd.” Someone has written that an invitation “was highly coveted: it meant either that you were rich and famous, or that you’d get to fraternize with those who were. San Simeon was a place where connections were made, power was wielded, and alliances forged.” *La Cuestra Encantada*’s “A list” was (of course) a Hollywood *Who’s Who* that included, to name a few of the perhaps still-familiar names: Gary Cooper, Charlie Chaplin, Joan Crawford, Errol Flynn, Greta Garbo, Clark Gable, Cary Grant, Harpo Marx, Dick Powell, and Barbara Stanwyck. Studio bosses Louis B. Mayer, Irving Thalberg, and Jack Warner also enjoyed Hearst’s hospitality; so did politicians such as Calvin Coolidge and New York Mayor Jimmy Walker, and celebrities such as Charles Lindbergh. Katharine Hepburn once said that turning down an invitation was her biggest mistake in show business.

The Lord of San Simeon imposed his own contradictory moral code. Except for Hearst and Marion, only married couples could share rooms. He allowed neither coarse language nor immodest dress, and though he could see his mistress fast declining into alcoholism, he despised drunkenness. He was only a moderate drinker himself, with no taste at all for spirits. Although Prohibition remained in force until 1933, he served alcohol to his guests. William Randolph Jr. recalled, “Guests usually limited themselves to one drink. Pop . . . put the word out that no guests were to bring their own booze to the place. But some did and got drunk. He would have someone ask them to leave, and they would be driven to the [San Luis Obispo station.]”

Guests were left to amuse themselves during the day—there was plenty to occupy them—but all were expected to be present for dinner. Evenings would begin with cocktails before dinner. Guests would gather in the Assembly Room, and Hearst would enter through a concealed door. Dinner was served at nine, and the group would move into the Refectory with its carved coffered ceiling, and replete with arched Gothic windows, carved fifteenth-century

choir stalls, Sienese silk festival banners, and chandeliers. Diners were seated on antique Italian “Dante” chairs at a long oak table. Laid out beside the sumptuous silverware were ketchup bottles, mustard jars, and paper napkins; all of which served as “a reminder to all that Hearst . . . wanted informal western hospitality to be the tone of his own convivial celebrations.” Wodehouse noticed that diners were placed according to the host’s preference for their company,

with Hearst sitting in the middle on one side and Marion Davies in the middle on the other. The longer you are there, the further you get from the middle. I sat on Marion’s right the first night, then found myself being edged further and further away till I got to the extreme end, when I thought it time to leave. Another day, and I should have been feeding on the floor.¹²

At 11 o’clock guests would watch a newsreel, followed by a movie. Often Hearst would grow irritated a half-hour into a film and “instruct the projectionist to substitute an old Davies feature.”

“DISNEYLAND MEETS HOLLYWOOD”—SO WHAT?

It has been claimed that *La Cuesta Encantada* is not a “freak” but a “representative example of the American country-house tradition.” One pusillanimous anonymous Australian critic, writing from a socialist-objective Modernist perspective, recognizes (and ridicules) the castle as an “easy target of scorn.” Labelling it “a monument to the bowerbird tastes of [a] latter day carpetbagger,” he continues,

A cashed-up Hearst swept through a devastated cash-strapped Europe after both world wars buying up decorative arts . . . without much of a coherent plan of what to do with it all when he got back home. . . . Most of [Hearst Castle] is of the “Mediterranean Revival” style with various other styles thrown in . . . a sort of rich man’s pastiche of Disneyland meets Hollywood. The main building looks like a cross between a Mediterranean church and a Tyrolean Berghaus. The plethora of religious decoration on display almost leads one to think that Hearst was a devout man of Catholic faith. Apparently the only Catholic thing about [him] was his taste.¹³

What can be concluded about the architectural quality of Hearst Castle in this present age of fading post-Modernism? Form no longer necessarily follows function; a house is no longer Le Corbusier’s “machine for living in”; and certainly less is not more anymore. Anything goes, just like it did when Mr. Hearst built his dream house. Peevers remarks, “It’s certain that absolute power combined with unlimited wealth accounts for some of the most heinous architecture in all of history. But occasionally these lurid legacies . . . are

of such a scale and lunacy that they become oddly endearing. Witness Hearst Castle.”

As is the case with other buildings treated within these pages, the iconic status of William Randolph Hearst’s great house lies neither in its stylistic integrity—because it has none—nor in the considerable patience and professional skill of Julia Morgan, its architect. Rather, it springs from the popular appeal of its associations with a past generation of the “beautiful people” at the very end of the Gilded Age. It is coincidental that it was opened to the public just 2 years after the rerelease of *Citizen Kane*, when popular curiosity had been excited by Xanadu, the “stately pleasure-dome.”

NOTES

1. Cockburn, Alexander, “Ranch, my Foot; it’s a Castle,” *The Drawbridge* (Autumn 2006). www.thedrawbridge.org.uk/issue_3/
2. Azavedo, Michael, “The Battle over Citizen Kane.” www.pbs.org/wgbh/amex/kane2/
3. Nasaw, David, *The Chief: The Life of William Randolph Hearst*. Boston: Houghton Mifflin, 2000, 574.
4. Nasaw, 21–22.
5. Nasaw, 538.
6. Boutelle, Sara Holmes, *Julia Morgan, Architect*. New York: Abbeville, 1995, introduction.
7. Wilson, Mark, *Julia Morgan: Architect of Beauty*. Salt Lake City, UT: Gibbs Smith, 2007.
8. Cockburn.
9. Boutelle.
10. Boisson, Steve, *The Hearst Castle: A Castle for the Chief*. Available at http://away.com/primedia/arts_arch/hearst_castle.adp
11. Peever, David, “A Boy and His Castle.” www.travelmag.co.uk/article_299.shtml. Originally published in the Lonely Planet Guide to California.
12. Cockburn.
13. “Razzbuffnik,” “La Cuesta Encantada . . .” <http://blog.allthedumbthings.com/2007/05/28/>

FURTHER READING

- Boutelle, Sara Holmes. *Julia Morgan, Architect*. New York: Abbeville, 1995.
- California State Parks Service. *Hearst Castle: Hearst San Simeon State Historical Monument*. Sacramento, CA: The Service, 2001.
- Guiles, Fred Lawrence. *Marion Davies*. New York: Bantam, 1972.

- Henke, Ellen. "La Cuesta Encantada: The Formal Gardens of the Hearst Castle. . . ." *Flower and Garden Magazine* (February-March 1996).
- Hoopes, Roy. "The Forty-Year Run." *American Heritage Magazine*, 43(November 1992).
- Kastner, Victoria. *Hearst Castle: The Biography of a Country House*. New York: Abrams, 2000.
- Kastner, Victoria, and Jana Seely. *Hearst Castle: The Official Pictorial Guide*. Santa Barbara, CA: Companion Press, 1991.
- Kastner, Victoria, and Jana Seely, eds. *San Simeon Revisited: The Correspondence between Architect Julia Morgan and William Randolph Hearst*. San Luis Obispo: Library Associates, California Polytechnic State University, 1987.
- Longstretch, Richard W. *Julia Morgan: Architect*. Berkeley, CA: Architectural Heritage Association, 1977.
- Nasaw, David. *The Chief: The Life of William Randolph Hearst*. Boston: Houghton Mifflin, 2000.
- Pavlick, Robert. "Something a Little Different." *California History* (Winter 1992-1993), 462-477.
- Procter, Ben H. *William Randolph Hearst: The Early Years, 1863-1910*. New York: Oxford University Press, 1998.
- Procter, Ben H. *William Randolph Hearst: The Later Years, 1911-1951*. New York: Oxford University Press, 2007.
- Quacchia, Russell L. *Julia Morgan, Architect: and the Creation of the Asilomar Conference Grounds: including a Special Comparison with the Hearst Castle*. Philadelphia, PA: Xlibris, 2005.
- Swanberg, William A. *Citizen Hearst, a Biography of William Randolph Hearst*. Norwalk, CT: Easton Press, 1988.
- Wilson, Mark. *Julia Morgan: Architect of Beauty*. Salt Lake City, UT: Gibbs Smith, 2007.
- Winslow, Carleton M., and Nickola L. Frye. *The Enchanted Hill: The Story of Hearst Castle at San Simeon*. Millbrae, CA: Celestial Arts, 1980.



Courtesy Library of Congress

Hoover Dam, Colorado River, Nevada/Arizona

“A symbol of American ingenuity”

Over 726 feet high and 660 feet thick at its base, Hoover Dam stretches 1,444 feet across the Colorado River between the breccia walls of Black Canyon, 30 miles southeast of Las Vegas. The beginning of the U.S. Bureau of Reclamation's Lower Colorado Dams Project, it was completed in fewer than 5 years. Davis Dam, 45 miles downstream, followed in 1951 and Parker Dam, 110 miles further, in 1954. The principal means of effecting flood control in the southwestern United States, Hoover Dam also provides water for nine cities and supplies hydroelectric power for 1.3 million people. Behind it, the Colorado backs up for 110 miles in Lake Mead, harnessing irrigation water for the Palo Verde Valley, the Colorado River Indian Reservation, the Yuma and Gila projects in Arizona, and California's Imperial and Coachella valleys.

The American Studies Program at the University of Virginia distills the iconic status—more correctly, the iconic *stature*—of Hoover Dam:

Almost from the beginning of its construction, the Hoover Dam possessed an epic quality that animated the national imagination. Perhaps originally it was the very bigness of the dam that attracted tourists and inspired writers. Soon it became apparent that the meaning of the dam itself was beyond even that of a structure that equaled the vast landscape it inhabited; the dam, and the Americans who built it, controlled nature in a new and powerful way. The Hoover Dam, built during America's worst depression, spoke directly and profoundly to a people who were afraid and unsure; the massive structure silently addressed the power of technology, the hope for the future, and the ability of man to change the natural course of things. As it rose physically from the desert floor, damming the Colorado and altering the very shape of the land, its image rose from the desert of the 1930's and offered an alternative narrative to the that of the Great Depression.¹

Historian Theodore Steinberg's assertion that dam was "a symbol of American ingenuity and the mark of a nation that was fast rising to global dominance . . . supposed to signify greatness, power and domination. . . . It was planned that way"² is affirmed by another (anonymous) writer's observation that the act of building the dam as an "icon of faith" because "the narrative that arose in the popular imagination contained all the elements that would validate and promote the government's role in such projects."

As though it needed formal recognition, in 1955 the American Society of Civil Engineers (ASCE) included Hoover Dam among America's Seven Modern Civil Engineering Wonders. It was added to the National Register of Historic Places in 1981, designated an ASCE Historic Civil Engineering Landmark in 1984, a National Historic Landmark in August 1985, and a Monument of the Millennium in 2001. Over a million people visit it each year.

THE COLORADO RIVER: EUROPEAN EXPLORATION

The seventh longest river in the United States falls over 12,000 feet on its 1,440-mile course from the Rocky Mountains to its natural outflow in the

Gulf of California. Fed by tributaries and now shaped by dams, it flows through Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, California, and into Mexico; its drainage basin covers one-twelfth of the area of the continental United States. The Colorado turns south after its confluence with the Virgin River; below Hoover Dam it forms part of the Arizona–Nevada and Arizona–California state borders. Then it runs through a broad estuarine plain, much of its channel contained within levees that cut off its flow, to the low-lying Salton Trough in southern California. Its lowest reaches and its once tidal delta are now little more than a trickle.

Spanish explorations of the Colorado in the south were prompted by the quest for either precious treasure or precious souls—perhaps both and almost certainly in that order. In July 1539 Hernándo Cortéz sent Francisco de Ulloa to find the “streets lined with goldsmith shops . . . and doorways studded with emeralds and turquoise” of the fabled Seven Cities of Cibola. Exploring the Gulf of California, Ulloa reached the estuary of the Colorado but did not navigate it. The following year Hernándo Ruiz de Alarcón ventured 100 miles upstream; Captains Melchior Díaz and García Lopez de Cárdenas, members of Francisco de Coronado’s overland expedition also reached the river. The Spanish showed little further interest until 1604 when Juan de Oñate, governor of New Mexico, seeking a route to the west coast of North America, followed the Colorado to its mouth. About 100 years later a Jesuit Eusebio Kino of San Xavier de Bac Mission investigated the estuary, and for the rest of the eighteenth century most explorers were priests more concerned with converting Native Americans than investigating the geography of the river. In 1770 Father Francisco Garcés, also of San Xavier de Bac, traveled down the Gila River and almost to the mouth of the Colorado, which he renamed because of its red color—formerly it was called Rio del Tizon or Rio de Buena Guia. In 1776 the Franciscans Silvestre Velez de Escalante and Francisco Dominguez, returning from an unsuccessful attempt to find a northern route to Monterey from Santa Fe, crossed the Colorado near Marble Canyon.

American beaver trappers charted the Colorado’s northern reaches. In March 1825 the fur traders William Ashley and Andrew Henry accompanied Jedediah Smith’s expedition from the River Platte westward across South Pass in the Continental Divide. They navigated Green River, a tributary, and provided the first authentic information about the upper Colorado. In August 1826 Smith, in search of furs, led another expedition from near the Utah–Idaho border, reaching the Virgin River near the southwestern corner of Utah in October. Following it, he arrived at the Colorado. A little over a year later, one Sylvester Pattie, his son James Ohio, and six other trappers arrived at the junction of the Gila and Colorado rivers. They rafted down to the Colorado’s tidal reaches, where they buried their furs and traps before trekking overland to San Diego. There, officers of the incipient Mexican Republic accused them of spying for the Spanish government, and they were imprisoned for several months in the Presidio. Undertaking a second expedition in 1828, James Pattie followed the Gila to the Colorado, where he turned north and continued

for 300 miles upstream to a place “where the mountains shut in so close upon the shores [of the river] at an immense depth beneath.” This was probably at the mouth of the Black Canyon, later the site of the Hoover Dam.

In 1856 one Captain George Johnson began trading on the Colorado with the side-wheeler *General Jesup*. In December 1857, despite a disappointed application for government funding of a project “to determine the limit of navigation” he traveled the river to within 20 miles south of Black Canyon. At almost exactly the same time the War Department sent Lieutenant Joseph Ives of the Topographical Engineers Corps to investigate the logistical feasibility of transporting troops and supplies on the Colorado; his stern-wheeler *Explorer* reached Black Canyon but struck a rock and was abandoned.

Major John Wesley Powell, “the greatest explorer of the Colorado” made the connection between the river’s ends in 1869; he was then 35 years old and a hero of the Civil War, in which he had lost an arm. Late in May, traveling in four specially-built boats with a party of nine others, he left Green River in Wyoming. Ninety-eight days later six men—the others had deserted—ended their hazardous 900-mile journey at the mouth of the Virgin River. Funded by Congress, Powell embarked on an extended survey in May 1871; it took him 4½ months to reach the mouth of the Paria River from Green River. In August 1872 he started down river from Lee’s Ferry, but because of dangers he went no further than Kanab Canyon near the Grand Canyon. Sponsored by the federal government he continued to study the Colorado River region and “became impressed with the problems of settling the arid western lands.” Congress published his *Report on the Lands of the Arid Region of the United States* in 1878; in it, he proposed “legislation for the organization of irrigation and pasturage districts.”

TAMING THE COLORADO

Other ambitious proposals were made to control and utilize the vast volume of water that flowed down the Colorado. For example, by the time that he died in 1887, a prominent San Francisco physician named Oliver M. Wozencraft had pursued for 30 years his vision to irrigate southern California’s Imperial Valley with water from the great river, using a dry channel known as the Alamo River. In 1859 the Californian State Legislature asked Congress for 6 million acres of land, including the entire Salton Trough; if his idea could be realized, Wozencraft would be granted rights to it—that was necessary if he was to secure finance for his scheme. He spent his life savings trying to excite the federal government; it showed cautious interest, but when events were overtaken by more urgent issues, not least of all the Civil War, the plan was shelved.

In 1891 the Californian John C. Beatty, “a man of imagination and foresight,” founded the Arizona and Sonora Land and Irrigation Co. to operate

on the Arizona side of the river. His proposal later changed, following the assurances of irrigation engineer Charles R. Rockwood that 2 million acres in the Salton Trough and Baja California could be served by a single channel. Rockwood proposed a 40-mile conduit that would carry water into Mexico from 12 miles above Yuma, then westward and back across the border to Imperial Valley. The venture, rebadged as The Colorado River Irrigation Co., declared bankruptcy during the 1893 stock market panic, but Rockwood revived the scheme 3 years later. In August 1900, backed by George Chaffey, who had successfully launched irrigation settlements in Australia, The California Development Co. began building the Alamo Canal to deliver water to the Alamo River; 9 months later the Colorado flowed into it, and by September 1904 no fewer than 700 miles of canals were irrigating 75,000 acres.

In 1902 President Theodore Roosevelt signed the Reclamation Act, by which sales revenue from semiarid public lands financed irrigation projects in most western states. In turn, sales of newly irrigated land funded subsequent projects, setting up a cycle that eventually led to the damming of most major western rivers. The Act also created within the Department of the Interior the U.S. Reclamation Service (later the U.S. Bureau of Reclamation). The potential utilization of the Colorado River was on its agenda.

Silt deposits demanded almost continuous dredging of the Alamo Canal. A diversion canal was cut in the Colorado's west bank, and a flood protection levee system was built. But in March 1905 the river, swollen by heavy rains, breached it and inundated farms—indeed, whole communities—and the Southern Pacific Railroad's main line in the Imperial Valley. Partially changing its course, it continued to flow into the Salton Trough until February 1907, destroying 330,000 acres of agricultural land and forming the Salton Sea. Roosevelt paid for the Southern Pacific Railroad Company to close the breach, and water was once again diverted through the Alamo Canal.

The wheels of government began to grind slowly, as wheels of government do. About a decade later, perhaps in response to the unprecedented 1916 flooding of the Yuma Valley or to representations from the Imperial Irrigation District, Arthur Powell Davis, director and chief engineer of the Bureau of Reclamation (and, incidentally, John Wesley Powell's nephew), suggested in 1918 that the Colorado's capriciousness could be countered by constructing a dam near Boulder Canyon. Accordingly, the Department of the Interior created the All-American Canal Board and subsidized a study of a canal to serve the Imperial Valley that would be entirely within the United States—hence “All-American”—unlike the Alamo Canal, most of which was in politically unstable Mexico. In July 1919 the board recommended building such a canal, with a diversion dam and desilting works, and also that the federal government should construct large multiple-purpose reservoirs on the lower Colorado. Enabling legislation was introduced into the Congress in 1919 and 1920, but the bills failed to come to a vote. In May 1820 Congress passed the

Kincaid Act, calling for further investigation. Late in February 1922 Davis (as the report's principal author) and Secretary of the Interior Albert Fall submitted *Problems of Imperial Valley and Vicinity* to the federal government. The so-called Fall–Davis report recommended building the All-American canal and a high dam on the Colorado River “at or near” Boulder Canyon and proposed that the capital outlay could be recouped by selling hydroelectric power to southwestern cities. Its findings would be developed in the Bureau of Reclamation's *Report on the Problems of the Colorado River* (the Weymouth Report) 2 years later.

President Herbert Hoover, with some training in geology and mining engineering, was a key player in the realization of the dam that bears his name. The Boulder Canyon Project was the pièce de resistance of his campaign for flood control, river management, and generation of hydroelectric power; and when he was appointed secretary of commerce in 1921, the construction of a high dam in Boulder Canyon had been among his earliest initiatives. In 1922 Hoover settled old disputes and secured agreement over water allocation. The Colorado River Compact (aka the “Hoover Compromise”) signed on November 24 partitioned water rights between Upper Basin States (Wyoming, Colorado, Utah, and New Mexico) and Lower Basin States (Arizona, California, and Nevada), making the construction of the dam possible. Only Arizona, disgruntled because it “considered the dam a theft of its natural resources,” rejected the Compact. The Supreme Court would confirm the Lower Basin apportionment in 1963, after years of litigation.

In April 1922 Representative Philip Swing and Senator Hiram Johnson unsuccessfully introduced a bill to authorize the Fall–Davis proposals; over the next 6 years the matter was reintroduced three times before Congress finally being passed by Congress. The final version called for a dam with a reservoir capacity of at least 26 million acre-feet and a power plant that could be leased to public or private organizations. President Calvin Coolidge signed The Boulder Canyon Project Act into law on December 21, 1928; about 6 months later, Hoover, by then president, proclaimed it to be in effect. The choice of site had been left jointly to him (while he was president-elect) and Ray Lyman Wilbur to the secretary of the interior. The Act also authorized the All-American Canal System; its construction would commence in 1934.

Hoover was inaugurated on March 4, 1929. It was not until 18 years later that Congress would catalogue his contributions to the dam in an April 1947 Congressional resolution establishing in law its name as “Hoover Dam”—after years of bitter, politically fuelled debate. Besides proclaiming the Act, (which any president could have done), Hoover “took an active part in settling the engineering problems and location of the dam in Black Canyon; was required by the Project Act to obtain power and water contracts adequate to assure some \$200 million of revenues before construction was begun; settled the difficult and controversial questions involved in the allocation of the power, and made the revenue contracts which Congress required.”

SO WHAT'S IN A NAME?

At the dam's Silver Spike Ceremony on September 17, 1930, Ray Wilbur announced, "In accordance with many requests . . . I choose that of the great engineer whose vision and persistence . . . has done much to make it possible and declare that the dam to be built . . . under the Boulder Canyon Project Act shall be called the Hoover Dam." Congress endorsed the choice 5 months later; all official references to "Boulder Dam" were changed, and the wording of earlier contracts was amended. When Franklin D. Roosevelt became president, Harold Ickes replaced Wilbur as secretary of the interior. Ickes disliked Hoover, and in May 1933 Ickes indicated that he had decided the dam should no longer bear Hoover's name. Out of what *The New York Herald Tribune* called "mere petty political spite," he set out openly to reinstate the original name: "Boulder Dam is a fine, rugged, and individual name. The men who pioneered this project knew it by this name," Ickes argued that the legislation enabled the initiation of the project had been passed during the Coolidge administration, and that Wilbur "had acted inappropriately." The attorney Ward Bannister warned the incoming president that Ickes' action was a "great offense to countless thousands of citizens and an inglorious blot" on the Roosevelt administration. Yet in his dedication speech at the dam on September 30, 1935, FDR used the name *Boulder Dam* five times; he did not mention *Hoover* once. The debate raged until *Selected Papers of Homer Cummings, Attorney General of the United States, 1933-1939* was published in 1939. It included Cummings' opinion, given to Ickes early in 1935, that "Hoover Dam" was the legal name. *The San Francisco Chronicle* noted with relish, "It may be Boulder Dam to Secretary Ickes, but to the rest of the people of the United States, by no less than Congressional action, it is Hoover Dam. . . . But it was a swell fight while it lasted. Thank you, Mr. Cummings, because at last . . . That dam thing's settled."

WHAT KIND OF DAM?

To remain stable, a dam must resist the horizontal force imposed by the huge mass of water that it holds back; that is, the structure itself and the rock underneath and beside it must exert an equal and opposite force to that exerted by the water. Gravity dams achieve this by sheer mass; arch dams transmit loads along their curve to the flanking support structures—in this case, the walls of Black Canyon. The maximum hydrostatic pressure at the bottom of Hoover Dam, a hybrid gravity-arch structure, is about 22 tons per square foot; the average on the dam wall is, of course, about half that. Because vertical walls are more likely to collapse under such immense loads, the downstream side of the dam is sloped; the Lake Mead side is almost perpendicular. The final profile of the wall was evolved over almost a decade of study by

about two hundred engineers and other staff at the Bureau of Reclamation's Denver design office; private consultants also were retained.

A tentative design of around 1920 envisaged a simple concrete gravity dam; at first there was no intention to generate hydroelectricity, so no powerhouses were included in the scheme. For a couple of years other dam types were considered: earth and rock-fill, concrete-faced rock-fill, as well as all-concrete alternatives—gravity, arch, and multiple arch. Proposals began to firm up after the Fall–Davis Report was published. Although alternative sites were available, Boulder Canyon and the nearby Black Canyon, 20 miles downstream, both had the advantage of being deep narrow gorges with steep walls; moreover, they offered large storage capacity and proximity to prospective users in Southern California. Davis initiated work on a high dam and hydroelectric plant in the vicinity of Boulder Canyon. By the start of 1924, all alternatives except concrete-faced rock-fill and concrete gravity or arch structures had been discarded. In February Davis's chief engineer Frank Weymouth produced an alternative preliminary design for a concrete arch structure at Black Canyon, because that site would allow for a more economical solution springing from savings in “logistical expenses.” It would also provide a larger reservoir for a given height of wall. Weymouth's massive curved gravity dam included three diversion tunnels on the Nevada side but no spillways; in the event of unusual floods the wall would be overtopped. Although outlet conduits through the structure were provided against future development, the scheme did not include hydroelectric generation.

The passing of the Boulder Canyon Project Act allowed the Reclamation Bureau's Denver office to accelerate work on the design. The secretary of the interior had already appointed the Colorado River Board—engineers and geologists who would evaluate the economic, safety, and engineering feasibility aspects of alternative proposals. By 1928 hydroelectric generation had become an integral part of the project. John Savage, the Bureau's designing engineer, revised Weymouth's “a preliminary study [for] estimating cost” and produced two alternative schemes for gravity-arch structures. One located the power plants and outlet works on the Nevada side of the canyon with two circular vertical shaft spillways on the Arizona side. The other, which formed the basis for the final design, included a U-shaped powerhouse at the base of the dam with spillway tunnels and double banks of outlet works contained in *both* canyon walls. Water would be supplied to the power plant turbines from intake towers. The scheme included two diversion tunnels on each side of the river and two unregulated “glory-hole” spillways connected to the diversion tunnels—by July 1930 they had been superseded by two side-channel spillways with control gates. By the time that the construction contract was awarded in 1931, a few more refinements had been made. The design of Hoover Dam as it was modified and built was (as all such vast and complex projects are) a collaborative effort by Davis, Weymouth, and Savage and many others, and cannot be credited to any individual.

In July 1930 the U.S. Congress appropriated \$10.66 million for the commencement of the Boulder Dam Project. *Time* magazine announced that Wilbur approved a construction order and had sent a telegram to resident U.S. engineer Walker R. “Brig” Young in Las Vegas: “With dollars, men and engineering brains we will build a great natural resource . . . make new geography . . . start a new era . . . conquer the Great American Desert. To bring about this transformation requires a dam higher than any the engineer has hitherto conceived or attempted to build.” Boulder City, a town for workmen, was to be established near the dam site; a spur line of the Union Pacific Railroad was to be built to connect the new settlement to Las Vegas, 23 miles away, and to the dam site, 7 miles away; and transmission lines were needed to bring power 220 miles from San Bernardino.

In January 1931 the Reclamation Bureau invited bids for the dam and power plant. Each bidder was asked for a refundable \$2 million bid bond, and the winner had to lodge a \$5 million performance bond. Three tenders “met the conditions laid down” and on March 4 the government accepted that of Six Companies Inc., a “hastily formed” (and, it might be added, unimaginatively named) consortium of half a dozen smaller contractors, that had been gathered together by Harry W. Morrison, cofounder and president of Morrison-Knudsen Construction Company. Only a conglomerate could muster enough experience, capital, and resources for the huge undertaking. Morrison sought financial backing for the project from the San Francisco banker Leland Cutler and as a result a broad range of expertise was assembled:

The Wattis Brothers of Utah Construction were well known for their expertise in building the early railroads in the western United States and Mexico. The JF Shea Company had started out as a plumbing business and was experienced in tunnel building and other underground work. Charles Shea knew people at the Pacific Bridge Company, and he convinced them to bring their expertise and capital to the project. Felix Kahn of San Francisco’s MacDonald and Kahn had built a number of large buildings in San Francisco and contributed \$1 million to the project. Henry Kaiser and Warren Bechtel were experienced in road building.³

Six Companies’ successful bid was \$48,890,955. For reasons that are suggested below, the figure was only \$24,000 above the Reclamation Bureau’s own estimate. The next lowest tender was \$5 million higher, and the other \$10 million. Six Companies agreed to pay a daily penalty of \$3,000 if the 7 years allowed for the work was exceeded. As it happened, the dam would be completed 2 years, 1 month, and 28 days ahead of schedule.

That brings us to Frank T. (“Hurry-up”) Crowe, whom Six Companies cannily appointed as construction superintendent, who was then 59 years old. Since 1905 he had worked on projects for the Reclamation Bureau, latterly as its general superintendent of construction. In 1921 he had resolved, “I’m going to build Boulder Dam!” Having worked on preliminary costings with Davis in 1919 and having assisted with the design in 1924, he was already

intimate with the dam. He had also worked with Walker Young, who was to be the construction engineer. When in 1925 the Reclamation Bureau began outsourcing work to private firms, instead of building its own dams, Crowe was confronted with a dilemma: he could remain in the government's employ, promoted to a desk job, or he could seek work in the private sector. He moved to the Morrison-Knudsen Construction Co. and (according to some sources) when the government announced that the dam on the Colorado would proceed, it was Crowe who convinced Morrison to form the consortium and bid for the contract, using the estimates that Crowe himself had worked up.

FIRST, HOUSE THE WORKERS, THEN BUILD THE DAM

Arriving at Six Companies' Las Vegas offices on March 11, 1931, Crowe first had to address the government's plans for Boulder City. Then, the town site comprised only a rail yard and Government Survey Camp Number One; set up in August 1930 it was surrounded by a makeshift camp called McKeeversville. Within days of the signing of the Boulder Canyon Project Act, the *Las Vegas Age* surmised that seven thousand workers would be needed. The news spread and, despite Wilbur cautioning against "a great rush of workmen to the barren dam site" where their services were not yet needed," more than five thousand men, many with their families, flooded into the area in hope of finding a job. Before work even began, Six Companies' offices received over twenty-four hundred applications and twelve thousand letters of inquiry. Local riverman Murl Emery recalled, "People came with their kids . . . with everything on their backs. Their cars had broke down before they got here and they walked." By May 1931 hundreds of families had set up squats along the highway between Las Vegas and the dam site. Probably the most notorious settlement was Hooverville—indeed, there were shanty towns called Hooverville all over the United States, established by those made homeless by the deepening Great Depression—where "the shacks were built out of most anything—tin cans, cardboard boxes, piano boxes, anything that they could find to live in."

Two other communities, called Oklahoma City and Pitcher respectively, were the focal point of the many disturbances and "most of the murders." Other writers have identified Williamsville, a sprawling squatters' camp "down by the river where the heat was most intense," as "the most infamous community" (its inhabitants dubbed it "Ragtown" or "Hell's Hole"). In July 1931 the average daytime temperature was 119° Fahrenheit; on one day, it reached 143° at noon. That summer, more than twenty-five workers and Ragtown residents died of heat prostration. Fresh food spoiled, even if was stored underground. To help out, Emery trucked canned goods from Las Vegas, charging people what they had paid "back home" on an honor system. His generosity went far toward creating, in such improbable circumstances, a sense of community. As well as his store there was a baker and a barber, and

the “rudimentary dirt streets had high-sounding names such as Broadway and Riverside Drive. There were church services and a small school. Citizens formed a Welfare Club and Ladies’ Aid Society. . . . There was a post office and an information bureau.” By fall 1931, Ragtown’s population had reached fourteen hundred, exacerbating health problems: the silty water from the Colorado was unfit to drink, causing recurrent outbreaks of dysentery. Sanitation, too, was extremely primitive.

Walker Young had chosen a wind-swept ridge as the location of Boulder City, and the Denver architect Saco DeBoer had been commissioned to design America’s first “fully developed and implemented experiment in town planning.” After the 1929 market crash his opulent proposal, that included a greenbelt and golf course, was “scaled back,” and Walker and Crowe produced a simpler plan that selectively followed DeBoer’s. One critic laments, “Unfortunately, DeBoer’s plan was scrapped as ridiculous . . . in favor of a more Levittown approach: build quickly, sensibly, and rectangularly, and leave the landscaping for others to worry about. The town was thrown into place.” Boulder City’s train station opened in February 1931, and construction of the triangular town began. The Bureau’s Administration Building stood at the northern apex. South of it, landscaped streets were lined with “nice little [two-roomed houses with] nice porches” for the government’s small operations and maintenance crew, who would remain Boulder City after the dam was completed. There was also a mansion for Crowe.

Six Companies was required to provide housing for 80 percent of its workers—buildings that would be demolished when the project ended. For single men it built eight dormitories and a large open-sided wood and canvas mess hall, catered by Anderson Brothers Supply Co. For families the company built “monotonous rows of slapdash wooden cottages.” They were dubbed “dingbat houses” because of their shoddy, quick construction, and dust blew in through cracks in the walls and doorways. The streets were unpaved, and the lots were not landscaped. In November 1931 Six Companies opened a twenty-bed hospital. It also printed scrip—tokens in place of U.S. currency—and issued credit cards to be used in the company store. Workers who set up a tab would have what they owed deducted from their next pay check.

Despite being conceived as a temporary town, Boulder City soon became a community. Residents began planning long-term development, and they soon successfully petitioned Six Companies and the federal government to replace the cottage schools that were already operating with a state-funded school. By late spring 1932—which just happened to be a presidential election year—Ragtown and the other camps had been vacated, and the new town had “lawns, city parks that were more than dust lots, and trees that shaded its inhabitants from the unforgiving sun,” all laid out by a landscape gardener ironically named William Weed. At the pinnacle of construction activity at the dam, Boulder City’s population of seven thousand Whites and a few Native Americans was the highest of any town in Nevada. But African Americans

were excluded; the handful who worked on the dam were forced to commute every day from Las Vegas.

The cadaverous Sims Ely—his son was Ray Wilbur’s personal assistant, so there was a whiff of nepotism in the air—was appointed as Boulder City manager. His iron fist “controlled every aspect of the city’s economy and morality,” exercising absolute power. And although the Reclamation Bureau appointed an advisory committee, its members were picked by Young and answerable through Ely to him. Although the governance of the municipality was for the most part benevolent, it was a benevolent dictatorship, and the residents had no say in running it. Historian Dennis McBride writes,

If there was any resentment of . . . the creation of a police-state atmosphere, it was not expressed loudly. . . . [The official list] of applicants for jobs at Hoover Dam, numbering twenty-two thousand at the close of 1932, cast a long shadow . . . and it was evident that from the outside looking in, Boulder City, where everyone had a job, a full stomach, and a roof overhead, appeared to be the model town the government said it was, whatever the reality.⁴

BUILDING THE DAM

The primary task on the Colorado was to divert the river, so that the dam could be built. At first, workers and equipment were ferried in on Murl Emery’s barges; later, roads were built, and the site was reached by truck. In May 1931 excavation began at each end of four 56-foot diameter, 4,000-foot long tunnels through the rock, two on either side of the river. The heat, dust, fumes from explosives, and exhaust gases from trucks—quite apart from the deafening noise—made conditions unbearable, literally so for some. Working in three shifts around the clock, many men became ill. In the summers several died of heat prostration; in the winters it was freezing.

To expedite the work eight “drilling jumbos” were built—steel-framed, two-level platforms on the backs of army trucks that carried up to thirty men with pneumatic drills. The jumbo was backed up to the working face, and the drillers went to work making holes in which to pack the explosive charges. This allowed all of the holes needed in one-half of the tunnel face to be prepared simultaneously. Then the jumbo was moved to the other side of the tunnel so that drilling could begin while the finished holes were packed with powder and wired. When both sides were drilled and the entire rock face was filled with explosives, the jumbo was removed and the wall was blasted. After a safety inspection, the thousands of tons of rock and earth spoil were removed by conveyor belt “mucking” machines, loaded into trucks, and dumped in down-river side canyons. On average one jumbo crew drilled, blasted, and mucked 46 feet of tunnel in an 8-hour shift. In March 1932 work began on lining the tunnels with concrete, 3 feet thick; they were completed a year ahead of schedule.

The purpose of the cofferdams was to isolate the dam site as the waters of the Colorado were diverted through the tunnels. The “upper” cofferdam of concrete-faced rock was started in September 1932, about 600 feet downriver from the tunnel inlets. It was 98 feet high, 450 feet long, and 750 feet thick at the base and before it could be built, 250,000 tons of silt were removed to expose a bedrock foundation. Already the workers known as “high scalers” were removing loose material from the canyon walls above the main dam and power plant sites, establishing a stable interface between the natural rock and future concrete. Construction of the lower rock-filled earth cofferdam, 66 feet high, 350 feet long, and 550 feet thick, and protected by a rock barrier, was postponed until that work was complete. All the diversion work was finished before the spring floods of 1933. The mighty Colorado was channeled through the tunnels, and the main task could begin.

The quantities of materials used to build Hoover Dam are too great to have any meaning for us. The Bureau of Reclamation lists, for example, more than 5 million barrels of cement (almost as much as it had used in all its works over 27 years), 45 million pounds of reinforcement steel, gates and valves weighing 21.67 million pounds, 88 million pounds of plate steel and outlet pipes, 6.7 million pounds (840 miles) of pipe and fittings, 18 million pounds of structural steel, and 5.3 million pounds of “miscellaneous metal work.” Such figures convey little to us.

Power shovels dug out the silt of millennia—1.76 million tons of it—to reach bedrock at an average depth of 120 feet. On June 6, 1933—now 18 months ahead of schedule—Six Companies started pouring the dam’s concrete base; 5 months later pouring began at the U-shaped powerhouse at the toe of the dam. A river-level plant upriver from the site had been used to mix concrete for lining the diversion tunnels, and its output was now turned to the lower levels of the dam, and carried to the site in 4- and 8-cubic yard bottom dump buckets by truck or (later) by electric trains. Crowe employed a sophisticated and efficient system for delivering the concrete (and even workers and equipment) that he had developed at the Arrowrock Dam on the Boise River in Idaho in 1911. The huge dump buckets were lifted from the cars and lowered into place from an overhead cableway. Of the nine such cableways at Hoover Dam, five were carried on moveable towers, allowing them to be repositioned. Later, as the dam rose, an automated concrete mixing plant was built on the canyon rim.

The strength of concrete depends on the ratio of water to cement—the more water, the less strength. For all parts of the dam, a very dry mix was needed. Concrete hardens through a two-stage chemical process, known as an initial and final set or curing; the dryer the mix, the more rapidly the initial set takes place. If it was moved too slowly between the mixing plant and the dam, curing would begin while the concrete was still in the dump bucket. So crane operators became the critical workers on the project, and they were paid three times the minimum wage. As each bucket of concrete was dumped, a team of seven “puddlers” consolidated it with shovels and pneumatic vibrators.

The huge mass of concrete in the dam generated tremendous heat as it cured. The Bureau of Reclamation's engineers calculated that if the dam were built in a single continuous pour (in itself, that was logistically impossible), the concrete would have taken 125 years to cool to air temperature, while the resulting stresses would have caused the dam to crack. The problem was overcome in two ways. First, the dam was built in 5-foot lifts as a series of interlocking trapezoidal columns, varying in size from about 25 feet square at the downstream face of the dam to about 60 feet square at the upstream face (someone has said, "Think 'giant Lego set'"). Second, the prefabricated wooden formwork for each of the columns, besides the cage of steel reinforcement, contained coils of thin-walled steel pipe; when the concrete was poured, river water was passed through these coils, followed later by chilled water from a refrigeration plant. When each module had cooled the pipes were cut, and grout was injected under pressure. The interlocking grooves between the columns were also grouted, creating what amounted to a monolithic structure.

The last concrete was placed on May 29, 1935. President Roosevelt dedicated the dam on September 30, but the powerhouses, spillways, and other features were not completed for another 5 months. By the end of 1936 the first three hydroelectric generators were in service; two more followed in 1937, and another two in 1938. By 1961 there were seventeen turbines in operation.

A WORD ABOUT ARCHITECTURE: "TAKING THE PLAINNESS OFF"

It seems that the Reclamation Bureau engineers were content for the aesthetic of the dam to follow "a Neo-Classic style." Appropriately, they were more concerned with performance than appearance. But such an epic-making technological icon hardly lent itself to historical architectural styles. As one critic points out,

As a marvel of engineering, the Hoover Dam would inevitably be associated with the modern. No dam of this scale had been attempted before; that fact that technological innovations were required to build it was understood implicitly. In this context, though, the word modern simply implies advancement, an adherence to the forward-looking quality of design as new materials and new techniques became available through the first half of the twentieth century.

The Hoover Dam also became an icon of modernism, that certain mode of design which emerged from Europe in as disparate forms as Gropius's Bauhaus or the 1925 Paris *Arts Décoratifs et Industriels Modernes* show; out of these came the International Style and Art Deco. Although the Hoover Dam's design was not specifically allied with a sub-movement of modernism, the attempt was made to create an aesthetically pleasing—and Modern—façade.

The original design for the dam's facade by Bureau of Reclamation engineers made it clear that an architect needed to be brought in. Although the engineers' design was highly functional, the unbalanced outlet houses, government-office

powerhouse, and massive eagles set on the roadway towers clashed violently with the image projected of Hoover Dam as a modern structure.⁵

From 1927 Americans had access to an English translation—*Towards a New Architecture*—of the Swiss architect Le Corbusier’s seminal work of 4 years earlier, *Vers une architecture*. He wrote: “The engineer’s Aesthetic, and Architecture, are two things that march together and follow one from the other: the [first] being now at its full height, the other in an unhappy state of retrogression. The Engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony.”⁶ According to Le Corbusier’s ideal, the engineering constraints of Hoover Dam, and not some arbitrary style, should have been the wellspring of its aesthetic. For about a decade before design of the dam started, European architects, especially in Germany and The Netherlands, had sought to express *zeitgeist*—“the spirit of the age,” and as early as 1914 the manifesto *Futurist Architecture*—possibly written by the Italian Antonio Sant’Elia—had declared, “The decorative value of Futurist architecture depends solely on the use and original arrangement of raw or bare or violently colored materials.” Sant’Elia in fact had built little, but his dramatic drawings (ironically, inspired by American industrialism) survive; many from 1913 to 1914 are of power stations.

Yet, as noted elsewhere in this book, well into the twentieth century most American architects continued to embrace styles inappropriate to the industrial age. It seems that European Modernism was too austere for them, or at least a case of “too much, too soon.” Perhaps political reasons gave rise to their caution; after all, most Modernists were socialists, and some even communists; the *Neue Bauern* (New Building) came from Germany, a recent enemy. On the other hand, the 1925 Paris *Exposition Internationale des Arts Décoratifs et Industriels Modernes* had a major (albeit superficial) influence in America, and the “Art Deco” style—“modernism with the plainness taken off”—was acceptable. So “Modern” was out; “Moderne” was in.

In 1931, while the Los Angeles architect Gordon B. Kaufmann was helping to design the prosaic Boulder City Administration Building, he was asked to comment on the aesthetics of the dam. His response, no longer available to us, seems to have moved the Reclamation Bureau to engage him to “develop a more modern appearance” for it. As one writer put it, “the circumstance of hiring [Kaufmann] . . . occurred very late in the design process and was very much separate and distinct from the rest of project.”

Arriving in California in 1914, London-born Kaufmann had established a parochial reputation with his Moderne works, described by some as “Spanish Mission-Art Deco hybrid.” Before and during his involvement with Hoover Dam he built Scripps College, Claremont, California (1927–1930); the Athenaeum and dormitories at Caltech (1928); and the *Los Angeles Times* Building (now the *Times-Mirror* Building) of 1931 to 1935. Architectural historian

Richard Guy Wilson asserts that Kaufmann, given the chance to make his mark on Hoover Dam, “took the banal details of the engineers and [turned them] into one of the great moderne landmarks of the 1930s.” The Englishman sought “a visual scheme that would complement rather than clash with the engineer’s design.” He later insisted that “There was never any desire or attempt to create an architectural effect or style but rather to take each problem and integrate it to the whole in order to secure a system of plain surfaces relieved by shadows here and there.” Wilson describes the outcome:

On the crest, the overhanging balcony and four unequal towers gave way to a series of observation niches and towers that rise from the wall and continue upward unimpeded. The emphasis, according to Kaufmann, was on “an orderly series of small vertical shadows punctuated by the larger shadows of the elevator and utility towers.” He treated these extrusions as continuations of the dam face, not as separate moldings. The four large towers have cutback corners and tops reminiscent of the set-back *Los Angeles Times* Building, but were treated much more simply. The two outer towers were for utilities and public restrooms, while the two inner towers acted as public entrances to the dam.⁷

It has been said that Kaufmann gave the dam its futuristic style, with the electrical transformers anticipating sets in the 1939 space movie *Buck Rogers* and the intake towers emerging from the lake “like rockets to the moon.” He also streamlined the spillways, redesigned the two 230-foot-high wings of the power plant in the stripped-Classicism style and created the night-time illumination of the dam with lights atop the intake towers. At Kaufmann’s invitation, the Denver muralist Allen Tupper True decorated the power plant’s terrazzo floors with Art Deco medallions translated from Southwestern Native American geometric motifs. A team led by Italian immigrants Joseph and John Martina, also of Denver, laid the floors in 1936 and 1937.

The dedicatory monument on the Nevada side of the dam was created by the Norwegian-born sculptor Oskar J. W. Hansen, following a national competition held in 1935. A 142-foot flagpole stands between two 30-foot-high seated bronze figures on 6-foot black diorite bases. Naming them the “Winged Figures of the Republic,” Hansen saw them as “an inspirational gesture . . . that symbolizes the readiness for defense of our institutions and keeping of our spiritual eagles ever ready to be on the wing” that expressed “the immutable calm of intellectual resolution, and the enormous power of trained physical strength, equally enthroned in placid triumph of scientific accomplishment,” whatever that meant. Richard Guy Wilson calls them “surrealistic apparitions” that “underscored the unreality of a dam and lake in the middle of a hostile desert.” The black terrazzo floor around the bases is inlaid with a celestial map that Hansen believed would indicate “in remote ages to come” the precise astronomical time of the dam’s dedication. Nearby and raised above the floor is a compass, framed by zodiacal signs.

Hansen also designed a low-relief bronze triptych commemorating those who died building the dam. Originally placed in the canyon wall on the Arizona side, is now near the Winged Figures. It reads,

They died to make the desert bloom. The United States of America will continue to remember that many who toiled here found their final rest while engaged in the building of this dam. The United States of America will continue to remember the services of all who labored to clothe with substance the plans of those who first visioned the building of this dam.

The only external ornament on the dam is also by Hansen: panels of five cast-concrete low-reliefs above the entrances of the two elevator towers. Those on the Arizona tower, with the inscription “Since primordial times, American Indian tribes and Nations lifted their hands to the Great Spirit from these ranges and plains. We now with them in peace buildeth again a Nation,” portrays the original inhabitants of the region. Those on the Nevada tower illustrate the dam’s purposes: flood control, navigation, irrigation, water storage, and power. Of course, all Hansen’s work—monument, plaque, and reliefs—was of its time. The question could be asked: Is it Kaufmann’s architecture or Hansen’s sculpture and True’s mosaics that have led some critics and historians to classify Hoover Dam as “Art Deco”?

THE “WORKING STIFF”

Frank Crowe received a \$350,000 bonus for his role in building Hoover Dam. But altogether, twenty-one thousand men worked on the project. When activity peaked in June 1934 the daily number reached 5,128, although the average over the history of the job was thirty-five hundred. The lowest-paid received fifty cents an hour, the highest a princely \$1.25.

Only American citizens were employed, and Six Companies gave priority to World War I veterans and even some from the Spanish-American War (most of whom would have been at least 50 years old). The contractor specifically prohibited hiring Chinese, whom it styled “Mongolians.” And despite government pressure, Six Companies hired very few African Americans—around thirty in all—and for only the worst jobs. Native Americans worked as high scalars. In 1933, *Fortune* magazine described the White “working stiff” who predominated at Hoover Dam:

His average age is thirty-three. His average wage is sixty-eight cents an hour. He is taller and heavier than the average U.S. soldier, runs a greater risk of losing his life, and has passed a more drastic physical examination. . . . He likes hunting better than baseball, horse racing better than either. He’ll pick a grudge, or smell bad luck, mosey out and hit the road or the rails, but while he works he is inspired with a devil of loyalty, shrewdness, and skill.⁸

Hoover Dam construction began with nonunion workers. The isolation of the construction site enabled the government to run it as a federal reservation, allowing access only those willing to work on the government's terms. The first intervention by the militant union, Industrial Workers of the World (IWW) occurred in 1931. On August 7 Six Companies cut the pay of about thirty "muckers"—the lowest-paid laborers who loaded spoil from the diversion tunnels onto trucks. Despite assurances that nobody else's pay would be affected, 125 workers went on an 8-day protest strike and seized the occasion to air other grievances. They demanded clean water and flush toilets; they also wanted the contractor to conform to the mining laws of Nevada and Arizona. Frank Anderson, an IWW organizer, urged the strikers to unionize. But regarding him with "suspicion and contempt," and (of course) afraid of losing their jobs in the Depression, they voted to steer clear of the union.

Crowe enjoyed a "tough but fair" reputation in labor disputes. Because the men knew he valued—even needed—their skills, they expected him to put their case to the Six Companies' directors. They were wrong. He rejected all their claims, and the Bureau was forced to shut down the job for a week. Everyone was fired, and the contractor began hiring new crews. Young cleared the government reservation of anyone without a pass signed by him, and Six Companies sent in armed union busters to evict the troublemakers. Sims Ely and Boulder City's security chief had been conducting "covert surveillance to weed out, blacklist, and otherwise harass men perceived to be union agitators." Between October 1931 and October 1932 over one thousand were run out of town. Anderson was jailed on trumped-up vagrancy charges. The strikers' appeal to the U.S. Secretary of Labor William Doak was also turned down. Six Companies refused to reverse the pay cut, promising it would be the last, but they did provide better water and lighting. And they accelerated house building in Boulder City.

A year later the Central Labor Union of Clark County, Nevada, presented to the U.S. Senate Investigating Committee on Irrigation and Reclamation a formidable list of the "great injustices" being faced by the Six Companies' employees at Boulder Dam. Skilled mechanics were being paid less than three-quarters the rates paid elsewhere; the rents for the "dingbat" houses were 20 percent higher than those for the better houses of Reclamation Bureau employees; unmarried workers paid 30 percent more for food and lodging cost than Reclamation workers (and 65 percent more than workers in most Nevada mining camps); charges for utilities were "exorbitant and arbitrary"; and because schooling facilities were "sadly inadequate" and workers couldn't afford private school tuition, many of their children simply didn't go to school at all. Moreover, labor had "no voice in the settling of wages, hours of labor, working conditions, safety or living conditions." Yet except for a second IWW strike attempt in August 1933—also futile—there were no further major labor problems at Hoover Dam. That is not to say that working conditions had improved, but rather that industrial peace prevailed because work was so desperately scarce in those years of deepening economic depression.

Crowe had violated state law by using gasoline-powered trucks to haul debris from the diversion tunnels. At best, exhaust fumes caused respiratory problems for many workers; at worst, they were potentially or actually lethal. But company doctors insisted that the gassing victims had pneumonia. Nevada's inspector of mines threatened to sue Six Companies if it continued the practice. The contractor stalled for time, but when charges were finally laid, it brought in the U.S. Attorney's office to argue that state laws did not apply to a federal project. By the time the legal niceties of that claim were decided the tunnels were almost complete. When Nevada renewed its lawsuit, a federal court ruled that the regulation excluding gasoline-powered trucks applied to mining, but not to dams. In 1933, when several workers took civil action, Six Companies resorted to smearing the plaintiffs' reputations, and even to witness intimidation and jury tampering. Many more former employees subsequently sued, but it was not until January 1936 that fifty out-of-court settlements were made, for undisclosed amounts.

Officially, there were ninety-six industrial fatalities during the construction of Hoover Dam; some sources put the total at 112. Based on the often-cited figure of one death per million dollars spent on contemporary major projects, either statistic is alarming. Moreover, the *actual* death toll was probably higher because the casualty list excluded injured workers who died off-site as a result of on-site accidents, those killed by the insufferable heat, or those who died years later from illnesses resulting from working on Hoover Dam. No record was kept of the permanently disabled, and the only time a family was compensated was when its breadwinner was "killed dead on the spot." Reviewing Joseph Stevens' *Hoover Dam: an American Adventure*, historian Gregg R. Hennessey writes,

Emerging from these pages is a callous and irresponsible Six Companies, aided and abetted in the early years of the project by a sympathetic Hoover administration, which exploited desperate victims of the Depression—killing and maiming hundreds—to meet deadlines, earn profits, and make reputations. The Six Companies amassed a dismaying list of ruthless actions. . . . Frank Crowe callously pushed the workers in spite of unsafe and unhealthy conditions in pursuit of company profits, in which he had a direct stake.⁹

POPULAR CULTURE

It was inevitable that such an audacious undertaking as Hoover Dam would be embraced by popular culture. Indeed, Otis Burgess Tout's *Silt: Paula helps build Boulder Dam*, the first novel about the project, was published even before the Boulder Canyon Project Act was passed. But it was some years before other fictional works appeared, including the (then) anachronistically titled *Boulder Dam*, by the prolific Zane Grey (1963) and Mack L. Townsend's obscure *Rose of Calnevaria* (1964). Later books reflected social issues: John Haase's historical novel *Big Red* (1980); *And the Desert Shall Blossom* by

Phyllis Barber (1991); *Pigs in Heaven* by Barbara Kingsolver (1993); the no-fuss titled *Hoover Dam: An Historical Novel* by Harry Birchard, “a fictionalized biography of the people who contributed to this remarkable structure” (2000); and Bruce Murkoff’s critically acclaimed *Waterborne* (2004). In a different genre was Robert Davis’s widely panned and implausible 1997 thriller, *The Plutonium Murders*, that reaches its climax on the Dam.

Hoover Dam has appeared in at least thirty-five movies spanning 60 years, and beginning in 1933 with some crude back projection in Twentieth Century Fox’s “stylish light melodrama” *I Loved You Wednesday*. In most made since then, Hollywood ventured off the sound stages. The spectacular natural vistas and proximity to Las Vegas have provided “must-have” location shots; space prohibits listing them. But sometimes the dam had more than a bit part.

RKO Radio Pictures’ *The Silver Streak* (1934)—another melodrama—included action on the cable lift, and in some movies the structure more or less was integral to the plot. The first was Warner Brothers’ *Boulder Dam* of 1936 that told of a fugitive who found redemption through working on the dam; interestingly, “though many action scenes [took] place at the dam, principal photography was not allowed. A second unit filmed the site and that footage was used in rear-projection scenes.” The dam is at its best in cinematic climaxes. That all started with American International Pictures’ nonsensical sci-fi movie, *The Amazing Colossal Man* (1957), about a 60-foot mutant produced by a nuclear accident, who is cornered by the army on top of the dam and falls to his death in the Colorado. In *Superman: The Movie* (1978) evil Lex Luthor’s nuclear ICBM triggers an earthquake whose aftershocks breach the Hoover Dam—but everything turns out fine, because the man of steel compromises himself by reversing time, and the damage is repaired by playing the special effects footage backwards. In 2007 audiences were compensated for the unconvincing model in *Superman* by the stunning special effects in *Transformers*, in which a conflict between robots in an intergalactic war begins at Hoover Dam, reprising the plot of a 1983 animated cartoon. What’s more, the dam is the prison of a cryogenically frozen alien and serves as the headquarters of a secret U.S. military unit.

Hoover Dam was brought before the American public on a three-cent postage stamp (the domestic letter rate) of which nearly seventy-four million were issued in September 1935; it bore the Ickesian banner, “Boulder Dam.” Since 1932 postcards—photos, drawings, monochrome, color—have proliferated, as postcards will. And there has been an avalanche of tawdry tourist stuff: clothing, calendars, lapel buttons, refrigerator magnets, coffee cups, shot glasses, paperweights, 2- and 5-inch “replicas,” and of course snow domes (those with silver glitter and moving dice double as Las Vegas souvenirs, all at no extra cost).

It is stressed that Hoover Dam has not been made an icon by books, films, or souvenirs, whether serious cultural creations or spurious commercial kitsch; rather, *they* exist because *it* has been always an icon of greater values. That quality is eloquently explained in the words of others.

A WONDER OF THE INDUSTRIAL WORLD

One website inexplicably includes the dam among the “Seven *Forgotten* Modern Wonders of the World.” Such nonsense is not worth referencing. Even if the claim were justified—and certainly it is not—in 2003 the British Broadcasting Corporation dramatically recalled the great structure to mind in its internationally broadcast and stunning “docu-drama” series, *Seven Wonders of the Industrial World*. The prerelease publicity read,

As people found their way across the vast American continent, they were stopped only by a poor or hostile environment, such as the desert regions of Arizona and Nevada. Even here . . . engineers began to realise it would be possible to make the desert bloom by building a dam across the Colorado River. Sixty stories high and with a larger volume than the Great Pyramid at Giza, Hoover Dam would break all records.

Herbert Hoover, making a spur-of-the-moment change of itinerary in November 1932 so that he could visit the construction site, proclaimed, “Civilization advances with the practical application of knowledge in such structures as the one being built here in the pathway of one on the great rivers of the continent. The spread of its values in human happiness is beyond computation.” That is, if one sets aside the poverty, unhappiness and suffering of the men who built it. Yet, 70 years later historian Dennis McBride perceptively wrote,

Even though its foundation was laid in a mire of economic misery and personal tragedy, Hoover Dam stands today as an inspiring example of ingenuity and perseverance. As more years divide the dam’s present from its past, those who were involved in its construction regard it with pride and affection. Its place in the history of the United States and in the development of engineering methods remains unchallenged. Long after the story of its making has been forgotten, Hoover Dam will endure, its origins lost in time, its builders passed into myth.¹⁰

NOTES

1. Haven, Janet, The Hoover Dam: “Lonely Lands Made Fruitful.” <http://xroads.virginia.edu/~MA98/haven/hoover/intro.html>
2. Steinberg, Theodore, “That World’s Fair Feeling: Control of Water in 20th-Century America.” *Technology and Culture*, 34(April 1993), 401–409.
3. “Historic Construction Company Project: Hoover Dam.” www.constructioncompany.com/historic-construction-projects/hoover-dam/
4. McBride, Dennis, “Sims Ely: The Boulder City Dictator,” in A.D. Hopkins and K.J. Evans, eds., *The First 100: Portraits of the Men and Women Who Shaped Las Vegas*. Las Vegas: Huntington Press, 1999.

5. Le Corbusier, *Towards a New Architecture*. New York: Payson and Clarke, 1927. Introduction. Translated by Frederick Etchells.
6. Haven, Janet. "Modernity and the Hoover Dam." <http://xroads.virginia.edu/~ma98/haven/hoover/modern.html>
7. Wilson, Richard Guy, "American Modernism in the West: Hoover Dam," in Thomas Carter, ed., *Images of an American Land*. Albuquerque: University of New Mexico Press, 1997, 302–303.
8. Anon. "The Dam." *Fortune* (September 1933), 74–88. www.usbr.gov/lc/hooverdam/History/articles/fortune1933.html
9. Hennessey, Gregg R., [Review of] Joseph E. Stevens, *Hoover Dam: An American Adventure*. *Journal of San Diego History*, 35(Spring 1989). www.sandiegohistory.org/journal/89spring/br-hoover.htm
10. McBride, *op cit*.

FURTHER READING

- Allen, Harris C. "It Can Happen Here: A Classical Scholar Learns a Modern Language." *Architect and Engineer*, 129(May 1937), 13–33.
- Billington, David P. *Big Dams of the New Deal Era: A Confluence of Engineering and Politics*. Norman: University of Oklahoma, 2006.
- Boulder Dam Association. *The Federal Government's Colorado River Project*. Washington, D.C.: U.S. Government Printing Office, September 1927.
- Brooks, Nancy Growald. "Hoover Dam: Building an American Icon." *Blueprints*, 16(Summer 1998), 4–7.
- Cooley, John, ed. *Exploring the Colorado River: Firsthand Accounts by Powell and his Crew*. Mineola, NY: Dover, 2004.
- Dunar, Andrew, and Dennis McBride. *Building Hoover Dam: An Oral History of the Great Depression*. New York: Twayne Publishers, 1993. Reprinted University of Nevada Press, 2001.
- Hansen, Oskar. *Sculptures at Hoover Dam*. Washington, D.C.: U.S. Government Printing Office, 1968.
- Kaufmann, Gordon B. "The Architecture of Boulder Dam." *Architectural Concrete*, 2(no. 3, 1936), 3–5.
- Lyman, Wilbur Ray, and Northcutt Ely. *Hoover Dam Documents*. Washington, D.C.: U.S. Government Printing Office, 1948.
- McBride, Dennis. "Frank Crowe (1882–1946)." In A. D. Hopkins and K. J. Evans, eds., *The First 100: Portraits of the Men and Women Who Shaped Las Vegas*. Las Vegas, NV: Huntington Press, 1999.
- Rocca, Al M. *America's Master Dam Builder: The Engineering Genius of Frank T. Crowe*. Lanham, MD: University Press of America, 2001.
- Stevens, Joseph. *Hoover Dam: An American Adventure*. Norman: University of Oklahoma Press, 1988.
- U.S. Department of the Interior, Bureau of Reclamation. *Hoover Dam*. Washington, D.C.: U.S. Government Printing Office, 1950.

- U.S. Department of the Interior, Bureau of Reclamation. *Hoover Dam, Power Plant and Appurtenant Works: Specifications, Schedule, and Drawings*. Washington, D.C.: U.S. Government Printing Office, 1930.
- U.S. Department of the Interior, Bureau of Reclamation. *The Story of Hoover Dam*. Washington, D.C.: U.S. Government Printing Office, 1966.
- Wilson, Richard Guy. "American Modernism in the West: Hoover Dam." In Thomas Carter, ed. *Images of an American land*. Albuquerque: University of New Mexico Press, 1997.
- Wilson, Richard Guy. "Machine-Age Iconography in the American West: The Design of Hoover Dam." *Pacific Historical Review*, 54(November 1985), 463–493.
- Wilson, Richard Guy. "Massive Deco Monument: The Enduring Strength of Boulder (Hoover) Dam." *Architecture: The AIA Journal*, 72(December 1983), 45–47.
- Wolf, Donald E. *Big Dams and Other Dreams: The Six Companies Story*. Norman: University of Oklahoma Press, 1996.

INTERNET SOURCES

- Haven, Janet, et al. *The Hoover Dam: Lonely Lands Made Fruitful* (University of Virginia American Studies Program and the 1930's Project). <http://xroads.virginia.edu/~1930s/DISPLAY/hoover/> (Accessed June 2007).
- Official Hoover Dam website. www.usbr.gov/lc/hooverdam/



Courtesy Library of Congress

Hotel del Coronado, San Diego, California

“A vestige of the gilded age”

The contrived publicity and name dropping that permeates most of the literature about the Hotel del Coronado is hardly needed to establish or even add to the building's iconic standing; that already existed early in the twentieth century. In 1931 the novelist Edmund Wilson described it in *The New Republic* as "the most magnificent example extant of the American seaside hotel" of the Gilded Age. Observing that it still had "its beauty as well as its magnificence," he wrote, "White and ornate as a wedding-cake, polished and trim as a ship, it makes a monument not unworthy to dominate the last blue concave dent in the shoreline before the United States stops and the Mexican Republic begins." Those similes were seized upon by advertising copy-writers for years to come and even borrowed to describe other hotels.

Today his view is widely shared. In 2007 the American Institute of Architects conducted a popular survey to determine the nation's favorite architecture. The hotel was placed eighteenth in a list of one hundred fifty buildings. The grand hotel began climbing the "landmarks ladder" in 1970 when it was placed on the California Landmark Registry as a San Diego County Historical Landmark. In May 1977 the U.S. National Parks Service designated it a National Historic Landmark, with the accolade, "this enormous timber structure, rising from the Coronado Peninsula like a castle, was one of the last of the extravagantly conceived resort hotels in Southern California." It is also one of fewer than twenty-five hundred nationally significant places on the National Register of Historic Places, so "designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States," and therefore a "cultural [resource] worthy of preservation." Consequently, several travel guides remark that the Hotel del Coronado "[enjoys] more fame and historical significance than perhaps any hotel in North America."

The hotel is one of only three commercial buildings in this book. An undoubted icon for all the above reasons, from the beginning its reputation has been—and continues to be—carefully constructed by perceptive marketing that turned what could have been a financial disaster into a highly profitable business. But, as will be shown, that had little to do with the notion of icon.

CORONADO

According to anthropologists, the coastal mesas around San Diego, California, were the home of a succession of indigenous cultures—the so-called San Dieguito, the La Jollan (until between 1,000 and 3,000 years ago), and the Kumeyaay, the peaceful hunter-gatherers who arrived about 500 A.D.

The Spanish *conquistadores* of Central America lost little time in exploring the Pacific Coast to the north. In June 1542 the Portuguese-born navigator Juan Rodriguez Cabrillo sailed from Navidad on Mexico's west coast with three ships—*Vittoria*, *San Diego*, and *San Salvador*—bent upon finding gold

and the legendary northwest passage between the Pacific and Atlantic oceans. Three months later he made landfall—the first European to set foot upon California—at “a very good enclosed port” that he named San Miguel. Remaining for about a week, he established contact with the Kumeyaay before continuing north. He died in January 1543 while his fleet was wintering in the Channel Islands.

Sixty years later the Spanish explorer Sebastián Vizcaíno set out, also with three ships—*San Diego*, *Tres Reyes*, and *Santo Tomás*—virtually following Cabrillo’s route. On November 8, 1602, he sighted, 17 miles off the coast, four islands that missionaries traveling with him named *Las Yslas Coronadas* (crowned ones) in honor of a family of four stone carvers who been martyred in 287. Five days later the little fleet reached Cabrillo’s San Miguel. Vizcaíno renamed it, either in honor of San Diego de Alcalá (because it was his feast day) or for Vizcaíno’s own flagship. Continuing north, in mid-December he arrived at a bay discovered by Sebastián Rodríguez Cermeño some years earlier; he renamed that also after the Count of Monterey, the viceroy of New Spain.

Despite Vizcaíno’s assurance that San Diego Bay was the best port to be found in the Pacific the Spanish ignored it for more that 150 years. Then in 1769 the governor of California, Gaspar de Portolá, and Franciscan Father Junípero Serra led an overland expedition to find a route to Monterey; they reached San Diego at the end of June. Serra founded a mission on a prominent and strategic hill above the San Diego River, and the Presidio de San Diego, built to protect the missionaries, was the first of what would be twenty-one such settlements in California. Spanish maps identified the narrow peninsula that separates San Diego Bay from the Pacific Ocean as *San Diego Ysla*, but it is not an island and as late as 1877 English-speaking sailors knew it as “The Spit.”

After a decade of war, Mexico gained its independence from Spain in 1821; 3 years later the Mexican Republic was founded. In May 1846 Pio Pico, the last Mexican governor, granted the 4,185-acre *Yslas o Penínsulas de San Diego* to “a prominent and well-connected citizen,” Don Pedro Catarino Carrillo and his wife Josefa Bandini; some sources say that it was a wedding present. The parcel of land included today’s Coronado, the narrow southern connection to the mainland (now known as Silver Strand) and North Island, then separated from Coronado by a narrow swampy isthmus. Some wedding present! Sometimes it was cut off by tides; it was overrun by shoulder-high chaparral; in fact all it had to offer was abundant game—ducks, pigeons, quails, and rabbits. Don Pedro, naming it *Ranchos Peninsula de San Diego*, attempted to use it for pasture. But 5 months later he sold it for \$1,000 to Captain Bezer Simmons of the trading vessel *Magnolia* “because he couldn’t find anybody who could pay more.”

Four years later Simmons sold it to Archibald Peachy (a relative), William Aspinwall, and others for \$10,000. Of course, by then it was part of the

United States. The Mexican–American War had spread westward from Texas, and by 1847 the Californios had surrendered. After the signing of the Treaty of Guadalupe Hidalgo in 1848 the United States purchased Mexico’s territories in the southwest. That same year gold was discovered near Sacramento, and when in 1850 a burgeoning California had become the thirty-first state of the Union, the County and City of San Diego were established. Over the next decades ownership of the *Ranchos Peninsula de San Diego* changed several times. It was hardly surprising that nobody kept it for long; according to one writer, “Years and owners passed, as did experiments in growing wheat and establishing a whaling station. But with no fresh water and little rain, the land held few prospects.” Then it was announced in July 1885 that an “eastern syndicate” had acquired the property.

THE CORONADO BEACH COMPANY

In that year, San Diego’s population would swell from twenty-four hundred to about ten thousand. The first transcontinental train reached San Diego on November 21, 1885. Inevitably commerce in San Diego grew, with increased opportunities for trade within and beyond California. Rival railroads, having vast tracts of land to sell or lease, began undercutting each other (some offered passenger fares from Chicago to Los Angeles less than \$100). The quiet years were over, and a boom was on the horizon. The County Immigration Association was established to advertise local opportunities, not least the healthy climate. San Diegan Theodore S. Van dyke wrote that since 1875 newcomers

were in fact buying comfort, immunity from snow and slush, from piercing winds and sleet-clad streets, from sultry days and sleepless nights, from thunderstorms, cyclones, malaria, mosquitoes and bed-bugs. All of which, in plain language, means that they were buying climate, a business that has been going on now for fifteen years and reached a stage of progress which the world has never seen before and of which no wisdom can foresee the end. The proportion of invalids among these settlers was very great, at first; but the numbers of those in no sense invalids but merely sick of bad weather, determined to endure no more of it, and able to pay for good weather, increased so fast that by 1880 not one in twenty of the new settlers could be called an invalid. They were simply rich refugees.¹

Among them was Elisha Spur Babcock, a retired railroad executive from Evansville, Indiana. When he was only age 36 and showing symptoms of tuberculosis, his physicians had advised him to make the move to the Southwest. In San Diego he met Chicagoan Hampton L. Story of the Story and Clark Piano Company, who also seems to have been there for health reasons. The circumstances and timing of their meeting remains unknown. But the two

men often rowed across the bay to what was then known as the San Diego Peninsula to hunt and fish.

Even in retirement, the capitalist was not far beneath Babcock's skin. Although he was not the first to do so (a San Diego consortium led by Milton Santee already had proposed building a resort) Babcock recognized the peninsula's potential as real estate, and he knew that a community established around a grand hotel spelled respectability for prospective home owners. As for a supply of buyers, he could depend upon the competing railroads. In December 1885 a syndicate with him as president, Story as vice president and San Diego banker Jacob Gruendike as secretary-treasurer paid \$110,000 for the entire peninsula, including North Island, from the head of the bay to the mouth of the harbor. Indiana railroad stockholder Josephus Collett, lumber merchant Heber Ingle (Babcock's brother-in-law), and flour miller John Inglehart were drawn into the scheme as well.

A competition, offering a \$50 prize, was launched in January 1886 to (re)name the peninsula. Very few of over one hundred entries were Spanish. Beulah, Brooklyn, Cork, Hiawatha, Lands End, Shining Shore, and Welcome City were more typical. "Miramar" was chosen and released to the local press, but one of the owners wrote to the *San Diego Union* "protesting that [it] was difficult to pronounce and recommending Coronado Beach, because it was a local name referring to the nearby islands." Ignoring geographical exactness, residents still prefer "Coronado Island."

Hundreds of laborers were employed to build an urban infrastructure—subdivision, roads, landscaping, railroad tracks, and (later) a water supply, fed by submarine pipes from the mainland. In April 1886 the Coronado Beach Company issued a prospectus, probably either written or supervised by Babcock, announcing its capitalization of a million dollars, divided into ten thousand shares. The florid preface of this "classic among early-day real estate promotions" assured investors, "we have, however, done much—in fact we have left nothing undone—preparatory to offering of Coronado beach to the esthetic [*sic*] as an Elysium, the more practical and less critical as a home, to the invalid as a sanatorium, or to the fashionable as a seaside resort of unrivalled beauty." The scheme was vigorously promoted. Purchasers were offered such bonuses as a year's free supply of water if they spent \$1,000 on improvements to their land, or given 120 tickets per month—some sources say 150—for the San Diego Electric railway, the Coronado ferry and the Coronado railway. The Santa Fe Railway included a Coronado advertisement in seventy-five thousand copies of its timetables.

In May 1886 the *Los Angeles Times* reported:

The entire peninsula has been surveyed, and the central and larger portion . . . elevated some forty feet above the sea level, has been beautifully platted and largely planted to choice trees, shrubbery, etc. The soil [is] exceptionally good. . . . A nursery of a hundred thousand plants has been established. . . .

A street railroad, to run across the peninsula from shore to shore, is under way and will be completed shortly. . . . [There is a] telephone line . . . running almost the entire length of the peninsula connecting with the main-land. . . . There are two ferry companies, a street railroad company, a hotel company, a bathhouse company, etc. . . . The hotel, it is promised, will be a grand structure, ahead of anything on the coast.²

In July the San Diego Development Company's W. H. Holabird was appointed to the company's sales department. Over six thousand people turned up for the first land auction on November 13, when the sale of three hundred fifty lots recouped the \$110,000 paid for the peninsula. In the ensuing weeks sales often reached \$25,000 a day; altogether, they generated \$2.2 million. Every title included an unpopular clause stating that "no liquors shall ever be sold or drunk on the premises"; residents could drink legally only at the hotel, once it was built.

CROSSING THE WATER

Immediately after buying the peninsula Babcock and Story established the San Diego and Coronado Ferry Company. Its primary function was to transport construction workers to build the Hotel del Coronado; second, it was to promote the development of Coronado as a health resort. In 1885 the ferry *Della* went into service; first in a succession of wooden-hulled side-wheel steamers, the 21-foot craft could carry only a handful of passengers on board, so she was put to more efficient use, towing them in an open boat. Within a year she was replaced by the 100-foot *Coronado*, which continued in service from August 1886 until 1922. In 1888 the screw-driven *Silver Gate*, twice the length of *Coronado*, was launched; but 2 years later she was sold, having proven, for some unstated reason, "a complete failure as a ferry." The 92-foot *Benicia* joined the fleet at the same time as *Silver Gate*; decommissioned in 1903, she was replaced by the 118-foot *Ramona*, "the most successful of the early ferries" that plied the short route for over 25 years. *Morena*, last of the side-wheelers, served the Coronado community from 1924 until 1934.

From the late 1920s the Company bought diesel-powered vessels, all around 200 feet long. A couple were "recycled"—M.V. *North Island* (1939) and M.V. *Silver Strand* (1944)—but three were custom-built: M.V. *Coronado* (1931), M.V. *San Diego* (1931), and M.V. *Crown City*, "the jewel in the San Diego-Coronado Ferry Company fleet [and] the most modern ferry on the water." When the San Diego-Coronado Bridge opened in August 1969, the ferry service became redundant, although the Coronado Commuter Ferry still operates.

To complement their ferry company, Babcock and Story established the Coronado Railroad Company in 1886. Its first line ran about 1½ miles from the Coronado Ferry Landing to the future site of Hotel del Coronado. Until a dummy (a small steam engine considerably disguised as a coach to not frighten

horses) arrived in August, *actual* horsepower was used. A second line from the landing to Coronado Heights down the peninsula was built by the end of 1887. Six months later the company completed the Coronado Belt Line, a railroad from San Diego around the south end of the bay and up the peninsula to Coronado. Once the hotel was opened, most guests traveled to it by train; the wealthy took a private railcar because the journey from the East Coast took 7 days. The Coronado Railroad Company merged with the National City and Otay Railway in 1908 and was rebadged as the San Diego Southern Railway; following another merger in 1912, the San Diego and South Eastern Railway was established. Regular passenger services ceased in the mid-1890s, although special excursion trains continued for several years. However, freight services—two trains a week—were maintained until 1970. A “casualty” of the San Diego-Coronado Bridge, the railroad was removed in 1971.

The bridge is now the principal link between Coronado and the “mainland.” The 2-mile long box girder structure, with five lanes “designed exclusively for motor-vehicle traffic” soars 200 feet above San Diego Bay—high enough for the aircraft carriers *U.S.S. Nimitz* and *U.S.S. Reagan* to sail beneath it. Begun in February 1967 and completed in mid-1969 at a cost of \$50 million, it earned the “Most Beautiful Bridge” Award of Merit from the American Institute of Steel Construction in 1970.

“THIS GORGEOUS STRUCTURE OF ORIENTAL MAGNIFICENCE”

Of the hotel, Babcock’s purple-prose prospectus claimed (note the tense; after all, this was written *before* the hotel was built):

Inside the Hotel Del Coronado, the guest is at once gratified and delighted with the perfection of all the appointments. You wonder if you are in a fairy palace or a hotel of the nineteenth Century. The soft Persian rugs, the Oriental tapestries, the antique design of the furniture, the luxurious baths, the odor of orange and pomegranate blossoms, all appeal to you and you join the throng of devotees to Coronado the Lovely. . . . Close by . . . is the lawn tennis court, and when the guests, costumed like the knights errant of olden time appear, you might imagine yourself transported to the court of Louis the Fourteenth.

Even if he sometimes lost touch with reality, Elisha Babcock had maintained contact with Evansville architects James W. and Merritt J. Reid, who had worked some of his railroad projects in Indiana. James later wrote that his former client pressed him to visit Coronado and in December 1886 had “telegraphed most earnestly to come on, no matter how brief the stay.” When he arrived, Babcock told him, “Right here . . . we must build a house that people will like to come to long after we are gone—I have no time, it’s all up to you.” It is uncertain whether “no time” referred to Babcock’s busy schedule, or to his fleeting life, or to the urgency to build; in the light of events, the

latter seems most likely. The entrepreneur told his architect that the grand hotel

would be built around a court—a garden of tropical trees, shrubs and flowers with pleasant paths—balconies should look down on the open court from every story. From the south end, the foyer would open to Glorietta Bay with verandas for rest and promenade. On the ocean corner there would be a pavilion tower and northward along the ocean, a colonnade terraced in grass to the beach. The dining wing would project at an angle from the southeast corner of the court and be almost detached to give full value to the view of the ocean, bay and city.³

Presented with this “vision of designing an Americanized castle in an incomparable setting” and given the chance to build what Babcock and Story promised would be “the largest hotel in the world . . . too gorgeous to be true,” the Reid brothers could hardly decline the commission. As the firm’s chief designer, James immediately began to make sketches. But Babcock was so impatient for work to start and no time was allowed for design development. That process was irregular: according to the architect, “Preliminary sketches were quickly prepared and . . . remained the unchanged basis of construction.” More surprisingly, and despite the design-and-build arrangement with the architects, later “it was decided that the most speed in construction would be obtained if the delay of preparing drawings for contracting was avoided.” At the end of the project one of the Reids’ draftsmen commented upon this organic approach—although “slapdash,” “hotch-potch,” and “hit-and miss” are adjectives that come more readily to mind. He said that “the hotel never did seem to stop growing. . . . It was amazing how many rooms were built that were not even planned for at the start of construction.”

The first practical problem Reid faced was securing enough lumber for such a large building. Little was to be had in San Diego. He recalled, “From the sketch, a lumber bill [of quantities] was taken off. With many misgivings as to adequacy and accuracy, [I took it] to San Francisco, accompanied by Mr. Heber Ingle.” Together with Herman Shuster, a minor stockholder, Reid and Ingle “negotiated” to be given priority in cutting and shipping everything that the Dolbeer and Carson Lumber Company could supply. The green, rough-cut Douglas fir, sugar pine, and redwood were transported down the coast from the northern California forests on ships and barges; some were even floated as “monster rafts,” towed by steam tugs. Once on-site the lumber had to be cured—because time was of the essence of the project, that simply was not to happen—planed, and finished.

Progress was also overshadowed by a shortage of skilled labor. The boom in downtown San Diego was providing plenty of work for carpenters, so Babcock offered to pay more, attracting tradesmen from as far as Chicago, although some, when they reached the Southwest found that there was more to made from real estate speculation than from “nail-pounding.” But some accepted

the work and trained the novices. Forced to use inexperienced workers, Reid reported, “It was not difficult to obtain good, unskilled labor, of the only kind there was, by applying to the Chinese Seven Companies in San Francisco. As many as could work were employed at once.” He developed a strategy:

Realizing the difficulty of obtaining skilled workmen, where everyone was rich, or would be tomorrow, the foundations were started along the north front, as simpler in construction, progressing southward. The men’s workmanship would gradually improve and in the meantime perhaps more and better help would be found. This proved true to some extent, but progress was constantly hampered for want of competent men and leaders, both in the drafting room and in the field.⁴

The three-story Coronado Boathouse on Glorietta Bay, built before the hotel was started, is thought by some to have been “practice run” for what was at first a largely unskilled workforce. Loosely described as a “diminutive Del and a visual masterpiece in its own right,” the 40-foot square building has “a bellcast-hipped roof with a widow’s walk supported by brackets; a variety of dormers graces all four sides of the roof . . . an exterior observatory area at its peak.”

Soon after Reid returned from San Francisco work started on the Coronado Brick Company’s oil-fueled kiln; using clay from deposits near the hotel site, it turned out half a million bricks a day for the foundation, fireplaces, and chimneys, as well as for other Coronado buildings. Chinese laborers also built a planing mill and joinery shop, a metal shop and iron works, and living quarters for several hundred workers. Permanent “auxiliary” buildings included a plant room with a 100-foot steel-and-brick smokestack that housed a steam boiler and electrical generating equipment and a laundry; it was connected to the hotel by an access tunnel. When it opened, the hotel was the largest building outside New York City to be electrically lighted. The story of Thomas Edison’s personal involvement is apocryphal; there is no sign of Edison at the Hotel Del Coronado until October 1915.

Babcock’s wife Isabel and Story’s wife Emma performed the groundbreaking at the March 19, 1887 ceremony; 3 weeks later the first floor framework was complete. Constantly pressed to speed up construction, James Reid had to allow for the inevitable shrinkage problems that would result from using unseasoned lumber for the structural elements and wall framing. He was able to report that “the work went steadily and rapidly on in spite of drawbacks, and was greatly accelerated toward the later middle period”—that would have been 6 months into the contract—by the assistance of his brother Watson, and “Mr. Ingersoll, a young mining engineer.” Although it would not be finished for another 2 years, the hotel welcomed its first guests on February 19, 1888. On that day nearly fifteen hundred people crossed San Diego Bay to see it.

As Babcock had planned, most of the 399 guest rooms were ranged in three, four, or five stories on the north, south, and west sides of a central

landscaped court, almost an acre in area. It was laid out by Katherine Olivia (“Kate”) Sessions, who later became San Diego’s official “city gardener.” The east wing housed the main entrance and lobby, verandas, and some guest rooms. “Spared no elegance,” the guest rooms almost all had a fireplace surrounded by a wooden mantel. Naturally conscious of fire hazards in a building constructed entirely of wood, Reid installed automatic gravity-feed sprinklers fed from tanks on the upper story. In 1916 they were replaced by twelve thousand pressure sprinklers. He also provided two huge concrete cisterns in the basement for storing rainwater—“a plan that never came off.” Because the rooms have been continually redecorated or renovated, their original aesthetic quality is now hard to judge, but Australian architectural historian Miles Lewis remarks that a vintage photograph of a bridal suite reveals an “insipid interior with triple arcade across.” The seventy-three bathrooms were communal.

It is clear from surviving images—albeit monochromatic ones—of the original interiors that stylistic integrity was not high on the Reid Brothers’ agenda nor on that of their clients. The two-story lobby, with paneled walls and a coffered ceiling in dark wood, had a grand stair leading to a mezzanine; formally arranged chairs were set out within range of strategically placed spittoons. The lobby led to public rooms: some, reserved for reading and chess, also had coffered ceilings and wooden wainscoting; they were furnished with easy chairs and wicker chairs—in the manner of late Victorian interiors, all finishes were rather dark and most rooms were quite full of furniture. Other rooms were set aside for smoking, writing, and music. The bar room boasted a 46-foot long ornate mahogany bar, described by Lewis as having “a projecting polygonal corner, and a sort of baldacchino.” It was crafted in Philadelphia and (reportedly) shipped around Cape Horn, fully assembled. But it should be noted that, by contrast, there was a “white and gold” drawing room, complete with white joinery and furniture, a Neo-Classical ceiling and a tiled fireplace and mantel. The hotel also provided thirty billiard tables for its clientele—four for the exclusive use of ladies—as well as four bowling alleys. Telephones were available, but not in the guest rooms.

The most universally resonant image of the Hotel Del Coronado is the great red-shingled conical roof at the southwest corner. Ringed by two levels of dormer windows and crowned with an observation gallery and flagpole, it spans, without intermediate supports, the hotel’s 11,000 square-foot circular ballroom. The vast space, ringed with windows at floor level, has sloping walls rising to its flat ceiling. On the diagonally opposite corner of the hotel, crowned with steep gables and a pinnacle, is the seven-hundred-seat dining room—the Crown Room. Said to be Reid’s “special pride,” it is summarily and pragmatically described by one writer as “156 feet long, 62 feet wide and 33 feet high, built without pillar or post. It is ellipsoidal in plan and has self-supported vaulted ceilings.” In fact the rib-vaulted sugar pine ceiling was “fitted together with pegs and glue, without a nail in it.” A more

effusive account of the space appeared in *The San Diego Union* in February 1888:

This vast and elegant room, with its wealth of appointment, is a rare sight, especially under the brilliant incandescent lights that illuminate it. The polished floors, over which an army of trained servants noiselessly glide, the high inlaid ceilings, the snowy linen and the flitter of the silverware and glassware combine to make it a most charming picture. The room may have its equal . . . but it certainly is not surpassed anywhere.⁵

The hotel's architecture often is classified as Queen Anne Revival style. The broader Queen Anne movement, sometimes called Vernacular Revival, originated in England at the height of Empire as the result of search for a home-grown form, "modeled loosely on Medieval Elizabethan and Jacobean architecture." The American version, as the English, was a hybrid (less-kind critics would say "mongrel"); that puts it beyond objective assessment because it is not based upon a formal system of architectural "correctness." In the United States, whatever distinctives it had can be found mixed with Colonial Revival Italianate, Stick, or Victorian styles. Babcock's brochure represented the building as "a gorgeous structure of Oriental magnificence," pointing out that the design was "a combination of old classical architecture, so modernized and modified as to partake of the excellencies of the different schools it represents. The whole has been so successfully harmonized as to produce a structure remarkable for its size, symmetry and grandeur."

An early piece in *Leslie's Illustrated Newspaper* expansively concluded that "the story of Aladdin and his wonderful palace, built in a single night, comes closer to being realized into actual fact upon this Coronado beach than possibly any other place on earth known to man." But for hyper-hype Babcock's own propaganda for the Hotel del Coronado is hard to beat:

The building is grouped around a quadrangular court . . . which is exquisitely beautiful and already noted for the variety of its tropical and subtropical shrubs and plants. It is said to be unequaled either in Europe or America. . . . The grounds in front of it are terraced down to the very beach, where the waves of the gentle Pacific sometimes overleap their limits to steal a kiss from the bright green grass that there fringes on the skirts of Mother Earth.

Moreover (he said), "As a real sanatorium, and a pleasant all-the-year-round resort, Coronado is believed to be unrivalled." He even compared the location to Eden, with a climate "mild, dry and as pure as that of the primeval paradise. . . . From April to October there is seldom any rain here [and] the rain falls mostly at night. Here the whole year may be said to be almost one continuous summer, for flowers and fruits continue to grow simultaneously nearly all the year." That sounded like a line from Lerner and Loewe's *Camelot*. Babcock promised that anyone who suffered from "hay fever, asthma and other ailments

of the respiratory organs” would benefit from the climate, and added that the “inexhaustible springs of pure and wholesome mineral water [have] remarkable curative properties, especially in kidney and bladder ailments. Hundreds have been cured of troubles, which had long resisted medical treatment.” He failed to mention that the magical bottled water—and it really *was* full of minerals—was drawn from the general supply that also filled the bathtubs at the hotel.

The advertisement in which all these lofty promises appeared concluded more practically, “Yet with all the magnificent splendor, elegant surroundings, and the other excellencies . . . the rates here are as moderate as those of any ordinary hotel, ranging from \$2.00 per day and upwards by the month; transients from \$3.00 per day and upwards.” Babcock signed it as the manager of the Hotel del Coronado; but he was no longer the owner.

CHANGES

In 1887 the San Francisco sugar millionaire and shipping magnate John Diedrich Spreckels visited San Diego on his yacht *Lurline*. Drawn by the real estate boom, he invested in a wharf and coal bunkers. Following a financial crash in the following year, he loaned Babcock \$100,000 to complete the hotel and in July 1889 bought out Story’s one-third interest in the Coronado Beach Company for about half a million dollars. He soon owned controlling interest, and by 1894 the J. D. and A. B. Spreckels Investments and Securities Companies were sole proprietors. Some sources say Babcock was paid over a million dollars for his share, but how much, if anything, changed hands cannot be determined. Contemporary hotel literature recorded Spreckels as owner and Babcock as manager; by the beginning of the twentieth century, Spreckels’ manager was one John J. Herman. So what became of Elisha Babcock? According to a brief biography in the online *San Diego Reader*, he “built the city’s first electric-lighting network in 1904 and developed over 4,000 acres of San Diego property. However, he ended up nearly bankrupt after a flood ruined many of his businesses in 1916 and his enterprise, the Western Salt Company, failed.” He died in 1922.⁶

Four years later Spreckels also died, but the Hotel del Coronado was retained by the Family Trust until April 1948. Apart from renovations, the hotel remained more or less unchanged until the 1930s, when parts of the main building were converted into convention facilities and banquet rooms. Modern heating and plumbing were provided to the guest rooms. In the late 1940s, a fifth floor containing fifty more guest rooms was added.

The Del was then sold for a reported \$2 million through southern California developers, Herman Miller and M. Bert Fisher to “a nationally known hotel owner and East Coast land developer,” Robert A. Nordblom and his associate Josephine C. Moore. Exploration of the tortuous deal is beyond the ambit of this essay, but Nordblom sold the property 2 days later to Barney

Goodman, during whose proprietorship the hotel was allowed to “grow shabby. The basic architecture remained superb, but the interior showed lack of care. The furniture was a combination of sagging wicker, 1920 overstuffed, 1930 chrome and 1950 Grand Rapids. A slightly musty air of neglect hung about the upper rooms.”

Ownership next passed to San Diego millionaire John Alessio, who in 1960 engaged the Hollywood scenic designer Al Goodman to oversee a \$2 million interior refurbishment with “special wallpaper, carpets woven to order, a spruced-up lobby, new private dining rooms and a plush new bar.” In 1963 the renovated hotel was sold on to M. Larry Lawrence, who (it is said) intended to eventually demolish the 75-year-old building and redevelop the site. Instead, Lawrence undertook a 30-year refurbishment, restoration and expansion, extensively overhauling mechanical and electrical services and the heating and ventilation systems. He made structural changes and nearly doubled the available accommodation. The program, according to some sources, is estimated to have cost over \$150 million.

In 1972 the Grande Hall Convention Center, providing facilities for up to fifteen hundred people, as well as offices and “back-of-house” functions, was completed on the northeastern corner. The following year the seven-story Ocean Towers, with 214 guestrooms, was added at the southwestern corner. Through the remainder of the decade a spa, tennis courts, two heated swimming pools, expanded dining spaces, retail shops, and additional car parks were built. In 1979 the Poolside Building, housing meeting rooms, and ninety-six guestrooms (bringing the total to 692) was opened. Lawrence died in January 1996; his family trust continued to operate the Hotel del Coronado until the following September, when it reverted to Travelers Insurance Company (formerly Primerica Corporation), through whom it had been refinanced in 1987.

The new owners put the resort under the management of Wyndham Hotels, a professional management company, before selling it for \$330 million to Lowe Enterprises in August 1997. “Lowe Enterprises then promptly installed Destination Hotels and Resorts, their Denver-based management subsidiary, as manager.” A 3-year, \$55 million structural preservation, restoration, and redecoration program that included beachfront landscaping was completed in August 2001. That was not the end of The Del’s story.

Two years later, the hotel was sold to a partnership of KSL Resorts Inc. and CNL Hotels and Resorts, who carried out a further \$10 million renovation of guest rooms and announced the development of “North Beach,” that would offer “several dozen luxury villas on the northern edge of the hotel’s property. The North Beach villas would serve as both residences to their owners and hotel suites when not occupied.” According to the hotel’s publicity, “Beach Village consists of twelve beach front villas [that] feature dining and living spaces with fully-equipped kitchens and appliances, cozy fireplaces, spa-style baths with soaking tubs, and private terraces . . . Within this exclusive enclave,

owners and guests will also enjoy private pools and hot tubs, personalized concierge service and private access to the beach.”

Needless to say, the \$2 and \$3 daily tariffs that Babcock advertised around 1900 have been superseded. Now, the humblest rooms at the Hotel del Coronado cost around \$325 a night; for those *really* determined to enjoy luxury, \$4,900 a night suites are available.

“THE PRINCE OF WALES NEVER SLEPT HERE”

During John Spreckels’ ownership, the Hotel del Coronado catered to wealthy patrons from the East and Midwest. Most arrived with a retinue of servants, to “winter” for months on end. At the turn of the last century the hotel was “literally San Diego’s biggest single industry”:

Tourism . . . was something more than just visiting new places. Travelers, especially the wealthy, did so for their health, believing that salt air and balmy breezes would cure asthma and gout and other minor medical disturbances. And the hotel was quick to seize on these beliefs. But perhaps the most charming bit of Victorian style physical activities were the regular rabbit hunts. Guests would dress in a variety of English hunting attire or cowboy outfits to go galloping over the sand dunes . . . chasing jack rabbits.⁷

More refined entertainments included archery, bicycling, boating, bowling, croquet, golf, swimming, and of course fine dining.

As noted, the hotel is one of only three commercial buildings among the icons in this book. Even in the days when *icon* did not have its present meaning, successive owners recognized the business value of iconic status. Although the Del’s heritage department has been since 1998 “committed to safeguarding and sharing the hotel’s wonderful . . . history”—“elaborating” may be politely added—over the years fable has replaced fact. Long after being disproved by reputable historians, myths continue to spread; a case in point, already mentioned, is the fiction of Edison’s role in setting up the building’s original electric lights.

In about 120 years, many of the rich and famous have made the Del their destination. Its public relations department has published “A-lists” of presidents from Benjamin Harrison to George W. Bush, politicians and literary figures, as well as a cavalcade of sports heroes and movie stars to support—it must be repeated, quite unnecessarily—its claim to “icon.” To some of those individuals, apocryphal stories have become attached. Just a couple will make the point.

On April 7, 1920, the Crown Room was the setting for a gala banquet in honor of Britain’s Prince of Wales whose ship *H.M.S. Renown* sailed into San Diego for a couple of days. Although it is apparently too romantic to die, the myth that he met Mrs. Wallis Spencer (later Simpson), for whom he later gave

up throne and empire, was convincingly scotched by Professor Benjamin Sacks in 1998.

Between 1904 and 1910 L. Frank Baum, creator of *The Wonderful Wizard of Oz*, wintered at the hotel for months at a time and there wrote several of the sequels to his successful story. Until recently there was an unsubstantiated tradition that he designed the crown-shaped chandeliers in the Crown Room (the existing ones are 1920s copies), because he thought originals “were too plain.” The story was extended to assert that he also designed the chandelier in the lobby. But a 2007 press release from the hotel omitted the claims.

POPULAR CULTURE

In the 1920s “a young, carefree Hollywood discovered Del Coronado” and the clientele began to change. But for decades the resort had been no stranger to the movie industry.

The Hotel del Coronado was introduced into popular culture as a “bit player” in *Off for the Rabbit Chase*, a movie made by James White and Frederick Blechynden of the Edison Manufacturing Company Kinetograph Department and released in February 1898. A synopsis is almost as long as the film: “Two groups of horseback riders, accompanied by packs of hounds, are galloping away from the Hotel Coronado [*sic*], San Diego . . . on their way to the hunt.” Three years later a Los Angeles cinemaphotographer named Ramsey shot scenes of the Coronado Ferry and Tent City. None of these early filmic essays was a blockbuster because there were very few venues where they could be exhibited; besides, before about 1913 the motion picture was hardly a respectable medium.

In spring 1912 Allan Dwan of the Santa Barbara-based “Flying A” Studios filmed the feature, *The Maid and the Man* at the Hotel del Coronado. In the same decade Lubin Studios of Philadelphia and the producer-director Harry A. Pollard filmed on location at the Del. Hollywood studios began to recognize its possibilities as a location after 1918, when Maxwell Productions used it for Rudolph Valentino’s intriguingly titled *The Married Virgin* (aka *Frivolous Wives*). Some historians believe that in 1922 Valentino and Gloria Swanson made the now recovered *Beyond the Rocks* there. Swanson also starred in Dwan’s *The Coast of Folly* of 1924, set in Palm Beach, Florida, but reputedly made on location at Coronado. Fox Film Corporation filmed *My Husband’s Wives* there in the same year.

Whatever the case, these movies established the hotel as a location for films about “young men in search of fortunes and heiresses in search of romance.” One critic believes that its stereotyping as a playground for the rich was fixed in 1935 with *Coronado*. Starring Johnny Downs and Jack Haley, the “typical Paramount Grade-B” movie was described by critic Hans J. Wollstein as an “utterly charming little musical comedy that was rather obviously meant as

an advertisement for San Diego's most famous hostelry, on the grounds of which it was partially filmed." Paramount's critically-panned *Yours for the Asking* (1936) also used the resort.

But there is little doubt that Billy Wilder's 1959 comedy, *Some Like It Hot*, shot partly on location at the Hotel del Coronado, did more than any other movie to affirm the hotel—albeit in the role of the fictitious Seminole Ritz Hotel in Miami—as a popular icon of American architecture. About 40 years later the American Film Institute named it as the greatest American comedy film of all time. Starring Marilyn Monroe, Tony Curtis, and Jack Lemmon it tells the story of two men who witnessed the 1929 Valentine's Day massacre in Chicago and are on the run from the mob, disguised as members of all-girl jazz band. Wilder is quoted: "We looked far and wide, but this was the only place we could find that hasn't changed in thirty years. People who have never seen this beautiful hotel will never believe we didn't make these scenes on a movie lot. It's like the past came to life."

The Del was not used again by Hollywood until 1973, when it became the anonymous setting of MGM's *Wicked Wicked*, an annoying split-screen horror film about a masked psychopath—the hotel handyman—who dismembers and reassembles a succession of blond victims. It may have been an unguarded moment on the part of management that made the hotel the setting for a slash movie. As if the resident ghost of Kate Morgan were not enough!

To go from the ridiculous to the sublime: in 1980 Twentieth Century-Fox released *The Stunt Man*, produced and directed by Richard Rush. Although hailed by critics, it was deemed "commercially unviable." One reviewer counted it among "the best American films of the 1980s, and, ironically, one of the most overlooked and unknown." The plot? According to one simplistic summary: "An escaped convict accidentally destroys a stunt shot while a movie is being filmed. When the stunt driver dies in the subsequent car crash, the film's director decides to replace him with the convict saving them both from the police." Most of the action happened inside and around the Hotel del Coronado, which the Special Effects Department dynamited in the movie-within-the-movie; architect J. Michael Abbott later ambiguously commented, "The Del . . . never looked better, including parts where they blow it up!" The *New Yorker* reviewer Pauline Kael insisted that "if there were such a thing as a masterpiece of a location," the hotel was it. A "poignant but bitter" made-for-video documentary, *The Sinister Saga of the Making of The Stunt Man*, coincided with the cult movie's 2000 DVD release.

At the end of the 1980s Coronado Beach and the hotel were locations in Universal Studios' *K-9* and Warner Brothers' *My Blue Heaven*. In 1995 Touchstone Pictures filmed *Mr. Wrong* at the hotel; starring Ellen DeGeneres, it was described by one reviewer as a "slow-motion train wreck."

Television is a much more pervasive medium than cinema, and since the 1970s several series have included episodes filmed at the Del, among them *Baywatch* (complete with its ghost, the building played itself, so to speak),

Ghost Story, *Hart to Hart*, *Hunter*, *Lifestyles of the Rich and Famous*, *Silk Stalkings*, and *Simon and Simon*. A number of made-for-TV movies—*The Girl, the Gold Watch, and Everything* and *Loving Couples* (both in 1980)—and miniseries, *Captains and the Kings* (1976), *Rich Man, Poor Man* (1976), and *Space* (1985) have used it as a location.

Richard Matheson's 1975 novel *Bid Time Return* (republished in 1999 as *Somewhere in Time*) is set in the Hotel del Coronado. The hero Richard Collier, dying from a brain tumor, decides to spend his last days at the hotel. He is fascinated by a photograph of an actress who performed there almost a century before and discovers that she had an affair with a mysterious man. He travels back in time to become that man. Disappointingly, when in 1980 Universal Studios made the book into a film, *Somewhere in Time*, it was shot at the Grand Hotel on Mackinac Island, Michigan.

"PUTTING YOUR GHOSTS TO WORK"

The hotel also has been popularized in another literary genre by such books as Alan M. May's *The Legend of Kate Morgan: The Search for the Ghost of the Hotel del Coronado* (1990) and John T. Cullen's *Dead Move: Kate Morgan and the Haunting Mystery of Coronado, a Novel* (2007). The spectral legend proliferates in many "true" ghost story anthologies and on websites dealing with the paranormal.

The following item appeared in the *San Diego Union* on November 30, 1892:

Night before last, an attractive, prepossessing and highly educated woman came down from her room at the Hotel del Coronado and between 9 and 10 o'clock stepped out upon the veranda facing the ocean. The sea was lashed into a fury by the tempest that was sweeping over the whole coast. She was quietly and elegantly dressed in black, and wore only a shawl over her head. Nothing more was seen of her until at 8:30 yesterday morning, when the assistant electrician of the hotel, passing by the shell walk at the end of the western terrace, saw her lying on the steps leading to the beach. She was dead. . . .

The woman was eventually identified as 24-year-old Kate Morgan; her story has been told often, so here a synopsis will suffice. She and her husband Thomas were grifters who had made reservations at the Hotel Del Coronado under aliases: Lottie Anderson Bernard and Dr. M. C. Anderson. Their well-practiced scam involved having the attractive Kate pose as Thomas' sister; after forming a liaison with a young man—as noted, a resort hotel was a good environment for that—and then insisting that he gain her "brother's" approval to court her by playing his favorite game, poker, with him. Thomas would cheat him out of his money, and the couple would move on to their next "mark."

Using her alias, Kate checked into room 302 on November 23; Thomas was to join her a few days later. When he didn't turn up she searched San Diego for him; she also bought a pistol. Only a week after she arrived at the hotel, Kate was dead. According to one source, the hotel reported her death a suicide by poison to protect its good name; "a large bottle of quinine was found in her room and they suspected she had tried to abort [a] baby." But in fact she was shot in her right temple, but not by the gun that she had bought. There was no exit wound or blood on her hand or the gun, which was found "two steps above her hand" just outside the hotel.

By the next afternoon a jury returned a verdict of suicide to San Diego's Deputy Coroner. Cullen observes that because her identity was unknown "by modern standards it would be impossible to determine motive [or] to close the legal proceedings in one day." Police circulated a sketch portrait throughout the United States, leading to several identifications: two were aliases of Kate Morgan. No one claimed her body, and on December 13 she was buried at San Diego's Mount Hope Cemetery. Cullen writes that "the circulating sketch, plus speculation about her last hours and her motives, fed the media tempest. . . . First the San Diego newspapers [coincidentally, owned by John Spreckels, who also owned the Hotel Del Coronado] and soon, Hearst and other newspapers . . . began a telegraph-hyped campaign of daily and hourly bulletins, rumors, guesses, and glamorized half-truths . . . [Kate Morgan's] death . . . became high drama in circulation-starved newspapers." The cynical among us may be excused for believing that Spreckels recognized the advertising potential of the lurid episode. And that gave rise to the legend of the ghost of the Hotel del Coronado.

But it is pointed out that wooden buildings—especially those built of unseasoned material—continue to creak for decades, even centuries. It is suggested that a perfectly natural phenomenon, unconsciously (or consciously) fuelled with a little imagination and a desire for excitement can grow into a preternatural one until it becomes a fully-fledged urban myth. The publicity department of the Hotel del Coronado continues to capitalize on this. For example, in summer 2006 one of its press releases stated,

Hotel guests, employees, and even paranormal researchers have attested to some supernatural occurrences at The Del. Witnesses report flickering lights, televisions that turn on and off by themselves, dramatic shifts in room temperatures, odd scents, unexplained voices, the sound of strange footsteps, mysterious breezes which cause curtains to billow when windows are closed, and objects which move of their own accord; still others claim to have seen the ghost of Kate Morgan herself. . . .

Paranormal researchers have used infrared cameras, night vision glasses, radiation sensors, toxic-chemical indicators, a microwave imaging system and high frequency sound detectors to document unexplained temperature fluctuations, magnetic fields, electronic emissions, and other paranormal activity.

It also notes, “Not surprisingly, the media has closely followed the legend of Kate Morgan, and stories about The Del’s ghost have appeared nationally and internationally in newspapers, magazines and on television.” Not surprisingly, indeed!

In 2002 Christine Donovan of the hotel’s heritage department published *Beautiful Stranger: The Ghost of Kate Morgan and the Hotel del Coronado*, that includes excerpts from more than a dozen accounts of purported encounters with a ghost. One commentator writes that at that moment “Morgan’s ghost emerged as the hotel’s sole otherworldly resident.” Donovan admitted, “A lot of historic hotels have ghost stories. It’s a given, and they can take on a life of their own—the legends get passed down. . . . We reined it in and toned it down.” She added, “My attitude was I’d rather have one ghost story that seems legitimate rather than a whole lot of ghost stories just because people are telling them.”

For many years Kate Morgan’s ghost—or any ghost—was regarded as a commercial liability. One reviewer of *Beautiful Stranger* wrote,

Up until about a dozen years ago, a bellman who led public tours told the tale of a female guest who died in her room the night the hotel opened in February 1888. Management was so fearful that the potential scandal could ruin the venture before it got off the ground, the story went, that it spirited the body away and erased her name from the register.

In a 2006 hotel trade magazine article, “Putting Your Ghosts to Work,”⁸ Glenn Haussman wrote that though at one time “having a haunted hotel was something an owner would want to keep under wraps . . . these days, having a resident ghost around to taunt or tease guests with glimpses of the underworld is turning into a bonus for the property’s public relations department.” The Hotel del Coronado’s general manager agreed that Kate Morgan’s carefully cultivated shade has been a “boon for property publicity,” remarking “Having a resident ghost garners us a lot of attention. These kinds of stories are what makes this hotel great and this is part of our wonderful and unique history.” It is in the Hotel’s commercial interest to keep the phantasmagorical pot—this icon-within-an-icon—on the boil.

And because there’s money in it, others have climbed on the Del’s ghostly bandwagon. In 2007 a media-conscious San Diego “project psychic” and self-styled “spirit advocate” claimed, “Not only is this legend completely untrue for Kate Morgan, it is even more wrong when the legend is not even about the correct person.” Using “interdimensional communication,” she claimed to have spoken to the Phantom of the del Coronado and announced, “Mrs. Lottie A. Bernard claims she is not Kate Morgan.” As a footnote, her press release happened to mention that more cash was needed for ongoing research.⁹

Even *sans* celebrities, *sans* moviemakers, and *sans* ghosts, the Hotel del Coronado, though neither “the talk of the western world” that Elisha Babcock

predicted, or “the finest all the year round seaside resort in the world” could (and did) lay legitimate claim to being “America’s all the year round seaside resort and sanatorium.” As he put it so many years ago

All who have visited Coronado are loud in its praises, and seem at a loss to find language sufficiently strong to express their great admiration of the many charms of this locality, the magnificence of its gorgeous Hotel and the amount of varied comfort and enjoyment provided for the guests. As a real sanatorium, and a pleasant all-the-year-round resort, Coronado is believed to be unrivalled.

The Designers of the Hotel del Coronado

The Reid brothers—James William (ca. 1851–1943), Merritt J. (1855–1932) and Watson Elkinah (1858–1944)—were Canadian-born architects who practiced mainly in the United States. Around 1872 James left St. John, New Brunswick, to study industrial arts at the Lowell School of Practical Design in Boston. The details of his professional education are unclear; some sources claim that he studied also at McGill University, Montreal, Massachusetts Institute of Technology, and at the *École des Beaux-Arts* in Paris, but it seems that he graduated from none of them. Merritt had followed his brother to Boston, where he also worked as a drafter.

While in Boston, William had worked in several architectural firms and on returning from France in 1875 settled briefly in Terre Haute, Indiana, as assistant to Charles Eppinghousen, who was then designing the McKeen Bank in the city. When his employer went to Italy to obtain sculptures for the building Reid took over supervision. He probably also worked on Eppinghousen’s unsuccessful entry in an 1877 design competition for the Indiana state capitol. Around then he moved to the office of H. H. Brickley, later buying the practice. When he was commissioned to design a new depot for the Evansville and Terre Haute railroad Merritt joined him to form Reid Brothers, Architects. Through that connection they became known to Elisha Babcock. One source claims, probably hyperbolically, that until 1886 they “altered the landscape of Evansville, southern Illinois and northern Kentucky.”

Many of those “landscape-altering” buildings have been demolished. An interesting survivor is the People’s National Bank (1880–1882), built for Aaron Guard Cloud in McLeansboro, Illinois, “a nominal Second Empire design with frenetic details. In 1884 the Reids also designed Cloud’s “Gothicky” residence in McLeansboro; now housing the Mary E. Cloud McCoy Library, it is assessed by its present owners as “majestic, inspiring, and beautiful.” Also in the grotesque Gothick style is their Willard Library in Evansville, of 1885.

Reid Brothers’ performance for the Evansville and Terre Haute railroad, and perhaps their stylistic versatility, led to the commission for the Hotel del Coronado

in December 1886. James, the partnership's principal designer, moved to San Diego; Watson joined him a year or so later, while Merritt managed the Evansville practice. Following the completion of the Del in 1889, James and Merritt Reid opened a San Francisco office, leaving Watson in charge in San Diego until May 1891 when William Sterling Hebbard, who already had a thriving practice, subsumed the firm. Watson returned to New Brunswick.

In 1891 James and Merritt designed the *Portland Oregonian* building, the first steel-framed skyscraper west of Chicago. The first residential work in San Francisco was a six-house Victorian terrace of 1894, and between 1895 and 1905 they designed several large residences for the Spreckels family. In 1898 John D. Spreckels commissioned them to design a new headquarters for the *San Francisco Call* newspaper; completed 2 years later, the eighteen-story steel-framed tower, with an ornate four-story dome redolent of the Hotel del Coronado's conical roof, was for many years the tallest building west of the Mississippi. In 1899 they built the grandly named Spreckels Temple of Music, an "Italian Renaissance-inspired terra cotta and sandstone band shell" in Golden Gate Park. Two years later, also for Spreckels, they produced the San Francisco and San Mateo Electric Railroad Company's Geneva street offices and powerhouse.

What someone has called "the prolific Reid Brothers partnership" ended with Merritt's death in February 1932; then over 80 years old, James retired from practice. He died in September 1943. The firm had produced office blocks, warehouses and other commercial buildings, residences, and nearly thirty cinemas along the entire West Coast. Perhaps worth noting among them was the understated Neo-Classical replacement for San Francisco's famous Cliff House, of 1909; one writer points out that "ironically, it was the Reid Brothers' Hotel del Coronado in San Diego that [the owner] directed his architects to use as a model for his overwrought Victorian palace."

"The Great Coronado Tent City"

Throughout the second half of 1900, when the Hotel del Coronado was closed for renovations, holiday-makers were accommodated in tents and pavilions on the beach south of the building. Beginning as what a San Diego newspaper called a "tiny camp," within 15 years the initiative grew into the Coronado Tent City, "wherein accommodations for thousands are afforded in spacious, clean tents and individual cottages with their comfortable equipment." Too popular and too profitable to remove, Tent City—sometimes called Camp Coronado—continued as inexpensive middle-class alternative to the hotel (but integrally associated with it) until the owners announced its closure in June 1936, possibly because of falling demand in the Depression years. It was dismantled in 1939.

In his 1908 *History of San Diego*, William Smythe praised Coronado as a “pleasant across-the-bay residence district [*sic*],” noting

On the narrow peninsula east of the hotel, several hundred tents and palm leaf-covered cottages [being directly beside the beach, these seem to have been “superior” accommodation] are erected early each summer, where a large number of people go to spend a few weeks beside the ocean. Here there is boating, bathing, fishing, and all the pleasures of camp life, combined with most of the conveniences of life in the city.

The semipermanent gaily striped tents, lit by electricity, had rough wooden floors and sparse furniture—lumpy beds and folding chairs. Privacy was achieved by canvas curtains on wires. For less affluent campers who wanted to cook for themselves, for an extra tariff a kerosene stove and kitchen paraphernalia were provided in separate “cook tent” behind the living quarters; personal cleanliness was maintained with a jug and bowl. And “each day a maid of sorts would give [the] shelter a cleaning of sorts.” A 1903 photograph of an interior shows an elderly woman surrounded by a great deal of furniture, overstuffed cushions, and even framed photographs hanging on the canvas walls. William Chandler of the San Diego Museum of Art remarks, that she was had no intention of “roughing it at the beach. Surrounded by parlor chairs and table, draperies and a very sturdy dresser-bureau, she surveys us with the dry calm of a hostess At Home.”

One writer recalls, “According to my aunt . . . , anyone who was in the *Who’s Who* spent a few weeks of the summer at Coronado.” She describes how “a simple breakfast was prepared in their tent, usually around 11 o’clock. In the afternoon there was a round of calling or card playing, then a dress-up dinner at the Hotel, followed by an evening of music, dancing or cards.”

Tent City also offered amusements: a Ferris wheel, a carousel, carnival booths, and “numerous activities for the entire family.” And for at least some time there was even a children’s bull fight. Although that may offend modern sensibilities, it underlines how different we are from our grandparents; as the English novelist L. P. Hartley said, “The past is a foreign country; they do things differently there.” Such a realization goes some way toward explaining the appeal that Tent City held for a pre-motel, pre-Winnebago generation.

NOTES

1. Van dyke, Theodore Strong, *Millionaires of a Day: An Inside History of the Great Southern California “Boom.”* New York: Fords, Howard & Hulbert, 1890.

2. Smythe, William Ellsworth, *History of San Diego, 1542-1908*. . . . San Diego, CA: History Co., 1907.
3. Reid, James W., "The Building of the Hotel del Coronado," [unpublished six-page booklet, n.d.], 3.
4. Reid.
5. Burke Ormsby, "The Lady Who Lives by the Sea. . . ," *Journal of San Diego History*, 12(January 1966). www.sandiegohistory.org/journal/66january/ladybysea.htm
6. Sanford, Jay Allen, "Underground with the Celebrity Dead." www.sandiego.com/news/2005/oct/27/underground-celebrity-dead/
7. Ormsby.
8. Hausmann, Glenn, "Putting Your Ghosts to Work." www.hotelinteractive.com/index.asp?page_id=5000&article_id=6493
9. Vent, Bonnie, ". . . Legend Busted." www.unexplainable.net/artman/publish/article_7181.shtml

FURTHER READING

- Aslet, Clive. "Freedom and Luxury Restored: The Hotel del Coronado, San Diego; Architects (1887): James William Reid, and Others." *Country Life*, 178 (September 26, 1985), 902–903.
- Banham, Reyner. "Coronado, or, Don't Smoke in Bed." *Architects' Journal*, 143(February 1966), 317, 319.
- Brandes, Ray, and Katherine Eitzen Carlin. *Coronado, the Enchanted Island*. Coronado, CA: Coronado Historical Society, 1988.
- Buckley, Marcie. "California Preserves Victorian monument: Hotel Del Coronado . . . , California; Architects: J. & M. Reid." *Architect*, (July 1971), 52–53.
- Buckley, Marcie, and Stephen S. Oakford. *The Crown City's Brightest Gem: A History of the Hotel del Coronado, Coronado, California*. Coronado, CA: The Hotel, 1979.
- Cullen, John T. *Dead Move: Kate Morgan and the Haunting Mystery of Coronado, a Novel*. San Diego, CA: Clocktower, 2007.
- Donovan, Christine. *Beautiful Stranger: The Ghost of Kate Morgan and the Hotel del Coronado*. Coronado, CA: The Hotel, 2002.
- "Grand Hotels: The Del Coronado." *Colonial Home*, 14(October 1988), 36–38, 40, 42.
- Hennessey, Patrick. *Hotel del Coronado: The First Hundred Years*. Coronado, CA: The Hotel; Bullock and Associates, 1987.
- Kantor, Ann. "The Hotel del Coronado and Tent City." *Nineteenth Century*, 8(no. 1–2, 1982), 88–95.
- Lee, Madeline. "Hotel Del Coronado at 100 in San Diego, California." *Victorian Homes*, 7(Spring 1988), 70–74.
- Malinick, Cynthia Barwick, "The Lives and Works of the Reid Brothers, Architects 1852–1943" (M.A. thesis, University of San Diego, 1992).

- Morrow, Thomas J., and William Sullivan. *Hotel del Coronado*. Coronado, CA: The Hotel, 1984.
- Oakford, Stephen S. *Official Illustrated History Hotel Del Coronado*. Coronado, CA: The Hotel, 1982.
- Pourade, Richard F. *The Glory Years*. San Diego, CA: Union-Tribune, 1964.
- Williams, Gregory L. "Filming San Diego: Hollywood's Backlot, 1898–2002." *Journal of San Diego History*, 48(Spring 2002).



Courtesy Library of Congress

Independence Hall, Philadelphia, Pennsylvania

*“Aspirations for justice
and freedom”*

To borrow from Shakespeare's *Twelfth Night*: some buildings are built as icons, some achieve iconic status, and some have iconic status thrust upon them. Which is the case with Independence Hall, that began life as Pennsylvania's State House, survived its midlife crisis as a museum, to finally become a national shrine? If the American colonies' struggle for independence had failed, it would still be just the State House; if the Constitution had not been ratified in it, it possibly would have been demolished long since, as Philadelphia's central business district grew. But as Pulitzer Prize-winning biographer Carl van Doren wrote,

Instead, Pennsylvania's State House has become Independence Hall for the entire United States. Nor is that all. On account of the Declaration of Independence, it is a shrine honored wherever the rights of men are honored. On account of the Constitution, it is a shrine cherished wherever the principles of self-government on a federal scale are cherished.¹

Thus though Independence Hall itself is merely a building of no particular architectural merit, it is made iconic by the world-changing historic events that took place in it. However, like many other buildings of national historical significance, its apparent authenticity is a self-conscious construct; as one has written, government intervention, effected by the National Park Service (NPS) and climaxing a century of metamorphosis, simply formalized the will of the people.

In 1979 the United Nations designated Independence Hall a World Heritage Site, recognizing it as "an important part of the world's cultural heritage [that] deserves to be protected for future generations." That was because of its association with the Declaration of Independence and the Constitution, both of which "enunciate enduring as well as universal principles and eloquently express mankind's aspirations for justice and freedom. The two charters have transcended the particular circumstances of their creation and any deficiencies in their scope or application to become part of the political and philosophical heritage of the world."²

A PLACE IN POPULAR CULTURE

Independence Hall is fixed early in the minds of young Americans in the schoolroom and through a profusion of children's literature; there have been nearly twenty such books since the turn of the century. Moreover, American and international visitors throng to Independence Park every year; although there was a sharp decline following the tragic events of September 11, 2001, 2 years later the figure climbed to 1.8 million. During the U.S. Bicentennial year there were 3.2 million visitors.

Tourism feeds the tawdry trinket trade—popular culture at its lowest ebb. In the case of Independence Hall, which more than any other place in America

is linked to the noble principles upon which the nation was founded, such vulgarity (it is suggested) is most offensive. The Germans have a word for low-art artefacts: *kitsch* (from *verkitschen*, meaning “to make cheap”); more than just bad design, many of them are inappropriate, and most demean a sublime idea. But in a free enterprise economy, if a dollar can be made, even the sacred may be profaned. So Independence Hall has been distorted in coarsely detailed, out-of-scale miniatures cast in metal or resin; on memorial plates (some finely decorated, others crudely); and impaled on the ends of silver teaspoons (some made in The Netherlands). There is even a tea-towel printed with an amateurish drawing of a pea-green Independence Hall.

Miniature liberty bells also are offered—complete with a crack—ranging from small to large (touted as “lightweight”) and large (“heavyweight”). The vendor boasts, “All models are complete with a clapper and produce a fine, clear tone. Each replica . . . is finished in antique bronze and is perfect for school presentations, display, promotions, teaching, patriotic wedding favors or gift presentations. Excellent mementos of Philadelphia and made in the USA!” At least they are made in the United States; many such souvenirs aren’t. Another gift store advertises, “Miniature Liberty Bells? Snow globes featuring Independence Hall? Tea towels illustrated with the Betsy Ross story? All this and much more is available just around the corner from the sights themselves.” Much more indeed!

Independence Hall appeared in Columbia Pictures’ 1968 *Where Angels Go, Trouble Follows* (a road movie featuring nuns—really!), and it was incidental to films set in Philadelphia, including *Rocky II* (1979), Brian de Palma’s 1981 thriller *Blow Out*, and the 1983 comedy *Trading Places*. It figured more importantly in a number of historical “docu-drama” TV series broadcast between 1972 and 2000. But it was germane to the plot of the 2004 *National Treasure*, an Indiana-Jones-meets-*The da Vinci Code* movie that resurrected the hackneyed conspiracy theories about connections between the founding fathers and the Knights Templar and Freemasonry. A scene in Paramount’s *Shooter* (2007) was filmed on location in front of the building.

THE PENNSYLVANIA STATE HOUSE

For many years after 1681, when the Province of Pennsylvania was founded, colonists “took little active thought of” where their governing Assembly should meet; they used all sorts of temporary venues, most of which were in Philadelphia—a coffeeshouse, an inn, a market house, a meetinghouse, or the home of some legislator. Then in February 1729 the Assembly was petitioned to “impower . . . the city and county of Philadelphia to build a Market and State House in High Street.” Three months later it unanimously appropriated £2,000 for the project. Construction of the Pennsylvania State House—at the time considered by many to be the most ambitious public building in the colonies—began in 1732 and continued throughout the 1740s.

Until well into the twentieth century credit for the elegant design was given to Andrew Hamilton, speaker of the assembly. Despite modern scholarship's discoveries to the contrary, some sources still prevaricate about authorship; we are often loath to relinquish our cherished fables. But as most architectural historians know, in the late nineteenth century many older buildings were attributed to the person whose name appeared most frequently in the records—often the contract supervisor, the clerk of works, or the chairman of a building committee. The phenomenon was hardly new: the great medieval abbeys and cathedrals were for centuries ascribed to the abbots and bishops who commissioned them, and hardly ever to the master masons who conceived and constructed them. Most scholars now believe that Hamilton was a dilettante architect “who contributed very little, if at all, to Philadelphia architecture,” including the design of the State House.

Born in Scotland in 1676, after studying law in London, Hamilton had emigrated to Virginia around 1697. For a while employed as steward on a plantation, he married the owner's widow and established himself in colonial society. He was admitted to the bar in 1712 and moved to Philadelphia some time before 1716. In 1717 he became attorney-general of Pennsylvania and five years later was called to the colony's Provincial Council, a position he held until 1724. In 1727 he was appointed principal clerk of the Supreme Court and Recorder of Philadelphia, and also elected to the governing Assembly. He was made its speaker in 1729 and reelected annually (except in 1733) until he retired a decade later. Hamilton is best known for his legal prowess, especially his defense in 1735 of newspaper publisher John Peter Zenger, a famous victory that is thought to have given rise to the term *Philadelphia lawyer* to describe an adroit attorney. He died in Philadelphia in 1741.

What was Hamilton's role in realizing the State House? To begin with, one historian writes, he “became chief proponent of a site and of a plan for the structure . . . and spurred preparations.” Between October 1730 and 1732 Hamilton and his son-in-law William Allen bought the site on Chestnut Street between Fifth and Sixth Streets. That superseded a location that had been proposed earlier, on High Street. Hamilton also purchased the building materials for the House. Finally, in 1732 he “produced a Draught . . . containing the Plan and Elevation of that Building; which being viewed and examined by the several members, was approved by the House.” The 3-year gap between the initial approval of funding and the commencement of building work resulted from disputes within the building committee. It is clear that Hamilton hired “the two Carpenters employed in building the State-house”—the architect-builder Edmund Woolley and master house carpenter Ebenezer Tomlinson (some documents call them “mechanics”). Once the building was started, Hamilton doubtless would have been consulted, and as architectural historian Roger W. Moss suggests, “he probably carried the plans back to his principals for discussion and approval. But the ultimate form, and especially the final details, were the result of the knowledge and skill of the master builder and his crew of workmen.”

It is likely that Hamilton's "draught"—a rather elementary line drawing—was intended to give Woolley and Tomlinson a general idea of layout and appearance. The former, an early member of The Carpenters' Company of Philadelphia, was born in England; he is known to have been in Philadelphia by 1705 and became a freeman in 1717. Tomlinson seems to have arrived from New Jersey before 1728; he also was a member of The Carpenters' Company. Anyway, the pair were contracted to build the "Floors, Outside Windows, Doors, Roof and Eaves [*sic*], Turret, Balcony, and the Stairs"—of course, all carpenters' and joiners' work. Despite the high quality of the brickwork, it is puzzling, as one writer notes, that "nothing appears [in surviving documents] as to the work of the brick and stone masons during this period."

In August 1732 Woolley and Tomlinson, claiming that "the work expected from them was heavy, and [required] to be carried on in an extraordinary manner," negotiated a higher price. Shortly after work started the brief was changed: the Assembly instructed that offices should be built as wings flanking the main building and connected to it by open loggias (Woolley called them "piazzas"). By the time the Assembly was able to meet in the partly finished building in September 1735, neither the glazing nor the internal joinery were complete; the paneling and wainscoting would take several more years. The office wings were probably finished early in 1736; "despite various county and provincial public officials' objections to moving into them, they were soon occupied." In July Woolley submitted an account for £5 for "drawing the Elevation of the Frount one End the Roof Balconey Chimneys and Torret of the State House With the fronts and Plans of the Two officis And Piazzas Allso the Plans of the first and Second floors of the State House." The creative spelling and the punctuation are his.

In 1740 Woolley and Tomlinson asked "to be excused from doing any more of the work." There were other delays, some caused by the dearth of skilled workmen, a not infrequent problem in the colonies. In summer 1741 the Assembly demanded that the walls and windows—presumably joinery work of some kind—in the meeting hall be finished immediately and the rest of the building be completed "without undue delay." However, plans for the Supreme Court chamber were not presented until more than 2 years had passed and the Council Chamber on the second floor was not ready to be occupied until February 1748.

Late in January 1749 the Assembly authorized "a Building on the South Side of the said House to contain the staircase, with a suitable Place thereon for hanging a Bell." Woolley returned to the site. He had a significant role in building the tower and even may have designed it. Anyway, he was paid more than £1,000 pounds for a wide range of services, including drafting; compiling bills of quantities; building the staircase, stairs, and other joinery; waiting on other trades and constructing scaffolding for them; breaking out and making good the existing building; fixing "many thousands of Shingles"; "getting the Bell up & down & up again & twice hanging Bells"; and "the rest of ye

work belonging to the tower as now finished both out & inside from the Vane to the foundation . . . with many Other Jobs not here mentioned.”

The tower's stone foundation was completed in 1750, and the framing of the steeple probably was finished in fall 1751, before the delivery of the original Liberty Bell. Work on the interior and various “supplementary projects” seem to have continued through September 1756. The tower contract also employed a number of Woolley and Tomlinson's apprentices including Thomas Nevell, who, ironically, would demolish the steeple in 1781 when it had become structurally unsound. In 1752 the Assembly engaged a local clock-maker, Thomas Stretch, to install clock faces just below the eaves on the eastern and western walls of the State House; an ornate soapstone structure imitating a tall case clock was built under the western face, and a bell was housed in a rather nondescript turret on the roof. Removed during one of the “restorations,” the clock and pedestal were later replaced.

STYLE AND SOURCE

In *The Book of Philadelphia* (1918) Robert Shackleton effused,

Building of serenity and symmetry, of fine amplitude, a gracious, alluring building, rich in noble memories, yet touched also with a living sweetness; such is the beautiful old State House in Philadelphia, often referred to as Independence Hall. . . . But it must not be thought that it is beautiful or interesting principally on account of age. Age adds to a beautiful building the salt and savor of time, the romantic patina, literal or metaphorical, that comes with the decades. But the State House is beautiful in itself; it was beautiful when it was young and new; it will remain beautiful as long as it stands, with its traditions growing more interesting with time.³

The sturdy two-story building with walls of red brick laid in Flemish bond was an elegant example of (what was in its day) “modern” architecture. Architectural historians, who seem to need categories, have dubbed the style “Georgian” because it was fashionable in Britain and her colonies during the Hanoverian dynasty of Kings George I, II, and III. Boston academic Jonathan M. Chu reminds us that later they would generate mixed messages because after the Revolution, Georgian architecture would represent “reactionary elements, a cultural dependence upon things British, and an unlikely symbol of republican nationalism.” But we must stay on track.

The layout of the State House also linked it—although it was a low-budget version—with the larger pre-Georgian stately homes of England, such grandiose essays of the English Baroque as Blenheim Palace or Castle Howard. The influence of that style, perhaps even hints of the work of Wren, is evident in the last-minute addition (an afterthought?) of the tower and wooden steeple. The central door in the tower, flanked by Tuscan columns, stands beneath

a large Palladian window. The lower two levels are separated from those above by the extension of the deep cornice that surrounds the whole building. The free-standing third level is comparted by superimposed brick pilasters; it has an oculus on each side under a bold, rather odd pointlessly pedimented molding. Each face of the topmost level has a large central window. Shackleton confusingly wrote that “above this is a clock-tower, square at the bottom and rising in eight-sided diminutions to a six-sided narrow pinnacle which is topped by a trident-link weathervane of gilt.”

By contrast, the building’s north front was restrained and truly Georgian. It was divided into nine bays and flat string courses and a row of fielded span-drels, all in marble, separated the two stories. The large, twenty-four pane double-hung windows, identical at both levels, were well proportioned; their brick lintels had rather plain marble keystones. The entire symmetrical composition around a quite ordinary door was crowned with a carved wooden cornice and framed by raised soapstone quoins. A wooden balustrade stretched between ranges of four chimneys at either end of the gable roof; at its center was an insignificant cupola that bore no relationship to the interior. The building provided a simple layout with “suitable space for the various agencies of government.” The first floor contained two modestly-finished 40-foot square rooms, either side of a 20-foot wide central hall. The one on the eastern end was the meeting room of the governing Assembly; that at the other end accommodated the Province’s Supreme Court and was entered through open archways. A stair at the south end of the central hall gave access to the 20- by 40-foot Provincial Council chamber in the southwest corner of the upper floor. The “gallery,” or “long room,” measuring 100 by 20 feet and used for public functions occupied the entire Chestnut Street frontage. The arched walkways—Woolley’s “piazzas”—gave access to the identical two-story hip-roofed east and west wings. The former was used as a public records office. Until 1773 the upper floor of the latter housed the Library Company of Philadelphia; the doorkeeper of the Assembly lived downstairs with his family.

There is little doubt that Edmund Woolley, who had no formal training in architecture, found his inspiration in one (or perhaps more) of the architectural pattern books that then were beginning to proliferate in Britain and her colonies. They provided plans and elevations of their authors’ works, “as well as formulae for the orders, for doorways, mantels and other details” and served as guides to builders, amateur architects, overseers, bricklayers, and carpenters. Treatises of a more theoretical kind included *Vitruvius Britannicus* by Colin Campbell (1717–1725); *Designs of Inigo Jones* by William Kent (1717), and *Andrea Palladio* by Giacomo Leoni (1715–1720), but they had been predated by a flood of pattern books by Halfpenny, Langley, Hoppus, Ware, and Salmon. Many were issued as “pot-boilers” by less-than-successful architects as advertisements for their services. As early as 1700 *The First Book of Architecture* by Godfrey Richards commented on the current dearth of builder’s handbooks, “we have but few Books which we can recommend . . .

besides the Excellent Discourses of Sir Henry Wotton and John Evelyn, . . . where they have comprised fully and clearly the most weighty observations of the art in general.” Edmund Woolley is known to have had an architectural library; its extent cannot be confirmed except for a copy of *Practical Architecture* (1730), one of three books by English architect and carpenter William Halfpenny that predate the State House.

INDEPENDENCE: THE PHILOSOPHER’S STONE

The first half of the eighteenth century saw Britain and France in continued competition for territory in North America. In fall 1753 Robert Dinwiddie, lieutenant-governor of Virginia, sent young George Washington with a party of militia to oust French troops who were building forts south of Lake Erie. Because his diplomatic attempts were ignored, a few months later he sent a one-hundred-fifty-strong force to drive them out. The ensuing skirmishes gave rise to the French and Indian War (1754–1763), that spread to Europe in 1756—the Seven Years War, in which Britain was victorious.

To pay for the costly conflict, parliament imposed direct levies on the colonies, beginning with the 1765 *Duties in American Colonies Act* (the so-called *Stamp Act* that taxed all legal documents). The *Townshend Acts* followed in 1767, taxing lead, paint, paper, glass, and tea imported from Britain; when the Americans’ simple “refusal to purchase only British manufactured goods negated [them]” they were repealed in 1770. Nevertheless, dissent continued in the colonies. In December 1773, protesting against yet another imposition, a new *Tea Act*, one hundred fifty Bostonians boarded three ships moored in the harbor and dumped 342 chests of British tea overboard. As news of the “tea party” spread through the colonies, other seaports followed the Bostonians’ example and staged similar protests. When the Bostonians refused to pay for what they had destroyed, in the middle of 1774 King George III and Lord North, the British prime minister, rushed through the parliament legislation known as the Coercive Acts, to be applied only against Massachusetts. In these four acts, Parliament closed the port of Boston; severely limited the colony’s powers of self-government; permitted officers of the crown, if accused of crimes, to be tried in other colonies or in England; and allowed the quartering of troops in the colonists’ barns and empty houses. The laws naturally rekindled resistance; the American colonists dubbed them the “Intolerable Acts.”

Over the following months, the Americans’ relationship with the mother country continued to deteriorate. By the mid-1770s about two-and-a-half million people lived in the thirteen colonies, which were grouped into three sections: Connecticut, Massachusetts, New Hampshire, and Rhode Island made up New England; Delaware, Maryland, New Jersey, New York, and Pennsylvania were known as the middle colonies, while North and South

Carolina, Georgia, and Virginia made up the southern colonies. The imposition of the Intolerable Acts compelled twelve of them (various reasons have been given for Georgia abstaining) to hold the First Continental Congress. Philadelphia was the obvious place for the representatives to decide upon a course of action. With a population of almost twenty-five thousand it was the second largest city in the English-speaking world. And it was located midway between the northern and southern colonies. Convened on September 5, 1774, in Philadelphia's recently built Carpenter's Hall, the Congress continued until late October.

The fifty-five delegates addressed several issues concerning taxation and the growing schism with Britain—to define colonial rights, to identify how parliament had violated them, and to find a way to have them restored. It is stressed that the colonists considered themselves British first—acknowledging allegiance to the monarch but not to the parliament—and Virginians, New Englanders or whatever, second. Anyway, they wrote a letter to the king, listing their complaints and insisting on their rights as British subjects. He rejected their submissions. Although they had not even hinted at seeking independence from the crown, the calling of the Congress was construed as an act of treason and parliament launched punitive expeditions. By April 1775 the colonial militia were engaged in a civil war, fighting British soldiers at Lexington and Concord in Massachusetts.

As had been arranged at the first Congress, the Second Continental Congress, this time with sixty-five delegates from all thirteen colonies, met on May 10, 1775, in the Assembly Room of the State House in Philadelphia, to consider further their declining relationship with Britain. John Hancock was named president of the Congress, and George Washington was appointed commanding general of the reformed New England militia, now assembled under the banner of the Continental Army. The first gathering of the Second Congress continued until mid-December 1776.

Early in July 1775 it sent the Olive Branch Petition (aka The Humble Petition or The Second Petition) to England. "A protest against the harsh regime inflicted upon the North [Americans], . . . in particular the imposition of new, harsher taxes," it was their last attempt to avoid a war. Although their appeal was framed in "terms of deep loyalty to the King," he gave it short shrift, and told parliament on October 26, 1775, "It is now become the part of wisdom, and [in its effects] of clemency, to put a speedy end to these disorders by the most decisive exertions"; in short, "Put down these rebels." Even in the face of escalating fighting, by the following spring the colonists remained divided about whether they should secede from Britain. In a motion of June 7, 1776, Richard Henry Lee of Virginia exhorted the Congress to declare its independence, but the weighty question was not resolved and debate of his resolution was deferred for a few weeks.

The Congress appointed a committee of five to set down the reasons why the colonies should become an independent nation. Mostly the work of

Thomas Jefferson, the resulting Declaration of Independence “turned the . . . complaints over issues such as taxes and trade restrictions into a struggle for universal human rights.” On July 2 twelve of the colonies voted in favor of Lee’s resolution; New York joined them a week later, and on July 4 all the delegates ratified the Declaration. Knowing that their action was treasonable and punishable by death the disaffected colonists, pushed to the limit, “had become a nation fighting for a cause: freedom from England and King George III.” What had started as a civil war had become a War of Independence.

The Second Continental Congress continued to meet in the State House, turning its attention to fighting the war, and trying to find ways to pay for the new Continental Army, which desperately needed basic supplies and equipment. Against all odds, George Washington’s rag-tag military, with a little help from its friends—notably the French—overcame what was then the most powerful nation in the world. The history of the war is quite another story; suffice it to say that Lord Charles Cornwallis’ forces surrendered at Yorktown, Virginia, on October 19, 1781; however, minor battles continued for another 2 years until in February 1783 King George III proclaimed the Cessation of Hostilities. The Paris Peace Treaty signed on September 3 formally ended the war. The last of the British fleet sailed from New York 2 months later.

In 1777 the Congress, attempting to formalize an agreement that would weld thirteen states into a unified nation, adopted the “Articles of Confederation and Perpetual Union of the United States of America.” Intended to establish a central government powerful enough to achieve tasks without detracting from the rights of individual former colonies, the Articles were ratified by 1781. Their weaknesses soon became evident: Congress had little authority; the new central government had no authority to collect taxes, control trade, or oversee the general affairs of the country—in fact, the decisions that Congress made could be ignored easily by individuals or by the states. The Constitutional Convention met in May 1787 at the Pennsylvania State House to revise the Articles.

Most of the fifty-five delegates (from every state except Rhode Island)—lawyers, doctors, merchants, and farmers, many in their twenties and thirties—had formerly served in the Continental Congress. George Washington was unanimously selected as president of the convention. The Assembly Room doors and windows were kept tightly closed through the 4 months of suffocating summer; historian Catherine Drinker Bowen explained that the State House “was commodious and cool in the mornings, but oppressively hot by the afternoons. Open windows invited an invasion of insects and so was avoided.” The content of the United States Constitution, and the story of how it was forged by 4 months of vigorous argument over the details, is not the subject of this essay. However, according to Bowen, “The word ‘miracle’ was used by both George Washington and James Madison in . . . describing the results of the Constitutional Convention.” She adds,

Indeed, many delegates were so enmeshed in the heated debates . . . that when they saw the finished document ready for signing, they expressed amazement at the excellence of the outcome of their work . . . [These] ‘details,’ as finally agreed on, were to change the United States from a confederation to a workable, lasting Federal Republic. Two balanced powers: Congress and the Executive, state and central government, with the judiciary as umpire. It was to be a triumphant conclusion.⁴

TRANSMUTATION FROM STATE HOUSE TO NATIONAL SHRINE

The Pennsylvania State House was subjected to several alterations, quasi-restorations, and conscientious restorations that accomplished its transmutation to Independence Hall. According to Charlene Mires, as it became inadequate to serve local functions, the rivalry for its future use raised the possibility for its elevation to a national shrine and a “sacred place with global significance.”⁵ That evolution took place in four stages: first, a period of neglect from 1799 to 1824; then, a quarter-century of stirring interest; then, 30 years of “intense emotional regard,” prompted in part by the approaching centennial; and, finally the period when something was achieved.

During the War of Independence the British occupied Philadelphia from September 1777 until the following June, using the State House for troop quarters and as a military hospital. According to a contemporary source, they left the building in “a most filthy and sordid situation [with] the inside torn much to pieces.” After the war, the Pennsylvania State Assembly cleaned and repaired it, remodeling the upper floor for its own meetings; the Congress continued to use the Assembly Room. In June 1783 the State House was besieged by eighty disgruntled veterans demanding back pay, so the Congress relocated in Princeton, New Jersey. After moving to Annapolis, Maryland, Trenton, New Jersey, and New York City—all erstwhile *de facto* national capitals—it returned to Philadelphia for the Constitutional Convention in 1789, as noted. Throughout the 1790s Congress met in Philadelphia’s recently completed county office building (aka Congress Hall) while a permanent national capital was being developed beside the Potomac.

Meanwhile, general repairs and alterations had been made to the State House so that the Pennsylvania Assembly could again use the Assembly Room. Major changes were accomplished by the century’s end:

The steeple had been removed in 1781, and the stair tower was now capped by a low hipped roof. Two handsome edifices flanked the wing buildings: one to the east to serve as City Hall; one to the west for the county offices. . . . Behind City Hall was the new brick building of the American Philosophical Society. The State House Yard had been landscaped in the new romantic taste, with artificial mounds and declivities, serpentine paths, informally disposed clumps of elms and willows, and benches for the enjoyment of the public.⁶

In 1770 what was still the Province of Pennsylvania, having acquired the land now known as Independence Square, had enclosed it within a 7-foot high wall, entered at the middle of the Walnut Street side through solid wooden doors in an arched gateway. The “romantic” landscaping of State House Yard was not initiated until 1784 by Samuel Vaughan, “a wealthy Jamaica sugar planter then living in Philadelphia.” Shortly after it was completed, the ubiquitous Reverend Manasseh Cutler described it in his journal as a “fine display of rural fancy and elegance.”

When the Pennsylvania legislature moved to Lancaster in 1799 and the following year the federal government was permanently relocated in Washington, D.C., the Assembly Room and second floor of the State House stood empty. Although city courts still sat in the Supreme Court Room, the building, as most unused buildings do, fell into disrepair.

In 1802 the state of Pennsylvania allowed the painter Charles Willson Peale to occupy the east end of the lower floor, the whole upper floor, and the garden of the State House for his museum. He changed the second floor, returning the long gallery and the south-facing rooms to their original disposition to exhibit his portraits of famous Americans, as well as to display his large and eclectic natural history collection, that then included “such awe-inspiring specimens as a stuffed grizzly bear, an ‘Ourang Outang,’ and the skeleton of a mammoth, as well as 760 varieties of birds and 4,000 insects.” Peale has been described as “a sympathetic tenant” who looked after the building; he also meticulously cared for the State House yard, planting trees and making general improvements. His second son Rembrandt (also an accomplished portraitist, whose brothers were Raphaele, Rubens, and Titian), established a studio in the Assembly Room.

Ten years later the state legislature permitted the City and County of Philadelphia to demolish the east and west wings and linking loggias, to replace them with larger “modern” office buildings of fire-resistant construction. The architect for the alterations, built in 1813 and 1815, was Robert Mills, who had some experience in fire-proofing records repositories, and is best-remembered as the designer of the Washington Monument in the national capital. After having worked for a few years in the Philadelphia office of Benjamin Henry Latrobe, in 1808 Mills had set up in private practice.

He also proposed to replace the State House steeple. The stone clock case was removed from the west wall as Mills wanted to relocate the clock at the front of the building. He also suggested, among several other changes, a portico at the south entrance. As one historian gratefully remarks, “It seems fortunate that Mills’ proposal was not carried out.” Nevertheless, his new wings remained in place until the end of the nineteenth century. Mills moved to Baltimore late in 1814.

Needing to raise money, in 1816 the Commonwealth of Pennsylvania considered subdividing the State House yard into lots and selling them, as well as selling the building itself. But to “put it beyond the reach of private developers”

the City bought the property as a package for \$70,000 and took possession on June 29, 1818. In the interim, control of the State House was vested in the Philadelphia County Commissioners and they embarked upon an “elaborate program of alterations” that was little short of vandalism. Constance Greiff writes,

Decorative plasterwork was added to the interior; on the exterior the original simple front doorway was replaced by one with a more elaborate Corinthian surround, and the marble trim was painted. The change that aroused public sentiment, however, was a wanton act of destruction, the motives for which have never been ascertained. The paneling and other architectural woodwork of the Assembly Room were stripped from the walls, dismantled, and sold. . . . Almost forty years later [former editor of *The Democratic Press*] John Binns still described the commissioners’ action as a “sacrilegious outrage.”⁷

Other sources say that the paneling was “removed and preserved in the attic.” Whatever happened to it, the enduring public indignation, Greiff suggests, “reveals the aura of veneration that already clung to that space, if not to the entire building, and the desire to preserve the room’s appearance for future generations.”

The movement toward establishing a national shrine was given impetus in September 1824 by the week-long visit to Philadelphia of George Washington’s former comrade-in-arms, the Marquis de Lafayette. Historian Lloyd Kramer comments that the aging French hero’s extended tour of the United States “was a galvanizing experience for the country [that became] one of the first and most remarkable expressions of American nationalism, national identity.” He adds, “Lafayette returned at a time when the nation faced political divisions, a tense election and was struggling to establish a national identity.”

The Frenchman’s visit occasioned elaborate preparations, most of them “centering around the State House, which became the principal point of interest.” A huge arch of faux masonry (really painted canvas) on a wooden frame was built in Chestnut Street, in front of the building. The interior decoration of the old Assembly Room was designed by the Philadelphia architect and engineer William Strickland, who had trained for a while under Latrobe. According to one account, the walls and ceiling were painted stone color, and the windows were draped with star-studded scarlet and blue cloth. Any available wall space was crammed with portraits of Revolutionary heroes and U.S. presidents.

Four years later the City of Philadelphia invited bids for a bell tower and steeple to replace those demolished in 1781. Strickland’s successful submission followed the general design of the original structure although it employed more ornamentation than the original and included a clock face on each side. Although it was not an exact replica, some have suggested that this was the first example of historic restoration in America. A new bell and clock were commissioned, and the project was completed in summer 1828. An alternative

steeple design by the English-born architect, John Haviland, then one of Philadelphia's most important practitioners, had been rejected. But he would be given other work at the State House.

In the 2 years following Charles Willson Peale's death in 1826 his museum was moved from the State House. The second floor was then rented to the U.S. government "for judicial purposes." At the end of 1830 Haviland was commissioned to restore the Assembly Chamber "to its ancient form." He is believed to have done little more than replace the paneling that had been removed in 1816. But it was always going to be difficult to find an appropriate use for the room in which the Continental Congress had ratified the Declaration of Independence and the Federal Convention had perfected the Constitution. They were hard acts to follow, so to speak. Following the restoration, the space was sometimes rented for art exhibitions, but its main use was as a reception room for visiting dignitaries.

In 1852 the City decided to celebrate Independence Day each year in the "said State House, known as Independence Hall." This seems to have been the first formal use of the term *Independence Hall* to indicate the whole building. In July 1854 delegates from ten of the original states gathered there to consider creating a monument to the Declaration of Independence but nothing came of it. The following February the mayor of Philadelphia opened the room to the public, refurnished and hung with over one hundred portraits acquired from Peale's collection. Despite their need for space, the city's Common Council and Select Council moved into the second floor rooms because by this time the Assembly Room had become a shrine.

Perhaps the best expression of this veneration is in the grandiloquent words of the famed orator Edward Everett, who, on July 4, 1858, said of the State House, or as it has now come to be known, Independence Hall: "Let the rain of heaven distill gently on its roof and the storms of winter beat softly on its door. As each successive generation of those who have benefitted by the great Declaration made within it shall make their pilgrimage to that shrine, may they not think it unseemly to call its walls Salvation and its gates Praise."⁸

For 20 years after 1852 Independence Hall was set apart for what one writer has called "patriotic purposes," which included the lying of state of Philadelphian soldiers killed in the Civil War and, on April 23, 1865, Abraham Lincoln. In those decades the building was routinely maintained—nothing more. That changed as the Centennial of Independence approached; then, "the city councils confirmed the sacred status of the Assembly Room by setting it aside forever as a shrine."

In 1872 a committee was appointed to facilitate the restoration and refurnishing of Independence Hall. The Pennsylvania State Capitol at Harrisburg and private sources returned furniture believed to have been in the Assembly Room in 1776; portraits of the founding fathers were hung in the room; the president's dais was rebuilt, and four columns, thought—albeit erroneously—to

have supported the ceiling, were set up. Encrusted layers of paint were removed from the first floor interiors to reveal the carved ornament beneath. Woodwork in the hallway and stair tower was also repaired. The Supreme Court Room was refitted as a national museum of Revolutionary War period relics. In 1873 the Philadelphia philanthropist Henry Seybert donated a large bell and a new clock for the steeple. After the Centennial celebrations, except for an unrealized proposal in 1878 by the architect Theophilus Parsons Chandler, Jr. to add fireproof the wings, little change was made to Independence Hall until the end of the century.

In 1896 Philadelphia's municipal offices were moved to the newly completed City Hall. In March, intent upon enhancing Independence Hall as a "sacred site," the local branch of the Daughters of the American Revolution commissioned the Philadelphia engineer and architect T. Mellon Rogers to restore the second floor. This began a "restoration" program, completed in February 1897 that extended to the entire building. Architects Bruce Laverty and Robert Hotes write that "unencumbered by either documentary research or on-site building analysis," Rogers spent 2 years replacing many of the original interiors with his personal take on colonial architecture (described by one writer as "ice cream saloon" style). Of course, the result was far from accurate and even farther from satisfactory; for example, Rogers replaced Mills' 1812 office wings with buildings and arcades that resembled the original design, but differed in "dimension and detail."

Two years later the Philadelphia Chapter of the American Institute of Architects (AIA), reacting to this "historical sacrilege," established the Committee for the Preservation of Historic Monuments and offered to "re-restore" Independence Hall. Just then the City did not have funds available, but the AIA's later restoration (1921–1923) rescued the second floor from most of Rogers' vandalism. The work, based on rigorous architectural analysis and measurements, was supervised by Horace Wells Sellers, "who probably knew the building better than anyone since Edmund Woolley himself." In fact, under Sellers' leadership the AIA committee directed the restoration of many other buildings in the historic heart of Philadelphia, including Congress Hall (1912–1913) and Old City Hall (1917–1922). Greiff praises the AIA restorations as "landmarks in the field," noting that much of their work "was so accurate that the National Park Service left it undisturbed in its subsequent restoration of the buildings." The AIA Committee, under architect Thomas Pym Cope, undertook further restoration of Independence Hall around 1940; there was other minor work until 1975.

On June 30, 1942—America's entry into World War II saw a surge in patriotism—representatives of more than fifty groups formed the voluntary nonpolitical, nonprofit Independence Hall Association, which campaigned to "achieve recognition and protection of Independence Hall and the surrounding buildings." Almost exactly 6 years later, Congress created Independence National Historical Park "for the purpose of preserving for the benefit of the

American people as a national historical park, certain historical structures and properties of outstanding national significance located in Philadelphia and associated with the American Revolution and the founding and growth of the United States.” About 30 years later Independence Hall, the “primary historic structure within the park,” was thoroughly researched, analyzed, and restored for the nation’s Bicentennial.

The federal area comprises three city blocks between Walnut and Chestnut Streets from Second to Fifth Streets as well as historically significant outlying sites, “private institutions preserved and interpreted through cooperative agreements”—in all, more than twenty components. According to the NPS,

The city and State have both made vital contributions to the park concept. The city, while retaining title, gave custody of the Independence Square and its group of buildings to the National Park Service; the State assumed responsibility for the development of the three-block mall north of Independence Hall. . . . Extensive research and restoration have been carried out on every building, and a green and finely scaled urban landscape created where once there was mostly decay and neglect.

The integrity of the site—and in a way the ideals it represents—was challenged by the Department of Homeland Security’s draconian antiterrorism proposals in 2006. Among its proposed \$2 million measures was the construction of a 7-foot-high wrought-iron fence about 130 feet behind Independence Hall, effectively bisecting the square—one rather more emotive critique of the proposal preferred the word *cleaving*—where the Declaration of Independence was publicly read for the first time. City and state officials successfully protested that such “overkill” would “turn an enduring symbol of American freedom into an eyesore.” The NPS conceded in January 2007 that the fence would not be built and gave wordy assurances that

the existing bicycle barricades will be removed from Independence Square and from Block 1, the Liberty Bell Center area. Relatively un-intrusive technologies and increased security patrols will supplement the defined secured visitor use area, screening, and existing security patrols. The efficiency of this . . . system in fulfilling the twin purposes of protecting cultural resources and providing a safe, quality visitor experience will be evaluated annually.

Reviewing Mires’ *Independence Hall in American Memory*, Jonathon Chu sums up the history of Independence Hall:

Begun as an expression of the genteel extension of British imperial fashion to colonial America, Independence Hall became the site of raucous electioneering, Charles Wilson Peale’s museum of natural curiosities, the embodiment of hopes for urban renewal, and a shrine representing a bridge to our shared past. It has, in brief, been transformed from a minor colonial assembly building to the physical manifestation of America’s Eden, the place and moment of the creation of the United States.⁹

The seminal documents that underpin the nation—the Declaration of Independence and the U.S. Constitution—could have been composed and polished in another city, say New York or Boston. They emanated from Philadelphia. They could have been ratified in any room large enough to house the delegates attending the Second Continental Congress and the Constitutional Convention. Both those momentous processes took place in the Philadelphia State House. That’s what makes this rather ordinary building, despite it being repeatedly changed and rechanged, an icon of American architecture.

THE LIBERTY BELL: AN ICON WITHIN AN ICON

On July 4, 1993, *The Philadelphia Inquirer* quoted Nelson Mandela: “[The Liberty Bell is] a very significant symbol for the entire democratic world.” Indeed, quite apart from its association with Independence Hall, in itself it has become an American icon. Historian Edward M. Riley called it “the most venerated symbol of patriotism in the United States, [whose] fame as an emblem of liberty is worldwide. In the affections of the American people today it overshadows even Independence Hall” and observed that “its history, a combination of facts and folklore [established it as] the tangible image of political freedom.”

As noted, the governing Assembly of the Province of Pennsylvania commenced building the State House (Independence Hall) in Philadelphia in 1732. The attenuated project included a brick tower on the south side, crowned with a wooden steeple completed early in 1751. The bell that was hung in it could not be heard everywhere in the burgeoning city or in nearby rural areas, so the superintendents Isaac Norris, Thomas Leech, and Edward Warner were authorized to obtain a “good Bell of about two thousand pounds weight” to replace it. At the beginning of November they wrote to Robert Charles, the colony’s London agent, instructing him to

Let the Bell be cast by the best Workmen & examined carefully before it is Shipped with the following words well shaped in large letters round in vizt. “By order of the Assembly of the Province of Pennsylvania [*sic*] for the State house in the City of Philadelphia 1752” and Underneath “Proclaim Liberty thro’ all the Land to all the Inhabitants thereof. Levit[icus] XXV.10”

The Old Testament passage relating to the Jewish law of Jubilee—the 50th year in a cycle when all bondslaves were set free and all debts were cancelled—seems to have been Norris’ idea. A member of the Religious Society of Friends (Quakers), he wanted the bell to bear “a Bible inscription that would reflect the inspirations of freedom-loving members of the colony.” Since the restoration of Britain’s Stuart monarchy in 1660, and the consequent reascendance of the state church—the Church of England—the Quakers, more than most

other Nonconformist denominations, had suffered discrimination, not to say persecution. The freedom they enjoyed in the New World following King Charles II's 1681 land grant to William Penn was reason to "proclaim liberty." One writer comments that the selected scripture was "particularly apt [because] Penn's charter, which became Pennsylvania's constitution, spoke of personal and religious freedom, Native American rights, and the rights of citizens to be part of the process of enacting laws."

Anyway, the bell was to be delivered in Philadelphia before the planned removal of the scaffolding around the steeple at the end of summer 1752. Robert Charles commissioned master founder Thomas Lester of the Whitechapel Foundry, Britain's oldest manufacturing company. After an 11-week Atlantic crossing on the *Hibernia*, the bell reached Philadelphia in good condition late in August 1752. Before it was lifted to the steeple, it was thought prudent to test it on the ground. Just as well. In Norris' words: "I had the mortification to hear that it was cracked by a stroke of the clapper without any further violence."

The now-useless bell was put into the hands of two "ingenious workmen" John Pass and John Stow, to be broken up and recast. Little is known of the pair; the former was a Philadelphia-born brass founder, the latter a native of Malta with experience in iron founding. They recast the bell, adding more copper to the alloy because (stating the obvious) they announced that Lester's bell was "too brittle." In March 1753 the replacement was successfully tested before being hung in the State House steeple. While it was loud enough, not all Philadelphians appreciated its tone—a fault that was attributed, ironically, to an excess of copper in its composition. Norris recorded that the local bell makers "were so teized [*sic*] by the witicisms [*sic*] of the Town that they . . . will be very soon ready to make a second essay."

Pass and Stow, asked to recast their bell, completed the work in June 1753. It was considered adequate, but not by all. Norris wrote to Robert Charles: "We got our Bell new cast here and it has been used some time but tho [*sic*] some are of opinion it will do, I Own I do not like it." He suggested that it should be broken up and the metal returned to the Whitechapel Foundry for yet another recasting, and negotiations were opened with Thomas Lester. In March 1754, Charles, on the Assembly's authority, ordered a completely new bell from the Whitechapel Foundry. The Assembly decided to pay for the new bell, although it sounded no better than the one recast by Pass and Stow. The latter remained in the steeple, to be rung for special events, while the new bell was hung in a cupola and used to ring the time.

In October 1777, British troops occupied Philadelphia. Because any bells remaining in the city were in danger of being melted down to be recast as cannon, all were spirited away. For almost a year the State House bell was hidden under the floorboards of the Zion Reformed Church in Allentown, Pennsylvania. When it was returned to Philadelphia after the British retreat in summer 1778, the wooden structure of the State House steeple was in a parlous

state; indeed, it had been for some time. The bell was rehung temporarily, but later, when the dangerously rotting steeple had to be demolished, it was lowered into the upper level of the tower, which was then covered with a low-pitched roof.

In 1828, architect William Strickland replaced the steeple. A new bell, weighing twice as much, was installed because the original one had cracked—or at least shown signs of cracking. It probably remained in the tower. But the new bell soon suffered the same fate as the first. There are contradictory stories—some historical claims supported in part by evidence, some much more appealing romantic myths—about the causes of the cracking, and about exactly when it happened. One version is that it cracked in 1832, while pealing in celebration of Washington’s birthday; at the other end of the emotional spectrum is that it happened when the bell was tolling on the death of Chief Justice John Marshall in July 1835. Neither is supported by documentary evidence. Several newspapers reported that it tolled in April 1841 at the passing of President William Harrison, and it is clear that the city fathers proposed to ring it on Washington’s birthday in 1846. Because a hairline fissure was visible William Eckel, the superintendent of the State House, authorized its repair. On February 26, *The Philadelphia Public Ledger* reported,

The old Independence Bell rang its last clear note on Monday last . . . and now hangs in the great city steeple irreparably cracked and dumb. It had been cracked before but was set in order of that day by having the edges of the fracture filed so as not to vibrate against each other. . . . It gave out clear notes and loud, and appeared to be in excellent condition until noon, when it received a sort of compound fracture in a zig-zag direction through one of its sides which put it completely out of tune and left it a mere wreck of what it was. The “zig-zag” fracture mentioned above extended the crack from the top of the machined slot (the end of the original crack) to the top the bell. It was now beyond repair.

A CHANGING ROLE

Riley wrote that “it is difficult to find the exact beginnings of . . . veneration for the Liberty Bell,” noting that “even after Independence Hall began its evolution as a patriotic shrine, [the bell], rarely mentioned earlier, still received no notice.” Indeed, he says,

Little, if any, thought was given it as a patriotic relic. But patriotism was the next logical step. In the first half of the 19th century the bell became the subject of legendary tales recited in prose and poetry; they have found their way into children’s textbooks. . . . Accepted by all classes of people, these legends have done more than anything else to make the bell an object of veneration.¹⁰

Historians trace Liberty Bell folklore to George Lippard’s fictional piece “Fourth of July, 1776” (popularly known as “Ring Grandfather Ring”) that

first appeared in Philadelphia's *Saturday Courier Magazine* in January 1849; it was republished in *Legends of the American Revolution* in 1876. Populist historian Benson J. Lossing assisted the transformation from legend to history before 1850 and the prolific Joel Tyler Headley completed the metamorphosis, with variations by 1854. Riley commented that the story "found poetic expression . . . [once] the first poem [was] written, it found its way into school readers and into collections of patriotic verse."

With the literary excitation of popular interest, the bell itself was brought out of hiding. In 1852 it was placed on a temporary wooden base in Independence Hall's Assembly Room; 2 years later "a massive pedestal [with] thirteen sides ornamented by Roman *fascies*, liberty caps, and festooned flags" replaced the platform. As the Centennial drew near the bell was moved to the hallway and mounted on the wooden frame that had long supported it in the tower. Remaining in Independence Hall, it was moved three more times: first to the Supreme Court Chamber; then suspended in the tower room; in 1895 it was returned to the Assembly Room in a glass case. The case was removed in 1915, and the bell was exhibited on a movable frame and pedestal, so that visitors were able to touch it. Meanwhile, its increasing significance as a national symbol generated popular demand for it to be transported around the United States so that more people could see it. In winter 1885 it was taken to New Orleans and through the South; trips to Chicago in 1893, Atlanta in 1895, Charleston in 1902, Boston in 1903, and San Francisco in 1915 followed. All this moving served to enlarge the crack in the bell until its condition had so dangerously deteriorated that the practice had to be stopped.

To celebrate the Bicentennial, the bell was given its own million-dollar glass and steel pavilion, designed by Mitchell/Giurgola Associates. In 2003 it was moved again, to the \$13 million Liberty Bell Center, designed by Bohlin Cywinski Jackson as part of a \$314 million overhaul of Independence Mall.

The Liberty Bell has always been owned by the City of Philadelphia. At first an icon of the religious freedom enjoyed by the Quakers, its intended purpose was to call together the governing Assembly of the Province of Pennsylvania and to summon the citizenry for special events or announcements. In fact, in 1772 people living near the State House formally complained that they were "incommoded and distressed [by the frequent] ringing of the great Bell in the steeple." But, as has been observed elsewhere in this book, the meanings of icons are in the minds of the people. Others have noted that "as decades passed, the bell became a different symbol." First referred to as the "Old State House Bell," the bell became the "Bell of the Revolution" or "Old Independence." One writer remarks that once it became established in the collective mythology, retrospective tradition held that "it continued tolling for the First Continental Congress in 1774, the Battle of Lexington and Concord in 1775 and its most resonant tolling was on 8 July 1776, when it summoned the citizenry for the reading of the Declaration of Independence." Those myths were debunked by credible historians as early as 1945.¹¹

The Liberty Bell was given its name in 1835 when abolitionists adopted its biblical inscription as the motto of their cause. In the February 1835 issue of the tract, *The Anti-Slavery Record* published by R. G. Williams for the American Anti-Slavery Society, the editor wrote:

The Liberty Bell. Being in Philadelphia a few days since, I was invited after viewing the room in which the Declaration of Independence was signed, to ascend the tower of the State House. . . . On our ascent, we did not fail to examine the celebrated Bell. . . . It is remarkable that the following inscription was on the bell when it was cast. It was considered a sort of prophecy: “proclaim liberty throughout all the land, and to all the inhabitants thereof.” May not the emancipationists in Philadelphia hope to live to hear the same bell rung, when liberty shall in fact be proclaimed to all the inhabitants of this favored land? Hitherto . . . its peals have been a mockery, while one sixth of “all inhabitants” are in abject slavery.”

On August 28, 1963 Dr. Martin Luther King Jr., in his unforgettable “I have a dream” speech—yet another icon—delivered on the steps of the Lincoln Memorial in Washington, D.C., said in part:

When we let freedom ring, when we let it ring from every village and every hamlet, from every state and every city, we will be able to speed up that day when all of God’s children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old negro spiritual, “Free at last! Free at last! Thank God Almighty, we are free at last!”

NOTES

1. Riley, Edward M., Independence National Historic Park, Philadelphia, PA (1956). Introduction. www.nps.gov/history/history/online_books/hh/17/hh17a.htm
2. UNESCO, “Independence Hall,” World Heritage List Nomination, 1979, 18.
3. Shackleton, Robert, *The Book of Philadelphia*. Philadelphia: Penn Publishing, 1918, 62, 72.
4. Bowen, Catherine Drinker, “Miracle at Philadelphia,” *Futurecasts Online Magazine*, 8(May 2006). www.futurecasts.com
5. Mires, Charlene, *Independence Hall in American Memory*. Philadelphia: University of Pennsylvania, 2002.
6. Stabile, Susan M., *Memory’s Daughters: The Material Culture of Remembrance in Eighteenth-Century America*. Ithaca, NY: Cornell University Press, 2004, 229.

7. Greiff, Constance M., *Independence: The Creation of a National Park*. Philadelphia: University of Pennsylvania, 1987. www.ushistory.org/iha/dreams/dreams08.htm
8. Riley, Edward M., "Evolution of a Shrine." www.nps.gov/history/history/online_books/hh/17/hh17g.htm
9. Chu, Jonathon M., "[Review of Mires, *Independence Hall in American Memory*]." *The Historian*, 66(2004).
10. Riley, Edward M., "The Story of a Symbol." www.nps.gov/history/history/online_books/hh/17/hh17h.htm
11. Warren, Charles, "Fourth of July myths," *William and Mary Quarterly*, Third Series, 2(July 1945), 238–272.

FURTHER READING

- Armentrout, David, and Patricia Armentrout. *The Constitution*. Vero Beach, FL: Rourke, 2005.
- Batchelor, Penelope Hartshorne. "Independence Hall: its Appearance Restored." In Charles E. Peterson, ed. *Building Early America*. Radnor, PA: Chilton, 1976. See also Lee H. Nelson, "Independence Hall: Its Fabric Reinforced." In Charles E. Peterson, ed. *Building Early America*. Radnor, PA: Chilton, 1976.
- Beard, Alice, and Francis Rogers. *Old Liberty Bell*. Philadelphia: New York: Frederick A. Stokes, 1942.
- Boland, Charles Michael. *Ring in the Jubilee: The Epic of America's Liberty Bell*. Riverside, CT: Chatham, 1973.
- Gibson, Deirdre, Mary Whelchel Konieczny, et al. *Cultural Landscape Report Independence Mall*. Denver, CO: National Park Service, 1994.
- Hakim, Joy. *From Colonies to Country: 1710-1791*. New York: Oxford University Press, 1999.
- Jackson, J. "How Independence Hall Was Built." *American Institute of Architects Journal* (October 1945), 160–166.
- Kimball, David. *Venerable Relic: The Story of the Liberty Bell*. Philadelphia: Eastern National Park and Monument Association, 1989.
- Maass, John. "Architecture and Americanism, or, Pastiche of Independence Hall." *Historic Preservation*, 22(April 1970), 17–25.
- Mires, Charlene. *Independence Hall in American Memory*. Philadelphia: University of Pennsylvania, 2002.
- Nash, Gary B. *Landmarks of the American Revolution*. New York: Oxford University Press, 2003.
- National Park Service. *Independence: A Guide to Independence National Historical Park*. Washington, D.C.: The Service, 1982.
- Nelson, Lee H. "Restoration in Independence Hall: A Continuum of Historic Preservation." *Antiques*, 90(July 1966), 64–68.
- Olin, Laurie. "The Remaking of Independence Mall." *Places*, 13(Fall 2000), 53–59. See also George L. Clafien, Jr., "Framing Independence Hall," *Places*, 13(Fall 2000), 60–69.

Riley, Edward M. *The Story of Independence Hall*. Gettysburg, PA: Thomas, 1990.
Shackleton, Robert. *The Book of Philadelphia*, Philadelphia: Penn Publishing, 1918.
Weigley, Russell F., ed. *Philadelphia: A 300-year History*. New York: Norton, 1982.

INTERNET SOURCES

Independence National Historical Park home page. www.nps.gov/inde
Independence National Historical Park home page. www.nps.gov/inde/liberty-bell.html
U.S. History: Liberty Bell home page. www.ushistory.org/libertybell/index.html



Courtesy Library of Congress

Lincoln Memorial, Washington, D.C.

"The salvation of the Union"

In March 1861, just a week after Abraham Lincoln was sworn in as the sixteenth president, seven southern states, having seceded from the Union, signed the constitution of the Confederate States of America. In effect, they formed another nation. Although Lincoln's stated opposition to slavery was a major issue, associated politico-economic reasons for the schism (beyond the scope of this essay) were complicated. In April, four more states seceded, and the North and the South descended into 4 years of tragic civil conflict. Half a million Americans died, and as many again were wounded before the Confederacy formally surrendered on April 9, 1865. The Union was saved. Six days later John Wilkes Booth, a young actor bent on avenging the South's defeat, crept into Lincoln's box at Ford's Theater and shot him in the back of the head. He wrote in his diary, "Our country owed all her troubles to [Lincoln], and God simply made me the instrument of his punishment." The president died the following morning. By year's end the thirteenth amendment to the U.S. Constitution, born of Lincoln's Emancipation Proclamation of January 1863, had been ratified by all the states. Slavery was abolished.

Inevitably, memorials to the martyred statesman multiplied, at least throughout the northern states. Between 1868 and 1900 several cities—Brooklyn, New York City, Philadelphia, and Chicago—would commission statues, some paid for by private citizens. His tomb in Oak Ridge Cemetery, Springfield, Illinois, mooted immediately after his death, was dedicated in October 1874.

Between 1868 and 1876 three statues would be set up in Washington, D.C. And as early as May 1865 the District of Columbia's "colored citizens" established the National Lincoln Monument Institute, "for the purpose of erecting a Colored People's National Monument to [Lincoln's] memory; said monument to be a seat of learning—a building of fine architectural design, to be dedicated to God, to Literature, to Science, and Art—to be held and appropriated for the education of the children of Freemen and Freedmen, and their descendants for ever."

But the nation's leaders had something grander and quite different in mind. At the first session of fortieth Congress in March 1867 the Lincoln Monument Association was allowed 4 years to raise \$400,000 from private donations for a monument to be built on the grounds of the Capitol. The federal government promised to give the Association—once the fund reached \$100,000—twelve decommissioned bronze cannon that could be melted down and used to cast statuary. In June 1868 they were handed over with no conditions attached. The self-taught New York sculptor Clark Mills proposed a monument with three levels of bronze figures—thirty-five in all—on a granite base. The lowest level was to have six equestrian statues of Union Army leaders (such figures seem to have been his forte); above it, there would be three groups of liberated slaves and low-relief tableaus of events of the Civil War; the 70-foot high composition would be crowned with a figure of Lincoln signing the Emancipation Proclamation. But by the time that Mills died in 1883 nothing had happened. For even such a noble cause, the subscription

fund seems to have been difficult to fill. So despite further empowering legislation and any number of ideas littering the next three decades, nothing substantial was achieved.

CHANGES TO THE CAPITAL: THE McMILLAN COMMISSION

Throughout the nineteenth century, profit-driven laissez-faire urban development had meant that Pierre Charles L'Enfant's original unified vision for the national capital (except for only the centrality of the Washington Monument) had been all but abandoned. By 1900, the city's centennial as the seat of government, the National Mall was randomly planted with trees and gardens and dotted with several public buildings—even some industrial ones. The Baltimore and Potomac Railroad station stood at the foot of Capitol Hill.

In 1898 President William McKinley convened a committee of state governors and federal politicians to begin planning social events to celebrate the centennial. Republican Senator James McMillan of Michigan, chairman of the Senate Committee on the District of Columbia, inclined toward a more permanent commemoration, suggested that the national capital be generally improved. Many influential organizations agreed in principle but not in detail, and throughout the centennial year alternative proposals provoked what one urban historian has called “the battle of the plans.” On December 12 the American Institute of Architects (AIA) launched its annual convention in the capital, with the theme, “Improvement of the City of Washington.” Speakers included nationally respected architects, landscape architects, and sculptors, and the subjects of the city's planning heritage and the development of The Mall as its focus were central to many of the papers. McMillan arranged to have them published as a government document. The subsequent complex political maneuverings between him and the AIA are beyond our present scope: in a nutshell, the AIA promised professional support for his bill to relocate Union Station in The Mall, if he would sponsor “a commission to . . . make recommendations for the future placement of government buildings and the development of Washington's park system.”

Three months later, after being denied funding by the House of Representatives, McMillan secured a Senate resolution allowing him to set up the Park Improvement Commission of the District of Columbia that became known as simply the “McMillan Commission.” Its four members, appointed by President Theodore Roosevelt, were all nationally—some cases, internationally—acclaimed designers: Chicago Beaux-Arts architect Daniel Burnham, who had overseen the design of the World's Columbian Exposition in 1893, was its recognized leader; New York architect Charles Follen McKim, also Beaux-Arts trained; young Massachusetts landscape architect Frederick Law Olmsted, Jr.; and the realist sculptor Augustus Saint-Gaudens, who also had studied at the Beaux-Arts. Their brief was to restore and develop L'Enfant's

plans for Washington and “fit them to the conditions of today.” They began meeting in April 1901.

Travelling with McMillan’s secretary Charles Moore, Burnham, McKim, and Olmsted undertook a 7-week study and design tour of Europe, visiting Paris, Versailles, Rome, Venice, Vienna, Budapest, London, and Oxford. They worked on proposals for Washington during their Atlantic crossings and separately developed the embryonic ideas when they returned home. The Commission set up three studios: one on the floor above McKim, Mead, and White’s New York office; Olmsted in his own office in Brookline, Massachusetts, “where he assumed responsibility for the park plans”; and McMillan secured space for a drafting room in the Senate Press Gallery in Washington. Its 171-page report of January 15, 1902 was approved by McMillan’s Senate Committee.

On the same day, organized by McKim, newly-elected president of the AIA, and its secretary Glenn Brown, an exhibition of more than 170 paintings, drawings, and photographs, as well as “before and after” models opened at the Corcoran Gallery of Art. Brown later recalled that Roosevelt “showed his keen appreciation of the value of the scheme in the development of the Capital City” and defended it during the remainder of his term in office.

Generally, the McMillan Commission’s recommendations reflected ideas from the 1900 AIA convention. Affirming L’Enfant’s scheme, it proposed a plan for all future development, predicated by the Renaissance ideals of convenience, order, and beauty. It included the relandscaping of the Capitol Grounds and The Mall (which was to be extended west and south of the Washington Monument), restructuring the city railways, clearing slums, providing a government office precinct, and—of course—improving the District’s system of parks and recreation space. A key element was a memorial to Lincoln, to be built on land reclaimed from the Potomac marshes at the western end of the Mall.

The Commissioners’ intention is best described in their own words:

From the [Washington] Monument garden westward a canal three thousand six hundred feet long and two hundred feet wide, with central arms and bordered by stretches of green walled with trees, leads to a concourse raised to the height of the Monument platform. . . . At the head of the canal a great rond point, placed on the main axis of the Capitol and the Monument, becomes a gate of approach to the park system of the District of Columbia. . . .

Crowning the rond point . . . should stand a Memorial erected to the memory of that one man in our history as a nation who is worthy to be named with George Washington—Abraham Lincoln.

Whatever may be the exact form selected. . . , in type it should possess the quality of universality, and also it should have a character essentially distinct from that of any monument either [extant or future]. The type which the Commission has in mind is a great portico of Doric columns rising from an unbroken stylobate. This portico . . . has for its chief function to support a panel bearing

an inscription taken either from the Gettysburg speech or from some one of the immortal messages of the savior of the Union.

The portico contemplated in the plans, consisting of columns forty feet in height, occupies a space of two hundred and fifty feet in length and two hundred and twenty feet in width; it is approached by flights of stairs on the east and the west, is embellished with appropriate groups of sculpture, and is surmounted by a central crowning group of statuary. At the head of the canal, at the eastern approach to the Memorial, it is proposed to place a statue of Abraham Lincoln.¹

STANDING ALONE, DISTINGUISHED, AND SERENE

The projected site, on swampy land reclaimed from the mosquito-infested Potomac shore, was a controversial choice. Joseph Gurney Cannon, then speaker of the House of Representatives, strongly disapproved of it, reportedly declaring, "I'll never let a memorial to Abraham Lincoln be erected in that Goddamned swamp." Some claim that his opposition delayed the memorial's completion by 10 years. Whether it did or not, the path to the building's official dedication on May 30, 1922, would be less than smooth.

Knowing the slow-grinding wheels of government, it was inevitable that still more commissions would be appointed. On January 18, 1909, lobbied by the AIA and responding to the administration's need for expert advice on artistic matters, Roosevelt established a thirty-member Council of Fine Arts, chaired by the provincial architect Cass Gilbert. At its only meeting, it endorsed the McMillan Commission's choice of site. The Council was disbanded when Congress declined to fund it on the grounds that it had been convened only by executive order. Roosevelt's successor, William Howard Taft, prompted Senator Elihu Root of New York and Representative Samuel McCall of Massachusetts to push the legislation, enacted on May 17, 1910, that created the Commission of Fine Arts "to advise generally upon questions of art" in the Federal District. Although its authority was at first limited to statues, fountains, and monuments, in October 1910 it was extended to include public buildings. In that same year two Illinois Republican senators sponsored a Lincoln Memorial bill. Signed by Taft on February 11, 1911, it created the Lincoln Memorial Commission, chaired by Senator George Peabody Wetmore of Rhode Island. Two million dollars—about two-thirds of the final cost—was set aside for the building. The Commission of Fine Arts authorized the Memorial 5 months later.

Given the recommendations and *imprimatur* of this succession of Commissions for the site and the form of the Lincoln Memorial, it seems surprising that debate continued. But continue it did and would do so even after construction began. It has been suggested, not without irony, that the Republican establishment that ruled when the Memorial was being planned and built wished to create "an American Empire"—a vision that may help to explain

the emergence of alternative proposals. For example, in 1911 Representative James McCleary of Minnesota proposed that Abraham Lincoln be remembered, not by a pseudo-temple but a “memorial road” from the White House to Gettysburg; the three states crossed, if they were so disposed, could erect their own monuments. Rejected in Washington, his idea would be taken up in 1913 by the Motor Car Dealers Association, the American Automobile Association, and other vested interests, to produce the Lincoln Highway, the first transcontinental road in the United States.

“THE QUALITY OF UNIVERSALITY”

On December 5, 1912, the Lincoln Memorial Commission not only unanimously approved the Potomac shore site for the building, but also “by a close vote” named Illinois-born New Yorker Henry Bacon as its architect; his design already had the endorsement of the Commission of Fine Arts. The report included appendices setting out Bacon’s rationale of the preliminary, alternative, and final designs; similar statements by the only other short-listed architect, John Russell Pope (also of New York); and the Commission of Fine Arts assessment of the respective schemes.

In 1902 Burnham and McKim had produced drawings of a memorial approximating that described in their report to McMillan, *sans* the “appropriate groups of sculpture [and a] central crowning group of statuary.” Although the project had remained in abeyance, other suggestions were forthcoming: some were sublime, like a triumphal arch to memorialize the fallen soldiers of the Civil War; others were ridiculous, like reconstructing in Washington, D.C., Abe Lincoln’s log cabin at Sinking Spring Farm, Kentucky.

About a decade later, Burnham, Pope, and Bacon each submitted designs. Inexplicably, contradicting his original recommendations, Burnham proposed a semicircular colonnaded plaza on Delaware Avenue. The ten designs that Pope offered—some sources say there were only seven—included a circular open colonnade for the Potomac site surrounding a statue of Lincoln; his alternatives were located at Meridian Hill and the Soldiers’ Home Grounds and included a meso-American pyramid, a ziggurat, and a funeral pyre. Bacon had submitted a single idea.

His successful design, which would be modified in the course of the 11 years it took to build, followed the McMillan Commission’s principal recommendations: it was in the “correct style” and on the “correct” site. In 1911 Bacon wrote,

We have at one end of the axis [of the National Mall] a beautiful building which is a monument to the United States Government. At the other end of the axis we have the *possibility* [emphasis added] of a Memorial to the man who saved that Government and between the two is a monument to its founder. All three of

these structures, stretching in one grand sweep from Capitol Hill to the Potomac river, will lend, one to the others, the associations and memories connected with each, and each will have its value increased by being on the one axis and having visual relation to the other.²

Certainly his original design, as the Lincoln Memorial Commissioners wanted, evoked “grandeur and republican simplicity.” Gleaves Whitney believes that it was “no accident that Bacon’s design reflected America’s vacillating aspirations to be both the world’s greatest democracy and the globe’s strongest power,” and comments that as built it looked like “an ancient Greek temple set in the Roman Empire.”

Indeed, a prominent inscription on the inside of the structure refers to the memorial as a “temple” dedicated to Lincoln and the ideas for which he stood. More accurately, perhaps, it is a temple to American ideals in the early twentieth century—union, freedom, democracy, and international power.³

Some writers have suggested that Bacon received the commission because he was born in Illinois—hardly a substantial reason. Others believe, perhaps more plausibly, that it was because he was one of Charles McKim’s protégés. In *The Lincoln Memorial and American life*, Christopher Thomas asserts that “McKim trusted Bacon to use a visual vocabulary that would suggest the ‘moral authority and fiscal sobriety of Republicanism.’” Regardless of how it has been used in more recent times, Thomas sees the memorial as a symbol of the “the Republican Party of Teddy Roosevelt’s and William Howard Taft’s era.” In all, it was and is a confusing icon.

When he designed the Lincoln Memorial, Henry Bacon was widely regarded as one of the most adept interpreters of the Beaux-Arts fashion that permeated American architecture, and that would continue to do so well into the last century. The style had originated in the highly theoretical *Académie royale d’architecture* (Royal Academy of Architecture) created by Jean-Baptiste Colbert for Louis XIV in 1671. By the mid-nineteenth century, and following the bloody interruption of the French Revolution, its functions had been taken over by the *École des Beaux-Arts* in Paris. Beaux-Arts products were eclectic, hybridized from Greek and Roman antiquity and the Renaissance and Baroque. Many American architects trained in the school.

Before about 1420, Western architecture had been simply architecture. There was no thought of “style.” Any variations of appearance, construction, and form simply expressed regional and historical differences in ways of building. But on many grounds what is now known as the Italian High Renaissance had turned architecture into a *retrospective* art, preferring ancient Roman models and theories to contemporary, vernacular forms. An analogy can be seen in the rejection of the contemporary Latin language, then still being used by scholars, in favor of archaic, classical Latin. Within fewer than 400 years, under complex constraints and despite attempts to theoretically defend its

“truth,” that Renaissance architecture was reduced to just one more alternative in the stylistic supermarket, competing with its own sometimes deformed offspring, or revived Greek forms, or revived medieval architecture, or even with the exotic forms of India and China. Until the European Modern movement matured in the early twentieth century, architectural design was what Walter Gropius called “applied archeology”—a choice from a range of historical styles, of which there were abundant examples to copy. As recently as 1950, architectural students in the United States, Britain, and Australia were asked by the studio masters who looked over their shoulders at a developing design, “What is your precedent?”

Several ideas have been put forward to explain the popularity that Greek revival (or Neo-Classical) architecture enjoyed in the United States from the early nineteenth century. Among them was empathy with Greece, then fighting its own war of independence with the Ottoman Turks; there was also the romantic belief that ancient Greek democracy was the same as American democracy; that misconception may have influenced the choice for the Lincoln Memorial of a loose version of the Doric style that had reached its zenith in ancient Athens.

THE LINCOLN MEMORIAL

The Lincoln Memorial is at the center of a landscaped circle, defined by a roadway, in the 107-acre West Potomac Park. In front of it, the National Mall with its axial Reflecting Pool extends eastward past the Washington Monument to the Capitol Building, almost 2 miles away; behind it, the Arlington Memorial Bridge connects the Mall with the National Cemetery in Arlington, Virginia.

The 204-foot by 134-foot rectangular building is raised on a podium. It has ashlar walls of white Colorado Yule marble within a 44-foot high “not-quite-Doric” peristyle, whose columns are carved from Indiana limestone. The entrance to the Memorial chamber—simply an interruption in the wall, without doors—is approached from the direction of the Reflecting Pool along a formal pavement of Massachusetts granite and stones from the Potomac River; the path incorporates shallow flights of stairs as it rises to the memorial. Bacon designed the associated landscape elements in collaboration with Frederick Olmsted, Jr., who by then had been appointed to the Commission of Fine Arts. The final approach to the podium is flanked by wing walls, each supporting a 9-foot high tripod and censer carved from a single block of pink Tennessee marble. On the eastern face of each wing wall the *fascēs*, symbol of authority in the ancient Roman republic, are carved in low relief. They are almost the same as those on Lincoln’s chair within the building. Ironically, just 5 months after the Memorial was dedicated, the Italian dictator Benito Mussolini chose the ancient Roman device (and its name) to symbolize his

despotic political party and later Nazi ally, the *Fascisti*. The flight to the podium has thirteen steps, representing the number of States originally in the Union.

Standing on a classical stylobate (a platform of three high steps), the encircling colonnade, or peristyle, has thirty-six columns, one for each State of the Union at the time of Lincoln's death. In the frieze of its entablature, the triglyphs that normally were centred above the columns in the Greek model are replaced by linked double wreaths of pine and laurel branches; the spaces between them, which in a Doric building would have been filled with brightly painted low-relief sculptures, are inscribed with the names of the thirty-six States and the respective dates of their admission to the Union. A row of finely carved anthemion ornaments crowns the entablature. Within the peristyle, the wall of the Memorial rises in an attic story. It has a frieze of eagles with spreading wings, linked by garlands and ribbons; the wall beneath that band of subdued decoration is inscribed with the names of the forty-eight States of the Union at the time of the Memorial's dedication. The external masonry details are the work of 19-year-old Evelyn Beatrice Longman, already recognized as a sculptor in her own right and then working as an assistant to Daniel Chester French, who created the famous portrait of Lincoln in the Memorial, and English-born Ernest Cecil Bairstow, a decorative stone-carver based in Washington.

The Memorial chamber is entered through a full-height opening, three bays wide and divided by two Doric columns. The interior walls are lined with Indiana limestone; the floor and skirting are of pink Tennessee marble. The space is compartmented into three chambers by two rows of four Ionic columns carrying a modified entablature (the classical model had three setbacks, whereas Bacon's has four). Perhaps he employed the more slender Ionic order inside the building, as the ancient Greeks sometimes did, because it took up less space. The profile of the entablature continues around the chamber's perimeter, rather like a cornice. The ceiling, beneath three separate gabled skylights, is framed in cast bronze, ornamented with laurel and oak leaves and supporting panels of Alabama marble, made translucent by saturating it in paraffin.

AESTHETIC CONFUSION: MISUNDERSTANDING HISTORY

Bacon's architectural style and his precedent—if indeed there was one—call for comment. Some populist sources claim that the Lincoln Memorial is based on the Athenian Parthenon; others more tentatively describe it as a “Doric temple.” Such speculation is uninformed and the claims are inaccurate.

The whole *raison d'être* of the classical Greek orders was just that: order. The Hellenes believed that their architecture—indeed, all forms of their art—was bound by piety to reflect what they perceived to be the immanent mathematical

harmony of the universe. Their three systems of building, each with its distinctive proportions, form, and detail, were based on that belief, although the quite diverse outcomes were colored by regional cultural differences. Historians have classified the systems as the Doric, Ionic, and Corinthian “orders.” But it is reiterated, to those who made them, they were simply architecture. The Doric, resulting from translation into stone of much earlier timber construction techniques, developed over centuries on the mainland peninsula of Greece and in the western colonies. It reached the pinnacle of its refinement—that is, a satisfactory conclusion about the cosmic order—in the Parthenon at the middle of the fifth century B.C., and thereafter continued with little change for about 300 years.

One can repudiate the assertion that the Lincoln Memorial was modeled on the Parthenon, simply by observing that it had a *thirty*-six (8 by 12) column peristyle compared to the *forty*-six (8 by 17), of the ancient temple. However, a couple of tenuous links can be noted. First, Bacon used an Ionic order *inside* his building, as architects Iktinos and Kallikrates did in a minor secondary space of the Parthenon. Second, Bacon tilted the outer columns of the peristyle inwards to overcome visual distortion of the form; that optical trick was among many employed with infinitely greater subtlety in the Parthenon.

And the Memorial was in no sense a Doric temple, much less a replica of the Parthenon. Even the approach to it was “un-Greek.” Greek temples did not stand on a podium, because their stylobates served to level their usually uneven sites; their entrances were invariably on the shorter sides; they had gable roofs with ridges parallel to their longer sides, whose form was expressed at each end by a triangular pediment. And—as Bacon should have known, because many Beaux-Arts drawings depicted them so—although constructed of white marble, they were painted and patterned with the brightest colors, luminous in the Aegean sunshine.

Frank Lloyd Wright is accused of having said, “The Lincoln Memorial is related to the toga and the civilization that wore it.” Indeed, the building’s axial relationship to the Mall, the grand scale of the whole ensemble, the podium, the flanking walls that defined the approach—even the censors—were derived from *Roman*, not Greek sources. Each Doric temple stood in its *temenos* or sacred yard, and every detail of its design encouraged worshipers to walk *around* it, looking up at it; its essence was not really discernible from a distance, and it was never approached along an axis. If there was a geometry involved in its siting and its relationship with its neighbors, it was, as Constantinos Doxiadis demonstrated, much more mystical and subtle than the straight-lines-and-no-nonsense dogma of the Romans and the American planners of the Mall.⁴

Moreover, such formal urban design was not even of the Roman republic, but of the empire. The Forum Julian, the first of the Roman Forums, was commenced as part of Julius Caesar’s planned redevelopment of the city in 46 B.C. Caesar’s nephew Octavian, who became the first Roman Emperor and

took the modest name Augustus (“the illustrious one”) famously declared, “I found Rome a city of brick and left it a city of marble.”

It is therefore more satisfactory to conclude that Bacon, like any Beaux-Arts architect, scoured antiquity for architectural elements to combine with those of his own invention to create a betwixt-and-between style. Although his passion for antiquity may have been born in the office of McKim, Mead, and White and nurtured by his travels in southern Europe, there can be little doubt that it was also informed by literature, including such archeologically obsessive books as Stuart and Revett’s *The Antiquities of Athens*, published 1762–1830 and Charles Normand’s *A New Parallel of the Orders of Architecture*, translated into English in 1829, as well as any number of architectural picture books.

As a reward for his Lincoln Memorial, in 1923 he was awarded the AIA’s Gold Medal at a theatrical ceremony in Washington. While Marine Band trumpeters played Walter von Stolzig’s “prize song” from Wagner’s *Der Meistersinger von Nürnberg*, Institute members, resplendent in colorful regalia and bearing banners, paraded alongside the Reflecting Pool, on which architecture students towed a barge bearing Bacon, enthroned beneath a gold-painted sculpture of a boy holding a laurel wreath. Taft, then chief justice of the Supreme Court, met the architect at the Lincoln Memorial steps and presented him to President Warren Harding, who conferred the Medal.

“GETTING TO KNOW MR. LINCOLN”

The lofty interior of the Memorial is dominated by Daniel Chester French’s gigantic portrait of the seated Abraham Lincoln. It is probably the feature that visitors best remember. Its sheer size is impressive enough, but its enigmatic expression makes it even more compelling.

Its New Hampshire-born creator grew up in Concord, Massachusetts, where at the age of 18, he began to study art with Abigail May Alcott. After a short apprenticeship with sculptor John Quincy Adams Ward in New York City, he moved to Boston to attend art anatomy lectures by British-born William Rimmer and take drawing lessons with the painter William Morris Hunt. In 1874, sponsored by Ralph Waldo Emerson, he completed his first major commission, *The Minute Man*, that was unveiled in Concord in April 1875. French by then had moved to Italy, where for 2 years he learned from Thomas Ball in Florence. On returning to America he opened a studio in Washington, D.C., where he established himself as a leading realist sculptor.

In 1910 he and Bacon had collaborated on a monument in the Capitol grounds of Lincoln, Nebraska, that incorporated a bronze standing figure of Abraham Lincoln. Early in 1915, soon after the foundation stone of the Lincoln Memorial was laid, Bacon engaged the 65-year-old French to produce the portrait sculpture that would stand within. French immediately began

work on clay maquettes. His research was very thorough; he worked from Matthew B. Brady's portrait photographs, casts of the late president's hands, and a life mask made in 1860 by the Chicago sculptor Leonard Wells Volk. By the end of October French had produced a model with which he was satisfied. When that "sketch" was approved, he made a larger clay working model. Altogether, he made (with his studio assistants) four models, gradually increasing the scale as he changed and refined the detail. The incline of Lincoln's head; the drape of his coat; the position of his feet, his open and closed hands, the height of the chair, and the drapery that covered it all were carefully considered and reconsidered.

At first it had been proposed to place a 10-foot high statue in the memorial's central chamber, but a drawing of French's "working model" by Jules Guérin quickly demonstrated how even that larger-than-life figure was far too small in proportion to the vast interior. When seen in the still-unfinished space, an 8-foot-high model that French took to Washington was quite insignificant. So to discover what would be an appropriate size, he set up enormous photographs—14 to 18 feet high—on timber frames. It finally was decided that the seated figure of Lincoln would need to be 19 feet high (that would make the standing president 28 feet tall), raised on an austere base, 11 feet above the floor. The translation of the sculptor's model into white Georgia marble was entrusted to the skillful hands of the Piccirilli brothers, who since 1890 had produced all but two of French's stone sculptures.

In 1887 Giuseppe Piccirilli, himself a successful sculptor and stone carver from Carrara, Italy—it might be said, "the marble capital of Europe"—had emigrated to New York with his family. His six sons (Feirruccio, Attilio, Furio, Masaniello, Orazio, and Getulio) were also trained marble carvers, and each in succession studied at the famous centuries-old *Accademia di San Luca* (Academy of Saint Luke) in Rome. When they first arrived in America, Giuseppe and the older boys worked at Samuel Adler's Monument and Granite Works, but they soon opened their own studio. In 1890, shortly after meeting French, they moved to The Bronx, where until 1945 they carved for many sculptors and produced myriad architectural details. The Piccirillis used 150 tons of marble in the twenty-eight blocks that make up the Lincoln statue. Of course, the final touches to the 9-year project, completed on November 19, 1919, were left to French.

Visitors see different things in Lincoln's face and posture. Some see wistfulness, others strength, and still others both. But almost all see the terrible strain of the years of war. Sociologist James Loewen writes,

The sculpture . . . offers more than the triumphalism of its hieratic scale. Huge it is, if erect, the President would stand 28 feet tall. Lincoln is not standing, however, nor astride a horse, nor is his pose or facial expression victorious. French has not forced viewers to see Lincoln in any one way. As historian Merrill Peterson puts it, "what some see as triumph, other observers see as resignation; what some see as toughness, others see as tenderness."⁵

Some writers have speculated on the detail of the hands, one closed, but not really clenched, the other open—one representing strength and determination and the other compassion. Whatever the meaning, they are the large, gnarled hardworking hands of the Kentucky rail-splitter. And there is a tradition, perhaps apocryphal, that French, whose daughter Margaret was hearing impaired, carved the hands to sign the letters “A” and “L” in American sign language. Lincoln’s hands rest upon the supports of the seat, which are carved in relief with a modified version of the ancient *fascēs*—a symbol that originally comprised an axe within a bundle of rods, tied with a thong. The axe represented power, and the rods the citizens of the state, bound together in common interest. Lincoln’s *fascēs* have no axe.

French was in Europe when the statue was assembled *in situ*. On seeing it, he wrote, “I was very much relieved to see that it was not too large for its surroundings. I got into rather a panic about this for it didn’t seem that a statue that large could fit into any place without being too colossal.” But in 1921, as the building neared completion, he became alarmed at the way his work was lit. Changes to the skylights and reflection from the marble steps had combined to make the face expressionless. Others failed to recognize the problem until 1925, and nothing was done for the next 4 years to correct it by interior electric lighting. The outside of the Memorial was floodlit in summer 1929.

The novelist Beverly Lowry recorded her response to French’s statue, encountered during an evening walk, in a piece titled “Getting to Know Mr. Lincoln” in *The New York Times* on May 14, 1995:

I switched off my Walkman and stood there gawking, saying, “Look. Look at that,” out loud and to nobody at all. The lights inside the memorial had gone on. There’s a moment when, after that happens, the sky suddenly gets dark enough that the statue of Lincoln . . . slowly makes a ghostly appearance from between the columns. From where I stood, I saw it happen. Like a picture coming into focus, gradually he was there, seated and in deep contemplation. With the sky on fire behind him, it was as if the whole thing had been staged, a drama of night and time, history and splendor.

THE WRITING ON THE WALLS

High on the west wall of the chamber, flanked by low-relief pilasters and Ionic entablatures (manneristically turned on their ends), is incised the simple inscription composed in April 1919 by Royal Cortissoz, art critic for *The New York Herald Tribune*:

In this temple
As in the hearts of the people
For whom he saved the union
The memory of Abraham Lincoln
Is enshrined forever.

The succinct statement that emphasized the salvation of the Union was considered “exactly right” by its author. All associated with the Memorial, including Chief Justice Taft, then chairman of the Lincoln Memorial Commission, agreed. Well, not quite all. In April 1922, about only a month before the dedication was to take place, Charles Moore of the Commission of Fine Arts objected to the text because he thought that the Memorial should be graced by Lincoln’s words only. An urgent flurry of correspondence followed and within days, assured that Taft had approved the inscription 3 years earlier, Moore backed down.

But more was to come. Shown the words, President Warren G. Harding wanted what seems to be a pedantic change: “In this temple, as in the hearts of the people of the Union which he saved, the memory of Abraham Lincoln is enshrined forever.” Offended, Cortissoz objected for artistic reasons, and on May 1 he wrote formally to Bacon, withdrawing the text unless it appeared as he had written it. Bacon approached Taft, arguing for Cortissoz’s inscription on aesthetic grounds. The next day Harding “agreed to disagree,” and the stone carvers were able to complete the art critic’s words by May 30.

There seems to have been no such dissension about the other words that have been immortalized in the stone of the Memorial. The text of Lincoln’s dedication of the Soldiers’ National Cemetery in Gettysburg, spoken on November 19, 1863—perhaps his most famous utterance—is incised in a classical cartouche on the south wall of building. The version is from the so-called Bliss copy and ends, “the great task remaining before us [is] that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.” Beyond the north colonnade a similar, but necessarily larger architectural device, frames Lincoln’s second Inaugural Address, made on March 4, 1865, one month before the end of the Civil War. It sets out his policy for reforging the Union.

The texts, like Cortissoz’s inscription, were executed by Longman and Birstow. The surrounding frames are in the form of a low-relief pedestal supporting flat, capital-less pilasters flanked at their bases by a stylized eagles with spreading wings; they rise to a narrow moulded entablature. The form has no precedent in classical architecture, but once again its parts are of Roman, not Greek, derivation. If these architectural details were designed by Henry Bacon, or even approved by him, their use underlines the fact, already remarked, that the style of the Lincoln Memorial is an eclectic melange of pieces pilfered from history.

THE MURALS

Over each text, 37 feet above the floor, is a 60 foot long, 12 foot high mural, painted in oils by Jules Vallée Guérin. As Thomas has remarked, they are so

placed that they easily become a parenthetical aside glossed over by most visitors, and on an overcast day, even unseen by some.

Guérin was born in St. Louis, Missouri. He enrolled at the School of the Art Institute of Chicago in 1880, when only age 14, and later studied with Benjamin Constant and Jean Paul Laurens in Paris. Returning home, he worked as a book illustrator before making a considerable transition of scale to mural painting. Early in the last century he exhibited in national and international expositions, and in 1907 Burnham and Edward H. Bennett commissioned him to paint renderings of their proposed Chicago Plan. After that he frequently collaborated with them and their firm's successors. He also painted maps on the ceilings in McKim, Mead, and White's Pennsylvania Station, New York, in 1911.

In that year Bacon engaged him to assist with presentation drawings of his proposal for the Lincoln Memorial, and in 1912, when the design had been selected, the architect asked him to paint the murals. Probably late in 1916 Guérin began work in a purpose-built two-story penthouse studio on East 23rd Street, New York City, painting his formal compositions on two continuous canvases. Therefore they were not *strictly* murals. In 1919 the completed works were rolled on wooden drums, taken to Washington and lifted into place so that the canvas could be gradually unrolled and stuck to the limestone walls of the chamber. Each is surrounded by a flattish moulded frame, supported by tiny widely-spaced guttae.

The mural above the Gettysburg Address, titled *Emancipation*, depicts at its center the Angel of Truth freeing slaves. The other is titled *Unification*, and shows the Angel, again centrally placed, joining the hands of figures that represent the North and the South. Other groups of figures—forty-eight in all—complete the vivid compositions. The detailed allegorical interpretation of those figures we leave to others, although probably it was never self-evident. The paintings are saturated with color and glowing with large areas of gold, but the style is hardly appropriate in a Neo-Classical building, because it is very much of its time. Indeed, similarities with Guérin's mural in the Louisiana State Capitol lobby, painted 15 years later, suggest that it was his one-size-fits-all style, redolent of the formal symmetry of Byzantine imperial art but touched by what became known as the Art Deco. That the style is incongruous is not to detract from the beauty of the paintings, but only to remark that with their static figures they owed nothing to the dynamic decoration seen in the narrative works that adorned antique architecture. Perhaps there was a slight nod toward the tripartite compositions of Greek pediments, but only perhaps.

Although all were deservedly respected in their fields, it is remarkable that, in a nation of 94 million people, the artists behind the Lincoln Memorial were already intimately connected. First, there was Henry Bacon's link with McMillan Commissioner McKim. Daniel Chester French, sculptor of the figure of Lincoln, had collaborated with Bacon on several projects, including his own

house. French's apprentice Evelyn Beatrice Longman was separately engaged to carve architectural details. Royal Cortissoz, composer of the inscription, had been an office boy in McKim's when Bacon was working there also. Frederick Law Olmsted, Jr., who worked on the landscape design with Bacon, also had been a McMillan Commissioner. The muralist Jules Guérin had worked closely with McKim and a third commissioner, Daniel Burnham (he had also made presentation drawings of Bacon's proposals). The remaining McMillan commissioner, Augustus Saint-Gaudens, died in 1907, before the project was launched.

ICONIC SIGNIFICANCE: *THEN*, THE SALVATION OF THE UNION

The Lincoln Memorial was built to symbolize the salvation of the Union. When news of the great president's death and rumors of a conspiracy to assassinate other leaders reached Philadelphia on April 15, 1865, three Union Army officers resolved to form a body to protect the Union. In May, the Military Order of the Loyal Legion of the United States—it remains active today—was established. President Harding asked the Order, then led by Lieutenant-General Nelson Miles, to coordinate the dedication of the Lincoln Memorial on May 30, 1922. The government declared a national holiday. Besides the thirty-five hundred invited guests, forty-six thousand others attended the ceremony on that clear and sunny Tuesday, and amplifiers and radio broadcasts carried the proceedings even further.

Frances Parkinson Keyes wrote to a friend:

There was no military parade, no floral display. There were more than five thousand [*sic*] in the reserved section on the platform: the diplomatic corps; the Senate and House of Representatives; the diplomatic and congressional ladies. . . ; General Pershing with his aides; members of the Grand Army of the Republic, and the United Confederate Veterans. In the center of the stage stood Chief Justice Taft. . . , with the President and Mrs. Harding, the Vice President and Mrs. Coolidge, and Mrs. Taft on one side of him, and Robert Todd Lincoln, eldest and only living son of the great President, and Representative Cannon of Illinois . . . on the other; the speakers for the day, and the other members of the commission occupying positions of honor.⁶

The Marine Band played *America*, followed by a prayer by Rev. Wallace Radcliffe, formerly of New York Avenue Presbyterian, Lincoln's church. General Pilcher, commander in chief of the Grand Army of the Republic, ordered the presentation of the flag and accepted the Memorial in the Army's name. The dedicatory prayer was offered by the chaplain in chief.

But not *all* the speakers occupied positions of honor. The keynote address was by African American Dr. Robert Russa Moton, principal of the Tuskegee Institute. Until he rose to speak he was obliged to stand apart from the white

guests, in an area roped off for “colored only” invitees, across the road by the Reflecting Pool. One author notes that he “achieved some decree of symbolic honor . . . by taking his reverent time in crossing the street when his time on the program was at hand.” Dr. Moton’s speech, as he wrote it, did not fit the political purpose of the Memorial’s builders. Adam Fairclough writes that because he saw the Memorial as a “moral symbol of the African-American fight against discrimination” he “intended to deliver a passionate plea for racial justice.” Bureaucrats censored it to remove any references to the ongoing troubles of African Americans, or criticism of the government. Moton had written, “My fellow citizens, in the great name which we honor here today, I say unto you this Memorial which we erect in token of our veneration is but a hollow mockery, a symbol of hypocrisy, unless we together can make real in our national life, in every state and in every section, the things for which he died.”⁷ When he concluded, he was escorted to the segregated seating. One writer observes, “It was an ugly reflection of the temper of the times” and another that “the Lincoln Memorial was built . . . in the midst of what has been called the ‘nadir of American race relations,’ an unlikely time to remember the Great Emancipator.”

Toward the end of the ceremony, Edwin Markham read his poem, *Lincoln, the Man of the People*, written in 1900; selected from over two hundred other tributes, it lauded Lincoln for preserving the Union. Then came Taft’s address on behalf of the Lincoln Memorial Commission. It contained not a single mention of slavery but underlined the importance of the Union. Finally, Harding’s acceptance speech contained much about Lincoln’s work for reunification but little of his role as liberator of the slaves.

The emphasis at the ceremony confirmed the symbolism deliberately set in stone. Even the texts chosen for the chamber played down references to slavery, avoiding offending the southern States. Indeed, when challenged that his inscription also neglected the issue, Cortissoz replied, “By saying nothing about slavery you avoid the rubbing of old sores.” An anonymous writer for the National Park Service remarks that it is hardly surprising that “the predominately white, classically minded and university educated, upper-middle class generation [who] built the Lincoln Memorial would stress the theme of National Unity over that of Social Justice.” Although that writer attributes such a mind-set to a reaction to post-1917 world events, it is clear that most of the design decisions predate them. Thomas’ view, already noted, is much more credible: the Memorial was intended to “suggest the ‘moral authority and fiscal sobriety of Republicanism.’”

Yet a symbol is not symbolic if it needs to be explained. Much of the iconography of the Memorial was reserved for an erudite elite; some of it was confused and even misinformed. A few examples demonstrate the point. Who, without being told, would recognize that the thirteen steps up to the podium represent the original states of the Union? Who would count or calculate, because the building is usually approached from the east, that there

are thirty-six columns in the peristyle, much less that they stand for as many states, unless the names of those states were inscribed between them? Who would grasp the significance of the *fasces*? Who would understand that the Doric order—or Bacon’s version of it—was intended to represent democracy, or that it had been developed in ancient Athens, where democracy was believed—albeit erroneously—to have been the political system?

As an aside, it needs to be understood that at almost the same moment as Doric architecture reached its epitome, the historian Thucydides said of Athens: “It was in theory a democracy but in fact it became the rule of the first Athenian,” and Herodotus used *aristoi* to describe Perikles, who financed the Parthenon. American political historian Steven Kreis correctly asserts that only seventy years later what began in 500 B.C. as a democracy became an aristocracy under Perikles.

Unlike the nation for which Lincoln longed, his memorial was not at first “for the people and of the people.” But that was to be changed.

ICONIC SIGNIFICANCE: NOW, EQUAL RIGHTS FOR ALL

Jeffrey Meyer of the University of North Carolina has convincingly pointed out that the Lincoln Memorial is an icon whose meaning has changed, almost in spite of the intention of its creators and that change from “an emblem of the stabilization of the Union to one of emancipation and racial equality has been impelled by the pilgrims to Washington.” Especially, two specific events changed the memorial’s iconic meaning: the Marian Anderson Easter concert in 1939 and the civil rights March on Washington of August 1963. Later “pilgrimage” marches have reinforced the popular image of the Lincoln Memorial as an icon of racial equality and of defiance of social oppression.

In January 1939 the African American contralto Marian Anderson, already widely feted throughout Europe, accepted an invitation to give a fund-raising concert for Howard University’s School of Music in Washington, D.C. Her previous performances there had attracted growing unsegregated audiences, so when planning an Easter Sunday concert—4 months ahead—university administrators applied for the use of the largest venue available: the four-thousand-seat Constitution Hall owned by the Daughters of the American Revolution (DAR). The DAR turned down the request, on the grounds that the hall was already booked by the National Symphony Orchestra.

That well may have been so; nevertheless, a clause in the DAR’s contracts limited use of the building to “a concert by white artists only, and for no other purpose.” Fred E. Hand, the booking manager who seems to have been initiated the policy as early as 1931, rejected Howard University’s appeal for an exception to be made for such an illustrious performance. The DAR’s hierarchy “promptly and explicitly” supported his decision. One source claims that alternate choices were offered, but impresario Sol Hurok had booked

Anderson's season so tightly that she was unable to accept another date. Given subsequent events, especially the reaction of First Lady Eleanor Roosevelt, the assertion seems specious. Although commented upon in the press in January, the incident came to the nation's notice at the end of February, when Mrs. Roosevelt resigned from the DAR in protest, and explained her reasons to four million readers in her syndicated newspaper column, *My Day*.

Incensed that Anderson had been so treated because she was "a singer of color," her Washington aficionados, black and white alike, formed the Marian Anderson Citizens' Committee to lobby for a suitable venue. The situation was exacerbated when the District Board of Education, on grounds of color, refused permission for use of the auditorium at the whites-only Central High School. Protests from across the nation forced a back-down, but the Board's reluctant agreement was encumbered by impossible stipulations. Walter White, executive secretary of the National Association for the Advancement of Colored People (NAACP), urged Harold L. Ickes, the secretary of the interior, to offer the steps of the Lincoln Memorial as the stage for the concert. Government combined with civil rights groups to involve over three hundred cosponsors from Congress, the judiciary, and scores of national organizations.

On April 9, Marian Anderson stood before the statue of Abraham Lincoln to sing to an integrated crowd of over seventy-five thousand—the largest gathering ever seen in Washington, D.C. Wearing a fur coat against the cold at 5 o'clock on that Sunday afternoon, and accompanied by Kosti Vehanen, she began her half-hour recital with *America*, followed by a Donizetti aria and Schubert's *Ave Maria*; after intermission she sang three spirituals, *Gospel Train*, *Trampin'*, and *My Soul Is Anchored in the Lord*. Mrs. Roosevelt and Ickes arranged for the concert to reach an estimated audience of six million through NBC's radio network. On the single sheet program were printed Lincoln's memorable words from Gettysburg, "Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal."

Reviewing Allan Keiler's *Marian Anderson: A Singer's Journey*, Terry Teachout wrote, "At no time was Anderson anything but a reluctant political activist. Likewise, the events leading up to her legendary performance at the Lincoln Memorial were in no way her doing." The review continued,

All the players in this drama had agendas of their own. Hurok knew that such a concert would be of incalculable publicity value. Ickes hoped that blacks, who then voted Republican *en bloc*, could be induced . . . to support the Roosevelt administration. Anderson . . . disingenuously claimed that she knew nothing of the controversy until Eleanor Roosevelt resigned from the DAR, but in fact she was fully aware of what her manager had in mind, and by all accounts was terrified by it.⁸

The concert is commemorated in Mitchell Jamieson's 1943 mural, *An Incident in Contemporary American Life*, in the Department of the Interior

building in Washington. In that year, invited by the DAR, Marian Anderson made her first appearance in Constitution Hall. Cultural historian Scott Sandage remarked, “In one bold stroke, the Easter concert swept away the [Lincoln Memorial’s] official dedication to the ‘savior of the union’ and made it a stronghold of racial justice.” That dramatic change in the meaning of the icon would be greatly reinforced by another amazing event, 24 years later.

From the late 1950s and through the 1960s the United States experienced a burgeoning politico-social struggle by African Americans for human rights. On Wednesday August 28, 1963, over two hundred fifty thousand demonstrators, fifty thousand of them white, assembled from across the nation for the March on Washington for Jobs and Freedom. The event was proposed late in 1962 by 73-year-old Asa Philip Randolph, a veteran civil rights activist; initially, and for their own reasons, other civil rights leaders gave him little support. But in just 2 months, working with two hundred volunteers, Bayard Rustin (who had planned earlier demonstrations with Randolph) brought them together for the largest peaceful demonstration in U.S. history. This demonstration was in spite of opposition, resistance, and criticism from some politicians, the press, and reactionary organizations, and attempted undermining by the FBI.

Rallying at the Washington Monument, the vast, orderly crowd marched along the Mall to the Lincoln Memorial. On its steps, Marian Anderson again sang—this time the national anthem—to launch a 3-hour program. Interspersed by songs from Mahalia Jackson and the Eva Jessye Choir, the crowd was addressed in turn by Randolph and representatives of several civil rights organizations: the NAACP, the National Urban League, the Conference of Racial Equality, the Student Nonviolent Coordinating Committee, the American Federation of Labor/Congress for Industrial Organization. Also participating were prominent members of various religious bodies: the Catholic archbishop of Washington; the executive director, National Catholic Conference for Interracial Justice; the Presbyterian vice chairman of the Commission on Race Relations of the National Council of Churches of Christ in America; the president of the Synagogue Council of America; and the president of the American Jewish Congress.

The final speaker spoke for four times as long as the program allowed him. Rev. Martin Luther King, Jr. of the Southern Christian Leadership Conference delivered his eloquent and now world-famous “I have a dream” speech, beginning with an allusion to Lincoln: “*Five score years ago*, a great American, in whose symbolic shadow we stand today, signed the Emancipation Proclamation.” And he concluded with the stirring words that struck chords in the hearts of his immediate audience, across the nation and then around the globe, words that echo still:

When we allow freedom to ring . . . from every village and every hamlet, from every state and every city, we will be able to speed up that day when all God’s

children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old Negro spiritual: “Free at last! Free at last! Thank God Almighty, we are free at last!”

On August 22, 2003, Coretta Scott King and Judge Craig Manson, assistant secretary of the Interior for Fish, Wildlife and Parks, unveiled a stone tablet set in the approach to the Memorial, marking the exact spot from which King spoke.

It is fitting to end with apposite words from Scott Sandage, written in 2004 in support of saving the National Mall:

Public uses alter the intended meanings of all monuments, and the Lincoln Memorial is our greatest example of this. Making it our national soapbox enhanced its symbolism. . . . Americans of all view-points have used this monument’s platform to address supporters crowded down the narrow, center lane of the Mall. Where else did both the Rev. Billy Graham and the American Nazi George Lincoln Rockwell preach? The site has hosted demonstrations for abortion rights and fetal rights, evangelical services and gay pride events, rallies by Mothers Against Drunk Driving and by the National Organization for the Reform of Marijuana Laws.⁹

Every president since Jimmy Carter has held an inaugural gala there, basking in a glow of freedom created by more than a hundred protests at the site after 1926. America is better today than it was seventy-five years ago, not only because one generation marched against Hitler, but because several generations have marched down the Mall to the Lincoln Memorial.¹⁰

Henry Bacon

Born in Watseka, Illinois, in November 1866, Henry Bacon (known as Harry) was one of seven children of government civil engineer Henry Bacon and his wife Elizabeth. In 1875 the family moved to Wilmington, North Carolina, and in 1884 Harry began to study architecture and engineering at the University of Illinois. After only a year he went to work as a drafter in the Boston architectural practice of Chamberlin and Whidden, before moving 3 years later to McKim, Mead, and White’s New York City office.

In 1889 he was awarded the recently established Rotch Traveling Scholarship that enabled young American architects and talented draftsmen to undertake the professional equivalent of the Grand Tour to study art and architecture in Europe. He spent 2 years in the northern Mediterranean, mostly in Greece and Turkey, studying the remains of Classical architecture. Returning to the United States, he was again employed in McKim’s firm, where he worked on the designs of Rhode Island State House (1891–1903), the World’s Columbian Exposition, Chicago (1893), the Brooklyn Museum (1893), and the J. P. Morgan

Library (built 1902–1906). In 1897 he established a successful partnership, Brite and Bacon, with James Brite, another former employee of the famous New York firm, who took care of the business side of the practice.

From 1902 he conducted a sole practice and by 1910 had made a name for himself. Among his important works before the Lincoln Memorial were the Free Public Library, Paterson, New Jersey (1905); the Union Square Savings Bank, New York City (1905–1907); and the Eclectic Society Building, Middletown, Connecticut (ca. 1908). Those completed after 1911 include the General Hospital, Waterbury, Connecticut (ca. 1911), the Whittemore Memorial Bridge, Naugatuck, Connecticut (1912); the Court of the Four Seasons at the Panama-Pacific Exposition in San Francisco (1915); and the master plan and several buildings for Wesleyan University, Middletown, Connecticut (ca. 1916). He died in New York in 1924.

NOTES

1. *Report of the Senate Committee on the District of Columbia on the Improvement of the Park System of the District of Columbia*. U. S. Senate Committee on the District of Columbia. Senate Report No. 166, 57th Congress, 1st Session. Washington, D.C.: Government Printing Office, 1902.
2. Thomas Christopher A., *The Lincoln Memorial and American Life*. Princeton, N.J.: Princeton University Press, 2002, 64.
3. Whitney, Gleaves, "Abraham Lincoln Memorial." www.gvsu.edu/hauenstein/index.cfm?
4. As K. Graham Pont points out (www.nexusjournal.com/conferences/N2006-Pont.html), "In his doctoral thesis (1937), translated as 'Architectural Space in Ancient Greece' (1972), . . . Doxiadis argued that the apparently haphazard layout of Greek temple sites could be explained by a system of planning by 'polar coordinates'. From a fixed pole, usually at the ritual entrance, the planner could locate any building by measuring the distance to that building and the size of the angle between . . . sightlines from the viewer to the outer edges of that building."
5. Loewen, James, "The Sociology of Selected Monuments in Washington, DC, or Stories Behind the Stones." www.asanet.org/footnotes/apr00/stones.html
6. The description of the dedication ceremony is found in Francis Parkinson Keyes, *Letters from a Senator's Wife*. New York: London: D. Appleton and Co., 1924, 223 ff.
7. Fairclough, Adam, "Civil Rights and the Lincoln Memorial: The Censored Speeches of Robert R. Moton (1922) and John Lewis (1963)," *Journal of Negro History*, 82 (Autumn, 1997), 408–416.
8. Teachout, Terry, "The Soul of Marian Anderson," *Commentary* (April 2000).

9. Sandage, Scott A., "A Marble House Divided: The Lincoln Memorial, the Civil Rights Movement, and the Politics of Memory, 1939–1963," *Journal of American History*, 80(June 1993), 147.
10. *Idem.* Sandage, "Dead End for the Freedom Trail" (October 2007). www.savethemall.org/chron/dead_end.html

FURTHER READING

- Brown, Glenn. *The Development of Washington with Special Reference to the Lincoln Memorial. Address by Glenn Brown, Secretary American Institute of Architects, before the Washington Chamber of Commerce, December 13, 1910.* Washington, D.C.: Chamber of Commerce, 1911.
- Concklin, Edward F. *The Lincoln Memorial: Washington.* Washington, D.C.: U.S. Government Printing Office, 1927.
- Dedication of the Lincoln Memorial, Washington, D.C., Decoration Day, MCMXXII.* Washington, D.C.: Lincoln Memorial Commission, 1922 [brochure].
- Fairclough, Adam. "Civil Rights and the Lincoln Memorial: The Censored Speeches of Robert R. Moton (1922) and John Lewis (1963)." *Journal of Negro History*, 2(Autumn 1997), 408–416.
- Goldstein, Ernest. *The Statue Abraham Lincoln: A Masterpiece by Daniel Chester French.* Minneapolis, MN: Lerner, 1997.
- Loewen, James. *Lies Across America: What Our Historic Sites Get Wrong.* New York: Simon & Schuster, 2000.
- Morgan, H. Wayne. "An Epitaph for Mr. Lincoln." *American Heritage* (February–March 1987), 59–63.
- Richman, Michael. *Daniel Chester French: An American Sculptor.* New York: Metropolitan Museum of Art, 1976.
- Sandage, Scott A. "A Marble House Divided: The Lincoln Memorial, the Civil Rights Movement, and the Politics of Memory, 1939–1963." *Journal of American History*, 80(June 1993), 135–167.
- Thomas, Christopher A. *The Lincoln Memorial and American Life.* Princeton, N.J.: Princeton University Press, 2002.

INTERNET SOURCES

Official Lincoln Memorial website. www.nps.gov/linc/



Courtesy Library of Congress

Monticello, Charlottesville, Virginia

Thomas Jefferson at home

On July 4, 1776, the Second Continental Congress adopted the Declaration of Independence, most of which was composed by Thomas Jefferson. Exactly 50 years later, shortly after noon Jefferson died in his bed at Monticello. He said in 1787, “I am happy no where else and in no other society, and all my wishes end, where I hope my days will end, at Monticello.”

No American architectural icon is as self-evident as Monticello. That has been true for most of its existence. Following a visit in 1832, John H.B. Latrobe, son of the architect Benjamin Latrobe, wrote that although “the first thing that strikes you [at Monticello] is the utter ruin and desolation of everything . . . [when Jefferson’s] spirit took its flight from it, there remained a halo lingering around it, which has made it a monument to his memory.” He accurately prophesied, “As such it will be visited until the history of America shall cease to have an influence on the conduct of its people.”¹ There were four hundred fifty thousand visitors to the house in 2006.

Like other buildings in this book, Monticello is an ambiguous icon. Semanticist Samuel Hayakawa’s axiom, “Meanings are in people,” applies also to nonverbal messages, including what places say to us. In 2003 African American Vesper Osborne wrote that though Monticello was “home—refuge—for Jefferson and the white family born of his flesh and blood,” it was an invisible cage for the slave: “Monticello inspires and angers me, simultaneously. I am torn between the ideal of a free democracy and the reality of slavery. Monticello is majestic, elegant, but a symbol of the sweat and toil of my slave ancestors . . . Monticello you are magnificent. Monticello, you are a sorrow.”²

Since 1938 an image of the house has been seen daily on five-cent coins—literally tens of billions of them—by all Americans, even children. In June 2002, when the U.S. Treasury proposed to celebrate the bicentennials of the Louisiana Purchase and the Lewis and Clark expedition with a new design for the nickel there was widespread complaint. Only 4 days after the Treasury announced its intention, Representative Eric Cantor, cosponsored by other Virginians, proposed “Keep Monticello on the Nickel” legislation, specifying that the coin must bear an image of Monticello; the draft also disallowed “the secretary of the Treasury’s statutory discretion ever to change the design on the reverse of the coin.” Cantor told the media, “The images of Thomas Jefferson and Monticello represent to America so much of what this nation is founded upon. I introduced the bill to make sure that our heritage as Americans and Virginians is accurately represented.” Australian historian Jack Sexton suggests that the ultimate decision that Monticello would ultimately remain on the coin after a brief interruption—it was returned in 2006—indicates that Jefferson’s former home remains one of America’s “public places.”

MORE THAN A RENAISSANCE MAN

Thomas Jefferson was born in April 1743 at Shadwell in Albemarle County, Virginia, the eldest son (and third of ten siblings) of Peter Jefferson, a surveyor,

cartographer, and planter and his wife Jane, who came from the powerful Virginian family, the Randolphys. Thomas Kindig writes,

More than a mere renaissance man, Jefferson may actually have been a new kind of man. He was fluent in five languages and able to read two others. He wrote, over the course of his life, over sixteen thousand letters. He was acquainted with nearly every influential person in America, and a great many in Europe as well. He was a lawyer, agronomist, musician, scientist, philosopher, author, architect, inventor, and statesman. Though he never set foot outside of the American continent before adulthood, he acquired an education that rivaled the finest to be attained in Europe. He was clearly the foremost American son of the Enlightenment.³

Thomas Jefferson's earliest education—from the age of nine—was at a local school, where he was introduced to Greek, Latin, and French. After his father's death in 1757 he was sent to board at Reverend James Maury's School for Boys for 3 years; there, history and science were added to his classical studies. In March 1760 he enrolled at the College of William and Mary in Williamsburg and studied natural and moral philosophy. He is said to have been "a keen and diligent student [who] displayed an avid curiosity in all fields . . . and, according to family tradition, [who] frequently studied fifteen hours a day." There he was drawn into the erudite circle of Dr. William Small, who taught him mathematics and stimulated his interest in science. Through him, Jefferson, still in his teens, met George Wythe, a classical scholar and a "distinguished jurist," and following 2 years at the College, he studied law under Wythe for 5 years. One writer says that he claimed Wythe as "my earliest and best friend . . . [to whom] I am indebted for first impressions which have had the most salutary influence on the course of my life." In *Jefferson and his Time*, historian Dumas Malone identifies Jefferson's Williamsburg days as "the story of the . . . first flowering of an extraordinary mind."

In 1764 Jefferson inherited 2,750 acres of land from his father; 4 years later he started to level and clear the heavily wooded crest of a hillock (in Italian, *monticello*) 3 miles outside of Charlottesville in the foothills of Virginia's Blue Ridge Mountains, in order to build "the house of his dreams." Historian Marc Leepson writes, "Since childhood Jefferson had dreamed of building . . . on top of a nearby [860-foot] mountain—a radical idea at a time when most Virginia plantation homes were built in the low-lying, tobacco-growing Tidewater region." We shall return to the house later.

Passing his bar examinations in 1765, Jefferson practiced from 1767 until the Revolution led to the closure of the courts in 1774. For 6 years from 1769 he also represented Albemarle County in the Virginia House of Burgesses. On January 1, 1772, he married a young widow and heiress, Martha Wayles Skelton, of whom he once wrote, "In every scheme of happiness [she] is placed in the foreground of the picture as the principal figure. Take that away, and there is no picture for me." They were to have six children, only two of whom would survive childhood.

For several years Jefferson's attention was held by matters far weightier than architecture. In 1774 he drafted instructions (later published as *A Summary View of the Rights of British America*) for Virginia's delegates to the first Continental Congress in Philadelphia. The British regarded this attempt at reconciliation by the colonials' as nothing more than treason. The Revolution was looming. In March 1775 Jefferson was elected as a Virginian delegate to the second Congress, and a few months later he drafted "A Declaration of the Causes and Necessity for Taking Up Arms" and calculated the cost of going to war with Britain. Between October and December he served on several Congressional committees, then returned to Monticello. In June 1776 he led the committee of five that prepared the Declaration of Independence; he was its primary author. The committee (and subsequently the Congress) made several "stylistic and substantive" changes to it—Jefferson disagreed with many of them—before it was ordered to be printed on July 4. The first public reading of the Declaration took place in Philadelphia 4 days later.

In September 1776 Congress appointed Jefferson to represent the newly named United States abroad. Two weeks later he wrote to John Hancock, declining the post, mostly for family reasons: his wife and two of his children were very ill, he was homesick for Monticello, and he was anxious about the development of a new government for the State of Virginia. Returning there, he served for 3 years in its House of Delegates and in the face of vehement conservative resistance introduced bills to liberalize the state's laws. He campaigned for the abolition of laws of entail and primogeniture because he wanted to remove what he called the "aristocratic, feudal, and unnatural yoke of inherited distinctions." He prevailed and the archaic legislation was abolished in 1785. He proposed a bill for the General Diffusion of Knowledge that involved establishing a public school system, another for the expansion of suffrage, and another for reformation of the criminal code that finally became law in 1796. And most importantly, toward the end of his tenure he proposed legislation "that all men shall be free to profess, and by argument to maintain, their opinions on matters of religion, and that the same shall in no wise diminish, enlarge, or affect their civil capacities"; that provoked an ongoing dispute but eventually was enacted in January 1786.

In June 1779, Jefferson succeeded Patrick Henry as governor of Virginia for a one-year term; he was reelected in 1780. In January the treacherous Benedict Arnold led a British invasion of Virginia, putting Richmond to the torch and forcing the government to flee. Jefferson's political enemies accused him of inadequately protecting the city, and of "pusillanimous conduct," but a subsequent inquiry, at which he presented a 3-day defense, exonerated him and—on the contrary—unanimously commended his performance as governor. In June 1781 he retired from the governorship, just at the moment that a detachment from Cornwallis' army attacked Monticello. Thanks to the actions of one Captain Jack Jouett of the Virginia militia, Jefferson and his family escaped capture. Apart from stealing some wine, the British left the

property unharmed. Cornwallis continued to Yorktown, where in October George Washington trapped the British army and forced its surrender.

Martha Jefferson died at the age of 33 on September 6, 1782; the grief-stricken Jefferson refused to leave his room for 3 weeks, and it was several months before he “emerg[ed] from the stupor of mind which had rendered [him] as dead to the world as [she] was whose . . . loss occasioned it.” He never remarried.

Toward the end of 1782 Congress appointed Jefferson to join John Adams, Benjamin Franklin, and Henry Laurens to negotiate for peace with Britain, and 2 days after Christmas he arrived in Philadelphia en route to France. But bad weather delayed the sailing, and he had second thoughts and declined the post. When Congress again offered him the appointment he accepted, but “the matter was so far resolved before he could sail” that his appointment was withdrawn in April 1783. Two months later he was elected as a Virginian delegate to Congress, where he made farsighted contributions. In April 1784 he submitted recommendations that led a few years later to the adoption of the dollar as U.S. currency. He also originated the Ordinance of 1784, the “first definitely formulated plan for the government of the western territories”; Congress adopted it except for its provision that after 1800 slavery should be excluded from the territories. In the event, the Land Ordinance of 1785 superseded his proposal before it had time to become effective.

Jefferson lived abroad from 1784 to 1789. Originally sent to Paris to help Adams and Franklin negotiate trade agreements, he succeeded Franklin as minister to France in May 1785. One writer notes that he took the opportunity to “avidly study European culture, sending home to Monticello, books, seeds and plants, statues and architectural drawings, scientific instruments, and information.” Returning home in September 1789, he discovered that Congress had confirmed his appointment as secretary of state in George Washington’s administration—a role that he reluctantly accepted at the President’s insistence.

Jefferson was alarmed by the “regal forms and ceremonies” attached to the new presidency; his views are outlined in the essay on the White House, elsewhere in this book. Being pro-French and sympathizing with the French Revolution—he believed that its “excesses would end at some point, and a republic would rise out of the chaos”—Jefferson suspected that the pro-British Secretary of the Treasury Alexander Hamilton and other conservatives were conspiring to invest the new government with “monarchist characteristics.” Two parties began to form and incipient political conflict developed. Gradually he assumed leadership of the Democratic-Republicans (not the same as modern Republicans), championing states’ rights and opposing strong centralized government. As Washington was flattered by the Federalists and agreed with their views, Jefferson, marginalized within the cabinet, grew less comfortable in his position until, at the end of 1793, after twice being dissuaded, he finally resigned and retired to Monticello, devoting himself to his family and his farm.

Pleased that Washington did not offer himself for a third presidential term in 1796, Jefferson accepted the Democratic-Republican party nomination. Although he was narrowly defeated by the Federalist John Adams, because of a constitutional anomaly he became vice president. Four years later he defeated Adams to become the third president of the United States. Among the major achievements of his first term were the Louisiana Purchase of 1803 and the Lewis and Clark transcontinental expedition of the following year. There was no constitutional provision to do so, but Jefferson “suppressed his qualms in order to take over the vast new [Louisiana] territory”—an action met with “popular enthusiasm.” The American people approved his other frugal policies: he reduced taxes, slashed military budgets, and reduced the national debt by one-third. He also declared the Alien and Sedition Acts—antique versions of the twenty-first century USA Patriot Act—to be unconstitutional, believing that they forced Americans to be “willing instruments in forging chains for themselves.” He also sent naval vessels to join the Swedish and Danish fleets, effectively declaring war on the Barbary pirates, who preyed on American merchant shipping in the western Mediterranean from Tunis, Tripoli, Algiers, and Morocco.

Jefferson’s second presidential term was checkered. In 1806 the disaffected former Vice President Aaron Burr, already a fugitive because he had mortally wounded Alexander Hamilton in a duel, conspired with a few others to create some form of independent southwestern empire (which of course he would lead), based on the division of the Union and even the conquest of Mexico. Exactly what his plans were and whether they were disloyal remains uncertain, but Jefferson had him arrested and tried for treason in August 1807; he was acquitted.

Jefferson was anxious to keep America out of the Napoleonic wars. Intended to secure “British and French recognition of American rights,” his Embargo Acts (1806–1808) “[put] a halt to all trading with any country in the entire world [and served] as a retaliatory measure to the increasingly coercive trade policies of the British and the French.” The U.S. economy suffered as a result, and of course there was an internal reaction, especially from the New England states. Jefferson signed the repealing legislation 3 days before the end of his presidency.

In March 1807, at Jefferson’s request and reprising his Ordinance of 1784, Congress legislated against slave trading in any place under the United States’ control, to come into effect on January 1, 1808. Although himself a slaveowner—he called them “servants”—Jefferson believed that slavery was an evil that should not be permitted to spread. He set only five of his own slaves at liberty, because toward the end of his life everything he owned, including most of his “servants,” was mortgaged to his creditors, and they were not really his to free.

In 1809 he retired to Monticello, where he remained for the rest of his life. In those 17 years his major accomplishment was the founding in 1819 of the

University of Virginia at Charlottesville. He conceived it, planned it, secured its site, led the legislative campaign for its charter, designed its buildings, planned its curriculum, supervised its construction and the hiring of faculty, and served as the first rector. He wished to be remembered for just three things, and “not a word more”; so his epitaph reads, “Here was buried Thomas Jefferson Author of the Declaration of American Independence, of the Statute of Virginia for Religious Freedom and Father of the University of Virginia.”

Although many writers have much more thoroughly and competently set out and analyzed Jefferson’s worldview, it has been necessary to include here this simplistic overview, because his beliefs inevitably extended to his architectural philosophy, and especially to what he called his “essay in architecture,” Monticello. As someone has said, “Jefferson’s architecture is an integral part of his views of man, society, and the infinite possibilities offered by the new nation.”⁴

BUILDING MONTICELLO: THOMAS JEFFERSON AS ARCHITECT

Jefferson noticed the buildings of Virginia (especially of Williamsburg) and formed opinions about them. In *Notes on the State of Virginia* (1782) he complained that “private buildings [were] very rarely constructed of stone or brick . . . it is impossible to devise things more ugly, uncomfortable, and happily more perishable” and that their plans demonstrated little originality. He lamented, “The genius of architecture seems to have shed its maledictions over this land. . . . The first principles of the art are unknown, and there exists scarcely a model among us sufficiently chaste to give an idea of them,” he remarked that Williamsburg’s only public buildings worth mentioning were “the Capitol, the Palace, the College, and the Hospital for Lunatics.” Even then, although the Capitol was “tolerably just in its proportions and ornaments,” he wrote,

The [exterior of the] Palace is not handsome. . . . The College and Hospital are rude, misshapen piles, which, but that they have roofs, would be taken for brick-kilns. There are no other public buildings but churches and court-houses, in which no attempts are made at elegance.⁵

Architectural historian Fiske Kimball wrote that as an “inveterate reader, [Jefferson may be] supposed to have picked up from books some general smattering of artistic knowledge even before his attention was forcibly directed to architecture.” He suggested that although Jefferson “was thoroughly familiar with Virginia and had been in 1776 to Annapolis, Philadelphia, and New York, we get no hint . . . that it was the buildings he himself had seen that attracted his attention to architecture,” and that he probably made no special study of the art until he thought about building at Monticello. Kimball added,

“There can be little question that he derived his first interest from the conversation of Dr. Small [and his circle] . . . while yet a student.”⁶

Around 1762 Jefferson purchased his first book on architecture, most likely Giacomo Leoni’s translation of Palladio’s *I quattro libri dell’architettura* (*The Four Books of Architecture*). Seeing Palladio’s work and reading his theories that were then enjoying revived fashionability in Britain introduced the young Jefferson—he was not yet 20—to an ordered architecture, based upon mathematical immutabilities. In the contemporary literature he discovered what he came to believe was the essence of architecture: the classical orders. What was the wellspring of this idea?

From the early seventeenth century the Italian architect Andrea di Pietro della Gondola, known as Palladio, had unparalleled influence on European architecture. Based upon his meticulous archeological observations of ancient Roman architecture and a study of two Latin treatises—Marcus Vitruvius Pollio’s *De architectura* (*About Architecture*) of around 45 B.C. and Leon Battista Alberti’s *De re aedificatoria* (*Of Things Relating to Building*), published in 1485—Palladio wrote a book of his own. In 1570 he published in Venice *I quattro libri*, enunciating his theories, giving practical advice to builders and (perhaps most importantly) including an abundance of woodcuts; the images included measured drawings of ancient buildings, as well as other illustrations that were (in effect) advertisements of his own works. *I quattro libri* was intended to demonstrate how principles of engineering, planning, construction, and decoration from classical antiquity could enhance public and private modern buildings. Moreover, the work was accessible at first to a wider Italian audience, as well as visitors to Italy, because it was written, not in classical Latin but in the vernacular. Soon translated into several languages in many editions, *I quattro libri* would dominate architectural studies until well into the nineteenth century.

Inigo Jones, originally a theatrical designer, has been credited with single-handedly introducing Palladian theories to the English-speaking world. As well as visiting many of Palladio’s buildings, mostly near Venice, Jones acquired a copy of *I quattro libri* and made a serious study of it. His marginal annotations demonstrate an intellectual grasp of the theory of classical Roman architecture. In 1613 Jones, who had worked as a designer for Anne of Denmark, the wife of James I, was appointed surveyor of the King’s Works. Before Jones, “the Italian style” had simply involved the ill-informed surface encrustation of English buildings with what was supposed to be renaissance detail—as a contemporary Italian proverb had it, “An Englishman Italianate is a devil incarnate.” After Jones had elegantly interpreted Palladian theory in such buildings as the Queen’s House, Greenwich (1616–1635), the Banqueting House at Whitehall (1619–1622), and the Queen’s Chapel at St. James Palace (1623), the English way of building stood at the brink of change. But the new architecture was strangled at birth because of its political association with the Stuart dynasty.

After James I's successor Charles I was beheaded in 1649 (ironically, just outside the Banqueting House that Jones had built for the House of Stuart) England, following civil war, became a republican Commonwealth under the Lord Protector Oliver Cromwell. With the restoration of the monarchy in 1660, Charles II returned to London from France, overawed by his experience of baroque opulence of the court of France's young Sun King. The restrained order, clarity, and symmetry of Palladian architecture was not pretentious enough for Charles II's sycophantic nobility, who preferred the weighty grandeur of Wren, Vanbrugh, and Hawksmoor. So it was put in abeyance and remained unfashionable until well into the eighteenth century, when the politically ascendant Whigs, rejecting Restoration extravagance, returned to a more rational and less complicated architectural style.

In the 4 years from 1716 the architect Giacomo Leoni, newly arrived from Venice, published English translations of Palladio. In 1715 the Scots lawyer-turned-architect Colen Campbell—called by some “the first important practitioner of the new and more literal English Palladianism”—began to publish his influential, profusely illustrated *Vitruvius Britannicus*, which both established neo-Palladianism as the national style and (with typically British jingoism) anointed Inigo Jones as the “British Vitruvius”; two more volumes followed in 1717 and 1725.

From about 1710 many English architects produced Palladian buildings. Notable among them was the wealthy dilettante Richard Boyle, third Earl of Burlington, who designed Chiswick House (1725–1729) as a “reinterpretation” of Palladio's Villa Capra. Some writers connect it with Monticello. In 1730 Burlington published *Fabbriche Antiche diseguate da Andrea Palladio*, a collection of Palladio's measured drawings of ancient Roman buildings, which he had acquired while traveling in Italy a decade or so earlier. The following year the acerbic Alexander Pope had written a poem *An Epistle to the Right Honourable Richard, Earl of Burlington*, warning his friend that “the efforts of men of taste . . . are doomed to failure if the indiscriminating and vulgar are free to misinterpret and pervert the values they have to impart: Yet shall (my Lord), your just, your noble rules/ Fill half the land with imitating fools;/Who random drawings from your sheets shall take,/And of one beauty many blunders make. . . .”

The publication of drawings has been stressed in this discussion for good reason. Despite an abundance of theoretical volumes, mere Palladian copyists inevitably flourished. As has happened with many architectural movements down the centuries, most architects were interested in fashion, not philosophy, and were unwilling to explore the ideas that underlay Palladio's work, and even with the best of them, Palladianism “tended to become a sterile academic formula.” Lesser architects and amateurs depended largely upon “pattern books”—collections of standard designs for all kinds of buildings; it is much easier to “read the pictures,” so to speak, than to digest a theory and apply its principles. Through literature, England's Palladianism inevitably

extended to her colonies, as well as to France, Germany, and back to Italy—it even reached Russia, Sweden, and Poland.

Thomas Jefferson was not among the imitating fools. He owned two versions of Leoni's translation of Palladio, one with Jones' notes and one in English, French, and Italian. He also owned Roland Fréart de Chambray's French translation of 1650. He once referred to *The Four Books* as his "bible." By 1783 his library included, among many other seminal architectural treatises, James Gibbs' *Rules for Drawing the Several Parts of Architecture*, of 1732 and Claude Perrault's French translation of Vitruvius. Following a 1782 visit to the not-quite-completed house, the French soldier François Jean de Chastellux wrote that Monticello "resembles none of the other [houses] seen in this country," acknowledging that Jefferson was the first American who had "consulted the fine arts to know how he should shelter himself from the weather."

Kimball believed that even with the first version of Monticello, despite "direct inspiration from Palladian principles [Jefferson] made notable contributions to Virginian, and even to American, architecture." In so doing, he achieved more than

any of his isolated predecessors, while at the same time his following of [Palladian] models was little more slavish than that of academic Europe generally, and involves no negation of his essential originality. . . . It was the academic correctness and superior convenience of Monticello . . . which drew the attention of foreign visitors to this house, and caused them to praise it above all others in America.

Kimball added that though contemporary American architects found their designs in the ordinary pattern books, "Jefferson had been drinking nearer the fountain head."⁷

MONTICELLO MARK I, 1768–1784

In the second half of 1768, Jefferson began leveling the hilltop at Monticello and building access paths on its slopes. On February 1, 1770, fire destroyed the Shadwell plantation house, his birthplace 2 miles away across the Rivanna River. A year later he wrote to his friend James Ogilvie that he had recently moved to Monticello, where he had begun building his house—only a single room that served the purpose of parlor, kitchen, hall, bedroom, and study. Although he intended to enlarge it in the following summer, for various reasons progress was slow. That original multipurpose room—the pavilion at the end of the south terrace—was incorporated in the final design. And it was to it, then still the only habitable part of the house, that he brought his bride at the end of January 1772.

Later that year the dining room was the first part of the main pavilion to be made liveable. The order of subsequent progress is now uncertain, but it seems that by 1774 (or at the latest, 1775) the first house was “primarily finished.” The National Park Service (NPS) provides a peremptory description: “constructed of brick with cut-stone trim, it consisted of a central two-story unit, with pedimented gable roof running from front to rear and one-story gabled wings, set perpendicularly to the central block.” To that may be added, that the portico design the employed grammatically correct superimposed orders: Doric at the first story supported Ionic above. The axially planned ground floor had a central parlor; to its north was the dining room and a room with an octagonal bow; to its south a bedroom and dressing room. On the second floor, the library above the parlor was flanked by two more bedrooms. No description, no matter how florid and detailed, much less one so pragmatic as this, can convey how Jefferson, with sketch after sketch and study after study, assiduously experimented with proportion, balance, and harmony to produce plans and elevations that aesthetically satisfied him. Those who have examined his finished delineations and preliminary sketches are convinced that “Jefferson resolved his problems on the drawing board. His uncanny draftsmanship provided him with the invaluable power to visualize and resolve the problems of spatial relationships.”⁸

When Jefferson left to take up his diplomatic posting in Paris in summer 1784, it is likely that, except for porticos and interior finishes, the house was almost completed.

MONTICELLO MARK II, 1796–1809

Jefferson’s time in France between 1784 and 1789 deeply affected his thinking about architecture. First, he had the chance to study French and Roman architecture at firsthand—without a Palladian filter, so to speak. Second, given impetus by a growing interest in classical archeology—Greek as well as Roman—France was then undergoing a change of ideas and taste that gave vogue to a new view of antiquity. Neo-Classicism, which pervaded the country’s architecture until the Revolution, was attempting to reformulate classical artistic theories for contemporary application. Jefferson was “violently smitten” by Pierre Rousseau’s Hôtel de Salm of 1784 in particular, and some historians suggest that it was the precedent for the west front of the second Monticello. Then, as William L. Beiswanger points out, Jefferson personally “experienced a new level of refinement in domestic architecture.” The elegant Hôtel de Langeac on the Champs-Élysées, in which he lived for most his time in Paris, was planned, not as a formal exercise in proportion but as a house to be lived in, whose rooms were suited to their purpose, whether for entertaining or “private and intimate spaces that greatly enhanced comfort and convenience.” The French idea of *appartements* certainly gave Jefferson pause for architectural thought.

Asserting that Paris was the “culmination of . . . Jefferson’s education in architecture,” Giordano explains that “his strict adherence to the allusion to ancient Rome and his knowledge of the classics,” together with his European experiences, “provided the ‘spark’ that transformed him from the mere gentleman architect of his early years into a vigorous leader of the neo-classical movement in America. The Thomas Jefferson who sailed home in 1789 was a true architect.”⁹

Jefferson began to envision changes to his hilltop house as early as 1784, and its transformation was commenced in 1796. Only the upper floors and northeast front of the original house were demolished; much of the ground floor brickwork on its southwest side was integrated into the new building. On completion, the remodelled Monticello was much larger—11,000 square feet—with thirty-three rooms, over three floors and a basement; there were four more rooms in the pavilions, six under the South Terrace, and a stable and carriage bays under the North Terrace. The following excerpts from the *World Heritage List Nomination* provide a pragmatic description of how the spaces in the house were disposed and used. But of course they totally fail to convey the elegance of Jefferson’s mansion. Then, words must fail; Monticello is better conveyed by images, and best through personally experiencing it.

The house is of red brick and white wood trim. . . . The northeast facade features the central main entrance portico, marked by a triangular pediment supported by four Doric columns. It is flanked by two bays of windows. At the first floor are long windows; at the second floor, are short windows at the floor level. The third floor rooms in the center of the building and are lighted with skylights. . . . The southwest façade is crowned with an irregular octagonal dome above a projecting portico with four Doric columns running across the front and two columns at the sides. A circular window is located on each side of the drum of the dome, except for a semi-circular window above the pediment. . . . For the major rooms, Jefferson selected designs for cornices and friezes derived from classical Roman buildings as published in architectural books. The upper floors are reached through two small stairways. On the second floor are five bedrooms. On the third floor are three additional bedrooms and a large dome room.

The main floor was connected with the second and third floors by steep, narrow stairs. The bedrooms on the upper floors were tucked under the eaves, with windows at floor level. At the top of the house, above the principal room to the west, Jefferson placed the dome, the first to be built on any American house. . . . The entrance hall, located at the east end of the building served as a reception room and a museum. From the entrance hall, visitors most often moved toward the west, into the parlor, the most formal room in the house. The southern section of the main floor consisted of Jefferson’s private rooms: the bedroom, study, library, and sitting room. The northern section contained the dining room, tea room, and two small bedrooms. The second floor contained five small bedrooms. Three additional bedrooms and the dome room were located on the third floor.

A unique aspect was Jefferson's incorporation of the "dependencies"—kitchen, pantries, laundry, slave quarters, stores, and stables—beneath L-shaped terraces extending from either side of the house and connected through the basement. At the end of each wing stood a square brick pavilion, with living space on the upper level and work space in the lower. As noted, the South Pavilion was the first structure completed on the mountaintop around 1769; the North Pavilion was built some 30 years later.

As much as possible of the *materiel* and labor was local. As was customary, the bricks were burnt on site. The nails for the house were made in the nail factory Jefferson had established to supplement his income from agriculture. Most of the structural timber came from his own land (only a fifth of which was under cultivation in 1796), as did the stone for the cellars and columns, and the limestone for mortar. Window glass was imported from Europe. Local white masons executed the brick- and stonework, while local carpenters, assisted by Monticello slaves, were responsible for the structural framing. But Jefferson imported highly skilled joiners to finish the interiors. John Neilson of Philadelphia worked there from 1805 to 1809, and James Dinsmore, also from Philadelphia, was on site from 1798, creating decorative wall moldings, floors, and some window sashes; others of imported mahogany were made in Philadelphia. Dinsmore trained an assistant, Monticello slave John Hemmings, who completed the work with other obviously very competent black artisans when the Irishman left in 1809 to build Montpelier, the home of then-President James Madison.

The exiled Duc de la Rochefoucauld-Liancourt, who visited Jefferson just as remodelling began, wrote that Monticello, "according to its first plan, was infinitely superior to all other houses in America in point of taste and convenience." He was even more enthusiastic about the proposed revisions, then, of course, they *were* French-inspired: "[Mr. Jefferson's] travels in Europe have supplied him with models; he has appropriated them to his design; and his new plan . . . will certainly deserve to be ranked with the most pleasant mansions in France and England."

By 1809, the house was completed; apart from maintenance works, which over the years moved further and further beyond his budget, no more changes would be made in Jefferson's lifetime. He had worked on altering, enlarging, and refining Monticello for over 40 years, reflecting (as someone has said) the pleasure he found in "putting up and pulling down." Beiswanger writes,

What Jefferson created . . . was unlike any other house in the United States, and not just because it was the first house in this country to have a dome. It was unusual in both plan and elevation. Jefferson himself acknowledged that it ranked "among the curiosities of the neighborhood. . . ." It is true that Monticello lacks the purity and geometric simplicity of Jefferson's other buildings. By contrast, [it] showed all the signs of a modified and evolving plan.¹⁰

The house's final form was born from Jefferson's studies of architecture in Europe and his inventive "adaptation of this knowledge to the requirements of living." As he wrote to Benjamin Latrobe in October 1809, "My essay in Architecture has been so much subordinated to the law of convenience, and affected also by the circumstance of change in the original design, that it is liable to some unfavorable and just criticisms."¹¹ Indeed, 30 years later an editorial in the *Niles National Register* denigrated Monticello as "a monument of ingenious extravagance . . . without unity or uniformity, upon which architecture seem [s] to have exerted, if not exhausted, the versatility of her genius," and accused Jefferson of having "no distinct conception of any design when he commenced building, but enlarged, added and modified as his ingenuity contrived, until this incomprehensible pile reached this acme of its destiny in which it stands at present, still indeed unfinished." So Jefferson had been right to expect criticism; whether such gratuitous comment was justified is another question.

Certainly, few since have agreed with it. Historian Howard Adams wrote, "As the work of a romantic, even radical idealist, Jefferson's . . . Monticello, can best be understood within the framework of [the] social and political ambitions that shaped [his] hopes and dreams for the new nation. . . . In its design, history, symbolism, and metaphor, Monticello is the quintessential example of the autobiographical house." Monticello was placed on UNESCO's World Heritage List in 1987 in response to an application that read in part:

[Jefferson's] architectural works were an integral part of the neoclassical movement, but adapted to the convenience, ideals, and requirements of the new nation. [His] use of Roman classical forms initially was inspired by a love of classical language, philosophy and arts gained through books. [Desiring] to raise American architecture to a level comparable to European architecture, [he] joined in the Neoclassical spirit as no other American did before him. . . . Monticello was not a typical residence of the period. It was unique because it represented a reconciliation of classical orders and forms, on the one hand, and the informal way in which Jefferson chose to live, on the other.¹²

Jefferson also showed a "scrupulous" interest in agriculture, horticulture, garden design, and landscaping, developing the property at the center of a 5,000-acre plantation of corn, tobacco, wheat, and other crops between 1807 and 1815. In 1806 he set aside 18 acres on the northwestern side of Monticello as the "grove," an ornamental forest "of the largest trees trimmed very high" to give it the appearance of open ground cleared of undergrowth and "broken by clumps of thicket, as the open grounds of the English are broken by clumps of trees." Reflecting Lancelot "Capability," Brown's carefully devised romantic English landscapes of 50 years earlier, it also included a planting of ornamental trees in an open area next to the West Lawn.

The house was encircled by a series of roads or "roundabouts." Shade, flowering, and ornamental trees were planted between the inner and outer

roundabouts. Close to the house on the west, Jefferson planned an “extensive scheme” of flower beds, where at least 105 species were grown; in fact, as well as plants from other sources; each year he imported up to seven hundred varieties of seeds from the *Jardin des Plantes* in Paris. Beyond the flowers there was a *ferme ornée* (literally, “ornamented farm”), another nod toward English bucolic romanticism. A 1,000-foot-long street known as Mulberry Row (because of the trees that defined it) was set out to the south of the house; it was lined with log dwellings for slaves, a stone house that originally had been provided for building craftsmen, joinery and ironworking shops, a nail factory, a smokehouse, a dairy, a wash house, storehouses, and a stable.

Jefferson wrote in 1819, “I have lived temperately, eating little animal food, and that as a condiment for the vegetables which constitute my principal diet.” Beginning in 1770 his kitchen gardens evolved on a slope below Mulberry Row. For years the crops were grown along the contours, but in 1806 the hillside was modified into a 1,000-foot-long, 80-foot-wide terrace, retained by a stone wall that stood over 12 feet at its highest point. Economic gardening reached its peak by 1812, with two hundred fifty varieties of over seventy species of vegetables. Below the retaining wall, some time before 1814 Jefferson planted more than one thousand fruit trees in the South Orchard that formed three sides of a berry square as well as two vineyards. Together, they yielded one hundred fifty varieties of thirty-one fruit species. To exclude foraging animals, the gardens and orchards were surrounded by a 10-foot high fence of wooden palings. Monticello became America’s first National Horticultural Landmark in 1998.

FROM “ESSAY IN ARCHITECTURE” TO NATIONAL SHRINE

When Jefferson died Monticello was inherited by his eldest daughter, Martha Jefferson Randolph, the only of his six children to survive him. But even then, the house had sunk into disrepair. The cash-strapped Jefferson had not been able to find money for repairs or even carry out routine preventive maintenance. Left with debts of more than \$107,000, in January 1827 Martha and her son Thomas began to sell off her father’s chattels—everything except the house and land, including furniture and furnishings, livestock, supplies, and agricultural equipment and, of course, his slaves. Part of his art collection was given to relatives; part was sent to Boston in July 1828 to be sold. In summer 1828 the Jefferson family left Monticello and the property, too, was put on the market.

But it was not until November 1831 that James Turner Barclay, a “learned, if eccentric, many-faceted” apothecary of Staunton, Virginia, paid \$7,000 for the house and 522 acres. Martha Randolph described him a “madman,” responsible for Monticello’s despoliation, although some writers insist that the portrayal of Barclay “as a Jefferson-hating eccentric who bargained

ruthlessly with the land-rich, cash-poor Randolphs” may not be accurate. It has been said that at Monticello he launched a “crackpot scheme to grow silkworms” and replaced Jefferson’s careful landscaping with mulberry trees to provide fodder for his tiny livestock. Depending on their loyalties, writers have presented him in quite different lights; the debate is beyond our present scope. Whatever the reasons—one source suggests that hordes of uninvited pilgrims to Monticello made it impossible for Barclay to live there—the projected silk business failed, and unable to pay for even minimal repairs to the already decaying property, in 1833 he offered it for sale.

It is uncertain exactly when the “colorful, brash [and] controversial” U.S. Navy Lieutenant Uriah Phillips Levy acquired Monticello. Jewish, he deeply admired Jefferson, largely because of his “determined stand on the side of religious liberty.” In Paris in 1832 Levy engaged the sculptor Pierre-Jean David d’Angers to make the statue of Jefferson that now stands in the rotunda of the U.S. Capitol. He also met the aging Marquis de Lafayette, a friend of Jefferson who had visited Monticello; in response to de Lafayette’s inquiry, Levy promised that on returning to America he would discover what had happened to the property. Levy found that the house was abandoned, with broken windows and sagging shutters; the lawns were overgrown and Jefferson’s carefully planned flowerbeds gone to seed. Through weathering, neglect, and vandalism the roof had caved in, the once-graceful columns had weakened, and the terraces had collapsed. Nevertheless, in spite of local rumors “fueled either by anti-Semitism or a distaste for Yankees,” early in April 1834 Levy bought Monticello from Barclay. Together with “an indeterminate amount of acreage,” it cost him \$2,700; the legalities of the deal were not finalized until May 1836.

Levy immediately hired a local resident, Joel Wheeler, to supervise repairs to the house and the restoration of the gardens. He employed local craftsmen to carry out repairs and bought a dozen or more slaves to take care of the grounds. He also increased the land holdings and set about recovering some of Monticello’s contents that had been sold nearly a decade earlier. Over the next 15 years he was to spend tens of thousands of dollars on the property.

In spring 1837 Rachel Levy, Uriah’s widowed mother, took up residence at Monticello and remained until her death in 1839. Levy himself lived there only intermittently, mostly in the summers. In 1853, when he was age 61, he forsook bachelorhood and—in accordance with a Jewish tradition described in the book of *Ruth*—he married his 18-year-old niece, Virginia Lopez; they spent several summers at Monticello. In 1861, a year before Uriah’s death, the Confederacy seized the plantation as “alien enemy” property and in November 1864 sold it at auction to one Benjamin Franklin Ficklin of Albemarle County, for 80,500 Confederate dollars—worth only \$4,000 in U.S. currency. By then it was again in decline; one visitor wrote, “The place was once very pretty, but it has gone to ruin now. . . . The ballroom . . . has a thousand

names scratched over the walls. There are some roses in the yard that have turned wild, and those are the only flowers.” When the Civil War ended all confiscated property was returned to its previous owners.

In a complicated will of 1858 Uriah Levy had bequeathed Monticello and the income from his estate to establish “an Agricultural School for . . . educating as practical farmers children of the warrant office of the United States Navy whose Fathers are dead.” If Congress declined his offer, Monticello was to go to the state of Virginia; and if Virginia also refused it, to a number of Portuguese Hebrew congregations were to use it as an agricultural school for orphans. When Congress turned down the bequest, Levy’s widow and his family challenged the legality of the will. Years of rancorous bickering followed (in 1876 there were nearly fifty claimants), until in March 1879 Uriah’s nephew, the New York lawyer and businessman Jefferson Monroe Levy—by some accounts an “eccentric, high-living, deal-making egoist”—purchased the house and 218 surrounding acres at auction for \$10,500. An unresolved lawsuit prevented him from obtaining title until May 1882.

When Jefferson Levy took possession Monticello was in appalling shape, the dilapidation largely the result of Joel Wheeler’s neglect. He had remained there unpaid through the Civil War; since Uriah’s death he had enjoyed unsupervised control while the Levys brawled over the estate. By 1879 the caretaker, now senile, “believed he owned Monticello [and] seems not to have done anything. . . . The gutters fell away, the roof rotted, rainwater flooded the basement, and the elements took their toll on every part of the great house.” One historian, noting that Wheeler became “more cantankerous . . . as the years unfolded,” explains, “during the war [he] started charging groups to use the . . . house and grounds for parties, picnics, and other activities, while doing little to discourage souvenir hunters. [He] also . . . planted vegetables on the West Lawn, allowed pigs to roam the property, stabled cattle in the basement, and stored and milled grain in the parlor.” Jefferson Levy eventually needed an eviction order to rid himself of the troublesome caretaker.¹³

He then set about repairing the house and restoring the grounds, where “the orchards, terraced gardens, flower borders, walkways, and roads had ‘all but disappeared.’” In 1889, after a succession of six unsuitable caretakers, he employed the “highly competent and dedicated” engineer Thomas L. Rhodes as superintendent. Rhodes’ professional ability and Levy’s wealth gradually “brought Monticello back to life.” The house was repaired and renovated, and the grounds again landscaped according to Thomas Jefferson’s original plans.

For many years Jefferson Levy used Monticello as his “bachelor’s hall and summer estate.” He spent a great deal—he would later claim that it was as much as a million dollars—improving Monticello. He installed running water, toilets, and a coal-burning furnace, and acquired another 500 acres of land. He also retained a European agent “for the purpose of purchasing furniture and works of art” for the house. It seems that his aesthetic taste was more

eclectic (and less informed) than that of his namesake; he combined Georgian and late Victorian pieces, so that the interiors (according to one critic) “took on the over-stuffed appearance of a Parisian banker’s country house during Napoleon III’s Second Empire”—what might be termed “nouveau-riche kitsch” style. His acquisitions included elaborate chandeliers, mirrors, sideboards, and a “spectacularly [designed] bed à la Madame du Barry.”

He greatly admired Jefferson, and he welcomed to the house President Theodore Roosevelt, congressmen, ambassadors, and other officials and dignitaries who came out of esteem and admiration for Monticello’s architect and builder. Indeed, from early in his ownership Levy received an “almost unbroken stream” of visitors from the general public; by 1900 there were probably twenty thousand a year and within a decade, as the property became better known and more accessible, that number more than doubled. Each paid a small fee, which Levy donated to local charities.

The last decade of the nineteenth century saw a revival of interest in Jefferson and all the Founding Fathers, due in part to growing nativism (read, jingoism) in the United States—a reaction to the influx of Europe’s “huddled masses yearning to breathe free.” Books and newspaper articles about Jefferson and his prophetic ideas proliferated, and it soon became clear to some that the time was ripe to make Monticello a national shrine. In April 1897 the Democrat politician William Jennings Bryan suggested to Levy that he give Monticello to the government. Levy declined.

The dark side of “nativism” was a concomitant increase in anti-Semitism—many immigrants were Jewish—and the rich and successful Jefferson Levy was targeted. In August 1902 one Amos Cummings in a *New York Sun* article criticized the twenty-five-cent admission charge leveled on “patriotic Americans” to see Monticello and complained that Levy valued the house at \$100,000. In the April 1914 issue of *Good Housekeeping*, the journalist Dorothy Dix (Elizabeth Gilmer) referred to Uriah Levy—a fifth-generation American—as an alien, rekindled a rumor that he had acquired Monticello through chicanery, and “used dialogue in which [he] spoke in a thick, new-immigrant accent.”

In 1911 Maud Littleton, the wife of a Brooklyn congressman, launched a campaign to have Monticello taken from the Levys and made into a public shrine. In 1899 she had effused over Jefferson Levy’s good care of the house in *Munsey’s Magazine*, but on July 24, 1912, she claimed in a statement before the House Rules Committee:

[When I was there] I did not get the feeling of being in the house Thomas Jefferson loved and built and made sacred, and of paying tribute to him. I did not seem to feel his spirit hovering over around those portraits. My heart sunk. My dream was spoiled. Jefferson seemed detached from Monticello. . . . Somebody else was taking his place [there]—a [rank] outsider. . . . It seemed to me that the people of the United States should own Monticello; that it should be public property.

She petitioned Congress to buy the estate, supporting her emotional arguments with references to Uriah Levy's will of a half-century earlier. Littleton garnered support from politicians and the press—the Hearst papers celebrated her as the “Lady of Monticello”—and a resolution was introduced in Congress that would have forced Levy to sell to the federal government. Contentious hearings and impassioned debates raged in the House and Senate. Jefferson Levy's response was, “When the White House is for sale, then I will consider an offer for Monticello.” A bill was defeated in the House of Representatives in 1912, and the following year Littleton intensified her campaign and hundreds of thousands of people were persuaded to petition their congressmen. Littleton accused Levy of “standing in the way of the American people, of being selfish, of not caring for anything except his own comfort, and . . . of being a poor caretaker of the estate, who guarded it like an ‘Oriental potentate’ refusing admission to those who would worship at the site.” All Levy could do in the face of her tirades was to

object to the slanders, and point out that he had poured large amounts of money into preserving Monticello, that visitors were always welcome, that the house was very well maintained, and that he had kept Monticello not out of the “selfish and sordid purposes” that Mrs. Littleton ascribed to him, but by an “unceasing flow of the fountain of a heart filled with love for Thomas Jefferson.”¹⁴

In September 1914, in response to a second approach from Bryan, who by then had become secretary of state, Levy conceded, “I must put aside my feelings and yield to the national demand.” He was prepared to sell Monticello for \$500,000 (which he claimed was half its value) and agreed to Bryan's proposal to convert into a presidential summer retreat. It never happened. Congress failed to pass the legislation, the shouting and the tumult died, and the whole distasteful matter ended. When America entered the Great War in 1917 the question of who should own Monticello suddenly seemed much less important.

In the postwar depression Jefferson Levy's “personal fortunes sank [and] he wanted to sell the house both to get the purchase price [and] to rid himself of the burden of maintaining it.” He put Monticello and 600 acres on the market in 1919 and sold it for \$500,000 to the recently chartered non-profit Thomas Jefferson Memorial Foundation in December 1923. The Foundation was established to “preserve and maintain Monticello as a national memorial to the genius and patriotism of ‘the apostle of human freedom.’” Theodore Fred Kuper, its first director, recalled that when Levy conveyed Monticello “. . . he burst out crying. He said that he never dreamt that he would ever part with the property.” Levy died fewer than 3 months later. The Levy family had owned Monticello for 89 years—far longer than the Jefferson family owned it. Uriah Levy and Jefferson had taken over the house when it was in parlous physical state and had saved it.

Once the mortgage was discharged in 1937, the restoration and refurbishment of Monticello began. Fiske Kimball, an authority on Jefferson, and the Charlottesville restoration architect Milton L. Grigg guided the execution of the work over the next 18 years. Between 1939 and 1941 the Garden Club of Virginia revived and restored the flower gardens at the east and west fronts, which had all but disappeared after Jefferson's death. Kimball acquired many of the original furnishings held by Jefferson's descendants, negotiated the purchase in Europe of complementary pieces, and was involved in the "recreation of curtains, draperies, and bedspreads for Monticello, as well as the reupholstering of chairs and sofas, all in the manner he felt was most historically accurate."

Monticello is administered as a national memorial, museum, and educational institution to keep alive the name and memory of Thomas Jefferson. It is the only home in the United States that has been designated a World Heritage Site. The application for listing stated,

Jefferson's first architectural designs were for his own house, Monticello, a project that occupied his attention from the late 1760s up to his death in 1826. [His] greatest intellectual energies and original talents were devoted to architecture and his two greatest architectural works, Monticello and the University of Virginia. Both properties were visited and admired because they were associated with Jefferson; they were in themselves outstanding works of architecture; they represented unique adaptations of eighteenth century neoclassical forms, and, they are symbolic of man's universal aspirations for freedom, self-determination, and self-fulfillment.

NOTES

1. Semmes, J. E., *John H.B. Latrobe and His Times, 1803–1891*. Baltimore: The Norman, Remington Co., 1917, 250.
2. See the full essay, Vesper Osborne, "Monticello," *Callaloo*, 26(Summer 2003), 590–592.
3. Kindig, Thomas, "Signers of the Declaration of Independence." www.ushistory.org/Declaration/signers/jefferson.htm
4. World Heritage List nomination. . . . www.nps.gov/history/worldheritage/us-jef.htm
5. Jefferson's notes are published in Washington, Henry Augustine, ed., *The Writings of Thomas Jefferson*. . . , Washington, DC: Taylor and Maury, 1853–1854, 391 ff.
6. Kimball, Sidney Fiske, *Thomas Jefferson Architect*, Boston: Privately Printed, Riverside Press, 1916. Reprinted New York: Da Capo, 1968. www2.iath.virginia.edu/wilson/TJA/tja.body2.html
7. Kimball.

8. Giordano, Ralph, "Thomas Jefferson: Education of an Architect," *Early America Review* (Summer/Fall 2001). www.earlyamerica.com/review/2001_summer_fall/architect.html
9. Giordano.
10. Beiswanger, William L., "Thomas Jefferson and the Art of Living Out of Doors," *Magazine Antiques* (April 2000), 594–605.
11. Beiswanger.
12. Adams, William Howard, *Jefferson's Monticello*. New York: Abbeville, 1983, cited World Heritage List nomination. . . www.nps.gov/history/worldheritage/us-jef.htm
13. See "Caretaker Contributed to Monticello's Decline," *Monticello Newsletter*, 17(Winter 2006), 1–2.
14. The whole sordid story is told in Melvin I. Urofsky, *The Levy Family and Monticello, 1834–1923: Saving Thomas Jefferson's House*. Monticello, VA: Thomas Jefferson Memorial Foundation, 2001.

FURTHER READING

- Adams, William Howard. *Jefferson's Monticello*. New York: Abbeville, 1983.
- Beiswanger, William L. "Thomas Jefferson and the Art of Living Out of Doors." *Magazine Antiques* (April 2000), 594–605.
- Beiswanger, William L., et al. *Monticello in Measured Drawings / Drawings by the Historic American Buildings Survey/Historic American Engineering Record, National Park Service*. Charlottesville, Virginia: Thomas Jefferson Memorial Foundation (TJMF), 1998.
- Bernstein, Richard B. *Thomas Jefferson*. New York: Oxford University Press, 2003.
- Giordano, Ralph. "Thomas Jefferson: Education of an Architect." *The Early America Review* (Summer 2001).
- Girouard, Mark. "Monticello, Virginia, the Home of Thomas Jefferson from 1771 to 1826." *Country Life*, 133(January 17, 1963), 106–110.
- Howard, Hugh. *Dr. Kimball and Mr. Jefferson: A Journey into America's Architectural Past*. New York: Bloomsbury, 2006.
- Howard, Hugh and Roger Straus III. *Thomas Jefferson, Architect: The Built Legacy of Our Third President*. New York: Rizzoli, 2003.
- Kimball, Sidney Fiske. *Thomas Jefferson Architect*. Boston: Privately Printed, Riverside Press, 1916. Reprinted New York: Da Capo, 1968.
- Leepson, Marc. *Saving Monticello: The Levy Family's Epic Quest to Rescue the House that Jefferson Built*. New York: Free Press, 2001.
- Madden, W.C. *Monticello*. Chicago: Arcadia, 2007.
- Malone, Dumas. *Jefferson and His Time*. Charlottesville: University of Virginia Press, 2005 (six volumes.) Originally published Boston: Little, Brown, 1948–1981.
- McLaughlin, Jack. *Jefferson and Monticello: The Biography of a Builder*. New York: Henry Holt, 1988.

- Nichols, Frederick Doveton. *Thomas Jefferson's Architectural Drawings*. Boston: Massachusetts Historical Society; Charlottesville: TJMF and University Press of Virginia, 1961.
- Nichols, Frederick Doveton, and James A. Bear, Jr. *Monticello*. Monticello, VA: TJMF, 1982.
- Nichols, Frederick Doveton, and Ralph E. Griswold. *Thomas Jefferson Landscape Architect*. Charlottesville: University Press of Virginia, 1978.
- Peterson, Merrill D., ed. *Visitors to Monticello*. Charlottesville: University Press of Virginia, 1989.
- Stein, Susan R. *The Worlds of Thomas Jefferson at Monticello*. New York: Abrams, 1993.
- Urofsky, Melvin I. *The Levy Family and Monticello, 1834-1923: Saving Thomas Jefferson's House*. Monticello, VA: TJMF, 2001.

INTERNET RESOURCES

Official Monticello website. www.monticello.org



Courtesy Library of Congress

Pentagon, Arlington, Virginia

"This concrete behemoth"

Begun on September 11, 1941, the Pentagon was completed in just 16 months. It is the world's largest office building, with a floor area of 6.54 million square feet—perhaps meaningless as a number, that is equivalent to 114 football fields. A recent editorial in *The Economist* noted that in World War II this military headquarters was four times the size of the British War Office in Whitehall, the German *Kriegsministerium* in Berlin, and the Japanese general staff headquarters building in Tokyo combined. The vast building is “virtually a city within itself” that now houses the offices of the secretary of defense, the Joint Chiefs of Staff, the secretaries of the three military departments, and a workforce of about twenty-three thousand and three thousand support personnel. As many as thirty-three thousand people worked in it at the peak of World War II.

The architectural historian Witold Rybczynski writes, “The Pentagon is not generally considered a significant work of architecture, but perhaps it should be.” He reasons that at a time when “every new art museum and luxury condo tower is touted as ‘iconic,’ the Pentagon is the real thing: a globally recognized symbol. This concrete behemoth . . . is also the product of considerable human ingenuity and resourcefulness.”¹ Others have gone further. *The Economist* named the Pentagon among the “greatest engineering feats of the twentieth century,” while the Virginia Section of the American Society of Civil Engineers holds it out as “a gigantic and lasting monument to the American spirit; unity in defense and war; the ingenuity of its architects and engineers; and the force and leadership of its builders.” And other writers assert that the building stands with the White House, the Vatican, and a handful of others as symbols recognized around the world. To some extent, all those claims are justified.

But the irony is that the Pentagon is most recognizable from the air. Despite its almost inconceivable size, its almost featureless appearance from anywhere on the ground offers little clue to its distinctive, even unique, layout—but more of that later. Moreover, much of its status as an icon of American architecture lies in its associations: just as the terms *the White House* and *the Vatican* now universally conjure the U.S. administration and the Roman Catholic Church, respectively, more readily than the buildings that house them, so “The Pentagon” signifies (to most people) America's enormous military might.

The Pentagon was built for the Department of War, which since 1789 had operated the U.S. land (and later air) forces: Department of War—plain words. In 1945, attempting to minimize the interservice rivalry that they blamed for “limited military success” in World War II, the Army, Navy, and the Joint Chiefs of Staff proposed a unified Department of National Defense. The change was temporarily stalled in Congress, but following revisions introduced by President Truman in February 1947 the National Security Act was passed in July. Two months later the National Military Establishment was created. Perhaps because of the unfortunate acronym “NME” (try reading it aloud), in August 1949 it was renamed the Department of Defense. Replacing the

secretary of war, the secretary of defense presided over the former War Department and Navy Department; the Department of the Air Force was created as a new separate service.

Claiming that the name change was “the single most effective and far-reaching piece of doublespeak in the twentieth century,” the American linguist William Lutz explained that it altered the “whole nature of the argument. Just think if you had to run for Congress and you wanted to stand up and say, ‘I don’t think \$300 billion a year is a big enough war budget. We need to spend more on war.’”² The London-based critic Jason Oddy wrote in *The Independent on Sunday*, “While ostensibly designed to coordinate the impending [Second World War] effort, the Pentagon’s construction also signaled a new ambition in US foreign policy.” Before the Pentagon was built, there were those in Washington who feared that it would become a postwar white elephant, unless America was to “look forward to a permanent military establishment vastly greater than [it had] hitherto maintained.” Oddy commented, “the Cold War provided the perfect excuse for this unprecedented surge in militarism, and the Pentagon came to symbolize the increasingly martial outlook of a nation that was about to become the most powerful country on earth.”³

After the new Department of Defense took over the Pentagon, the building became the headquarters of a rapidly growing bureaucracy. It also assumed its own personality; in much the same way as *the White House* was synonymous with the current administration, *the Pentagon* became synonymous with the military-industrial order and might of a nuclear superpower. So though the Pentagon is an undoubtedly an icon, it does not signify defense and security to everyone. In *Armies of the Night*, the book that he styled his “nonfiction novel,” Norman Mailer chronicled the October 1967 anti-Vietnam War march on the building. He characterized the Pentagon as “the symbol, the embodiment, no, call it the true and high church of the military-industrial complex, the Pentagon, blind five-sided eye of a subtle oppression which had come to Americans out of the very air of the century.”

THE SOUND OF DISTANT DRUMS

The outbreak of war in Europe in 1939 had military implications for the United States. Signed on August 23, the Ribbentrop-Molotov Pact provided that Nazi Germany and the Soviet Union, despite their polarized ideologies, would not attack each other. It included a protocol that gave the Baltic States and eastern Poland to the Soviets if they kept out of Germany’s probable conflict with the rest of Europe; that safeguarded the Germans against a war on two fronts. When Hitler’s armies invaded Poland on September 1 the Soviets did not intervene. Two days later the French and British declared war on Germany, and World War II had begun.

After overrunning Denmark and Norway in April 1940, the Germans launched a *blitzkrieg* on The Netherlands, Belgium, and Luxembourg on May 10. Two days later Hitler ordered the invasion of France, and in about a week the allied armies were driven back to Dunkirk on the coast; by June 4, 338,000 allied survivors withdrew across the Channel to Britain, all their heavy equipment abandoned in France. Thirty thousand died, and 1.2 million had been taken prisoner. The Germans marched into Paris on June 14. A month later Hitler proposed Operation Sea Lion, the invasion of Britain; the plan was cancelled on September 17.

Japan, insisting upon its divine right to subjugate and unify Asia under Emperor Hirohito, had long been on the march on the Pacific Rim. It had invaded mainland China in July 1937, and 4 years later established a puppet government in Nanjing. In September 1940 it entered a Tripartite Pact with Germany and Italy and then invaded French Indochina (now Vietnam), which it occupied in July 1941.

The Roosevelt administration was “consumed by war anxiety.” From the beginning of 1941 the United States had intercepted diplomatic messages between Tokyo and the Japanese ambassador in Washington, as Japan spread its tentacles toward the Pacific. In March the president signed the Lend Lease Act, which allowed America to provide its allies with “defense articles” (read, weapons) and other aid against German and Japanese aggression and to impose trade restrictions on Japan (a 30-year-old commercial treaty with Japan had been terminated in July 1939). Responding to the “swift and devastating” Nazi onslaught in Europe, Roosevelt declared a national emergency on May 27. Less than a month later Hitler breached the Nazi-Soviet Non-Aggression Pact and launched a surprise attack on the Soviet Union. Early in August, aboard a ship off Newfoundland, Roosevelt and Winston Churchill, prime minister of Britain, together with “high-ranking military officers of both governments” devised the Atlantic Charter—“a set of common principles that repudiated territorial aggression by ‘the Hitlerite Government of Germany and other Governments associated therewith’ and supported the right of self-determination.”

Through the second half of the 1930s, in response to upheavals in Europe and Asia that pointed to imminent war, recognizing the widespread growth of isolationist—some call it noninterventionist—sentiment, Congress had passed a series of Neutrality Acts that “following its costly involvement in World War I, sought to ensure that the US would not become entangled again in foreign conflicts, especially in Europe.” The Act of 1939, passed the day after the British declared war on Germany, was the final amendment, in “recognition of the imminent Nazi threat to western Europe’s democracies.” Unable to see that their country was inexorably hurtling toward war and needed to be ready for it, many prominent Americans resisted the Lend Lease Act and any war preparation on the part of their government; they advocated neutrality in what they regarded as a European war. Hundreds of thousands joined groups

like the America First Committee, established in September 1940. The anti-war feeling dissolved after the Japanese attack on Pearl Harbor on December 7, 1941.

General George C. Marshall became the U.S. army chief of staff in July 1939. For the next 2½ years, he oversaw the preparations for a possible war, and by December 1941 the nation had a well-trained Army of over 1.4 million, far larger than “the paltry forces” that had existed in 1939. Marshall’s preparations included the creation of office space for headquarters staff.

In July 1941, twenty-four thousand Army personnel were working in seventeen separate buildings in the Federal District—the Social Security and Railroad Retirement buildings, as well as leased apartment blocks, warehouses, private houses, and even garages—with a total space of 2.8 million square feet and an annual rent bill of \$3 million. Other staff was accommodated in Fort Myer and Alexandria, Virginia. Staff numbers were expected to reach thirty thousand by the beginning of 1942, and the existing 650,000 square feet of records storage space needed to be increased by 50 percent. One account says that “a typical high-ranking officer testified before the Congress that his business normally took him to several different offices daily and he wasted many hours in travel.” The Army constructed a \$9 million edifice in Foggy Bottom. But Henry Stimson, the secretary of war, despised the building and refused to occupy it; he thought that it was too small and that the façade looked like “the entrance to a rural opera house.” The Department of State eventually used it.

“DYNAMITE IN A TIFFANY BOX”

Although Marshall believed that several temporary buildings on a single site would solve his space problems, the president was convinced, not without cause, that “temporary” buildings erected by governments often became permanent. During World War I, Roosevelt, when he was assistant secretary of the navy, had authorized the construction of barracks-like “tempos” all over Washington, D.C., and they were still there 20 years later. Roosevelt himself—perhaps a little harshly—called it a “crime for which he should be excluded from Heaven,” and he was unwilling to repeat his mistake. But his reluctance to agree with Marshall had to do with location, and on July 14 he asked Congress to give the Public Buildings Administration \$6.5 million to build “temporary structures in or near Washington, DC [for the] War Department and other agencies engaged in the national defense effort”—“temporary” because (it was assumed) that it would be hard to find use for three million square feet of office space after the war. He need not have worried.

Brigadier General Brehon Burke Somervell, head of the Construction Division of the Quartermaster Corps, was more than anyone else responsible for the Pentagon. He informally approached General Moore, deputy chief of

staff, and Representative Clifton A. Woodrum of Virginia, chairman of the House Subcommittee on Appropriations, with the unique notion that the entire War Department—as many as forty thousand workers—could be accommodated under one roof. Somervell has been variously described as smart, ambitious, hard-driving, “a tough administrator” and a “smooth but ruthless operator”; one associate characterized him as “dynamite in a Tiffany box.”

On Thursday, July 17, Somervell addressed the subcommittee. Woodrum, having been suitably primed, suggested to Somervell and Lieutenant General Eugene Reybold, then acting chief of the Corps of Engineers, that the War Department should find an overall, rather than a piecemeal solution to its space problems. That same evening Somervell verbally ordered Major Hugh J. “Pat” Casey, chief of the Design and Engineering Section in the Quartermaster General’s Construction Division, to make—by 9 A.M. the following Monday—preliminary designs for an office building on the site of the former Washington-Hoover airport on the Virginia bank of the Potomac River. Years later Casey recalled,

[Somervell] said, “Pat, we’re going to build a new War Department Building and we’re not going to build it in Washington. It’s going to be built over in Virginia. . . . It’s to be for 40,000 people with parking for 10,000 cars, 4 million square feet of area . . . —not over four stories high and no elevators, solely ramps, and on Monday morning I want a general layout and design plan and perspective and so on for that structure. The structure is not to be air conditioned, and we want 500,000 square feet ready in six months and the whole thing ready in a year.”⁴

TIME IS OF THE ESSENCE

The prescribed building and car park would need a site of at least 105 acres. The location Somervell had chosen was the former 134-acre Washington-Hoover Airport at the foot of the 14th Street Bridge in Arlington County, Virginia, abandoned in June 1941 when a new National Airport was opened. The land was periodically flooded; *Time Magazine* described it as “trapped and trammeled” and “hemmed in by a landscape as disheveled as a Congressman’s collar.” Casey immediately recognized that the swampy site presented engineering and cost problems, and Somervell was convinced to change the proposed location to a 67-acre tract of Arlington Farms, part of a former experimental station of the Department of Agriculture. The new site was almost rectangular, with one corner cut off by a diagonal road. The location having been finalized—or so it was thought—Casey gathered some of his designers to make tentative layouts. The key members of his team were the Los Angeles architects George Edwin Bergstrom and David Julius Witmer and Frederick H. Fowler, national president of the American Society of Civil Engineers.

It seems that Somervell was keen to appoint such eminent civilian consultants to his organization.

George Bergstrom had studied at Yale and MIT before beginning to practice architecture in New York City in 1899. He moved to Los Angeles in 1903 and 2 years later formed a 10-year partnership with John Parkinson, designing several commercial buildings. In 1916 he served as president of the Los Angeles Housing Commission, after which little can be discovered of his career until 1921, when he became vice president of the Los Angeles Allied Architect Association—a cooperative of thirty-three prominent architects committed to designing civic buildings at the lowest possible cost. The fourth shell for the Hollywood Bowl (1929) is among its works. Through the 1920s the firm of Bergstrom, Bennett, and Haskell produced several Southern Californian buildings including the County Hospital, the Hall of Justice, and the Museum of History, Science, and Art (all in Los Angeles) and the Pasadena Civic Auditorium in 1932. In the national arena, Bergstrom served as treasurer the American Institute of Architects from 1926 to 1938; he became its president in 1939 and 1940.

He was appointed chief consulting architect to the War Department in 1941. It seems that the pragmatic Bergstrom, who (according to *Time*) “scoffed at high-faluting notions,” would do as he was asked. He believed architecture to be

a collaborative profession; a coordination of efforts to create a work of art to fulfill a definite need within a definite cost. The mind of the architect must interpret the need from another mind, apply it to his imagination, translate the concept to other minds and direct still other hands to give it form and substance and make it fulfill the need for which, and satisfy him for whom it was created.⁵

After completing his architectural studies at Harvard, David Witmer returned to Los Angeles in 1912. In 1919 he formed a partnership with Loyall F. Watson, and through the 1920s they won several awards for their domestic work. The firm remained active for nearly 40 years. Commissions were scarce in the Depression years, and in 1934–1938 Witmer was architectural supervisor for the Southern California District of the Federal Housing Authority. One source suggests that this government connection eventually led him to the Pentagon design team; anyway, he served as “co-chief architect” with Bergstrom in 1941 and 1942 and as chief architect until 1943.

Bergstrom started work late on July 18. A tall building, the most obvious solution, was precluded. But a low building would need to have (to use a term that was not current in 1940) a very large “footprint”; besides, anything so spread out would be taxing on its occupants. Bergstrom probably deserved greatest credit for the pentagonal design although Casey, Fowler, and some of the others who were working with him on different geometries finally reached consensus. In its earliest form, the layout was an asymmetrical pentagon—a drawing by the gifted Socrates T. Stathes shows a square with a corner cut off. His aerial perspective indicated landscaping but no car parks; indeed, there

was little spare room on the site—certainly nowhere near three times the area of the building’s footprint that ten thousand vehicles demanded. The building plan is succinctly described by Steve Vogel:

It was really two buildings, a five-sided ring surrounding a smaller one of the same shape. The interior of the outer ring was lined with 49 barracks-like wings, sticking in like the teeth of a comb. The smaller ring had 34 exterior wings, all pointing toward the outer ring. The wings were 50 feet wide and 160 feet long, separated from each other by 30-foot-wide open-air “light courts.” Corridors connected the two rings on the ground and third floors.⁶

Noting the problems of the irregular design—“the pattern was awkward, and the routes between wings . . . were circuitous. Lacking symmetry . . . the building was frankly quite ugly”—he reports Stathes’ comment about the plan’s “one overriding virtue,” made more than 60 years later: it fit the site. But, as will be seen from the following discussion, the War Department’s new headquarters was not destined for Arlington Farms.

During the subsequent, often antagonistic debate about location, the architects immovably retained (but refined) the pentagonal shape dictated by the original location. There were several reasons: the building already was designed, and there a degree of urgency about its completion; Army officers liked it because it echoed the star design of such buildings as Fort Pickens in Florida (1829–1934), Fort McHenry in Baltimore (after 1794) and of course Fort Sumter (begun in 1829), as well as older European models; and any plan form close to circular would provide “the greatest amount of office area within the shortest walking distance.” Vogel adds, not altogether logically, “Seen from above, the concentric rings of pentagons, if not beautiful, were at least pleasing to the eye.”

Although purveyors of conspiracy crackpottery point out that the pentagram has mystical meaning for Freemasons, it seems clear enough that even when a change of site meant that the pentagonal shape was no longer constrained by existing roads, the rushed schedule of the project meant that the architects did not change the design. Despite Bergstrom’s late post-facto arguments about allusions to Napoleonic-era fortress architecture, the *raison d’être* for the form was as simple as that.

A BUILDING IN SEARCH OF A SITE

On the morning of Monday July 21, 1941, Somervell received what he’d asked for. As Casey remarked, it had been “a busy weekend.” The same day, Marshall and Under Secretary of War Robert P. Patterson approved the proposal, and on Tuesday Somervell, Reybold, and Bergstrom presented it to Stimson. Somervell assured him that the building could be started in 2 weeks and completed in a year.

At first things moved quickly. On Tuesday afternoon Somervell told the reconvened Subcommittee on Appropriations that the building, respecting its environment, would now be three stories high, not four. Excluding the car park, it would cost \$35 million. The Subcommittee unanimously approved funding. Two days later the building was included in the First Supplemental National Defense Appropriation Bill for 1942 presented to the full House. Of course, some Congressmen challenged it. Roosevelt gave his preliminary approval at the end of the week. On Monday, July 28, the House approved the bill and sent it to the Senate.

But the issues of size, shape, and site were far from resolved. Casey later put it rather blandly: "There was some opposition that way." Certainly, several political and bureaucratic noses had been put out of joint by Somervell's proposal. On July 30 Roosevelt's uncle, Frederic Delano, chairman of the National Capital Park Planning Commission (NCPPC) and Harold D. Smith, director of the Bureau of the Budget warned the President that forty thousand people commuting to Virginia would generate "terrific" traffic problems. In response, on August 3 Roosevelt sent a letter (that had been drafted by Smith) to the Senate Appropriations Subcommittee, conveying that concern and advising that, though he had no objection to the Arlington Farms site, he wanted a building that would house only twenty thousand employees.

Somervell, perhaps unwisely, had considered it unnecessary to consult the NCPPC about the project. Insisting that his building would spoil the "dignity and character" of the Arlington Cemetery and the Lincoln Memorial, the Commission also condemned his "flagrant disregard" for symbolic context. In the 1920s Washington had symbolized national reconciliation by establishing an axis from Robert E. Lee's Arlington mansion, across Memorial Bridge to the Lincoln Memorial and then along the Mall to the Capitol. Setting the War Department building on that axis (they insisted) would undermine that symbolism. Other institutional objectors, including the local AIA chapter and the National Association of Building Owners and Managers, protested about the building.

Somervell also had bypassed the D.C. Commission on Fine Arts (CFA), irking its chairman Gilmore D. Clarke, who irritably complained: "It is inconceivable that this outrage could be perpetrated in this period of the history of the development of [Washington], that is held in the highest esteem by every citizen who visits it." He deplored the construction of such a gargantuan building "at the very portals of the Arlington National Cemetery, thus resulting in the introduction of 35 acres of ugly, flat roofs into the very foreground of the most majestic view of the National Capital." He demanded that it be relocated about a mile to the south.

Recognizing that much of the ostensibly objective resistance may have sprung from other motives, Casey later said, "I think the principal reasons in opposition were mainly the idea of having the War Department building not in the District [of Columbia] but over in Virginia." He was probably right.

The Congressional hearings were heated, many politicians waxing indignant at what they saw as “the casual abandonment” of the District. Vogel records that one declared that siting the building in Arlington would leave the District “a ghost town,” and alternative sites within D.C. were suggested. The press had joined the fray, tastelessly describing the proposal as a *blitzkrieg* on Congress and Washington. Somervell argued—speciously, as it turned out—that rejecting the Arlington Farms site would mean setting aside existing plans, thus causing a month’s delay and adding to the cost.

But the Senate Appropriations Subcommittee endorsed the site—after all, President Roosevelt had approved it—and the bill went to the Senate, where robust debate continued. Senator Robert Taft unsuccessfully proposed an amendment to halve the appropriation. The act that passed on August 14 did not mention the size or design of the building or specify exactly where on the Arlington Farm site it would stand.

Three days later Roosevelt returned from his secret meeting with Churchill to face a salvo of complaints. Secretary of the Interior Harold Ickes was bewailing the “rape of Washington.” A letter from the President’s uncle implored him to have Congress revisit issues surrounding the Army headquarters building. The Senate having turned down his recommendation to halve its size, he was demurring about building it on the Arlington Farm site. Three days later, to the delight of the newspapers and the assorted commissioners, he announced that only a small part of the structure, revised to house twenty thousand employees, would intrude on Arlington Farm; most of it would be on a swampy land to the south. Called Hell’s Bottom, that site has been described as an “unsightly former airfield and railroad yard littered with abandoned tin hangars and rusted-out boxcars.” It was far from an ideal location for the Pentagon Building. . . . At that time the quartermaster depot was under construction at the present site of the Pentagon.

On August 25—2 weeks *after* the construction contract was awarded—Roosevelt approved the appropriations bill. Somervell was resigned to the new site, but (without telling the president) he refused to reduce the building’s size and in fact pushed its population up to thirty-five thousand, and “with the help of Virginia congressmen, he protected the appropriations needed to make the construction permanent.”

Somervell and Bergstrom received a decidedly cool reception at a special CFA hearing on September 2 to review the design. That was perhaps predictable, because their principal inquisitors were architects who may have coveted the project for themselves. Commissioner William H. Lamb, designer of the Empire State Building, believed that “great confusion [was] apt to result in the circulation of [a pentagonal] building.” Beaux-Arts architect Paul Philippe Cret agreed. They advised Bergstrom to “do away with the monotonous appearance” of the façade. He agreed to make revisions—since he was designing “on the run,” so to speak, they were inevitable anyway—but insisted on retaining the pentagonal plan. Cret—a favorite of Roosevelt’s—decided to

take the CFA's case to the president, but Somervell preempted him. At 12:15 that afternoon "the general . . . strolled into the Oval Office, accompanied by Bergstrom. . . . Roosevelt . . . reviewed the plans carefully. He asked questions and directed a few changes, then approved the design." Two hours later Clarke, Lamb, and Cret called on the president. They argued for a rectangular plan because a pentagon "would make the biggest bombing target in the world." Revisiting the issue of what we now call "environmental impact," they also contended that the Department would be best housed in several buildings rather than a "single great mass." But Roosevelt replied that he liked the pentagonal shape because "nothing like it has ever been done that way before."

Yet it should be noted that Roosevelt, who seriously (and without justification) fancied himself an architect, made his own attempt at designing the building. He excitedly suggested a solid building, 1,000 feet square. Because it would be air-conditioned—clearly, a detail that had changed since Somervell first briefed his architects—there would be no need for courtyards, light wells, or even windows, except perhaps on the external walls. And the building could be reassigned as an archives store after the war. Whatever the disagreements among themselves, Clarke, Somervell, and Bergstrom and Henry Stimson successfully combined to dissuade the president from pursuing his own solution. Construction work commenced on September 11; after it had progressed for a month, Somervell presented the final plans to Roosevelt; faced with a *fait accompli*, the president approved the larger building. What else could he do?

AN APPROPRIATE AESTHETIC

It seems that Somervell enlisted his civilian collaborators not on merit but on prestige. Bergstrom was not a particularly good architect, an eclectic designer who had developed no particular personal style—but for a couple of years he had been national president of the AIA. Since around 1920 American architects had been made aware through professional journals of European Modernism. Their attention had been caught by the 1925 Paris *Exposition Internationale des Arts Décoratifs et Industriels Modernes*, and although generally only skin deep, the Art Deco style influenced much commercial architecture. But by 1940 many, if not most, architects continued to work in anachronistic styles. Washington's showcase, the National Mall, had been developed in accordance with the 1902 recommendations of the Park Improvement Commission—the "McMillan Commission"—and public buildings were in the Neo-Classical idiom. Examples include Hornblower and Marshall's National Museum of Natural History (1911), Henry Bacon's Lincoln Memorial (1911–1922), and Charles A. Platt's Freer Gallery of Art (1923). Contemporary with the Pentagon were the West Building of the National Gallery of Art and the Jefferson Memorial, both by John Russell Pope.

Only 2 or 3 years before the Pentagon project was initiated three of Europe's greatest architects, fleeing Nazi Germany, had been invited to important teaching posts at Harvard (Walter Gropius and Marcel Breuer) and Illinois Institute of Technology (Ludwig Mies van der Rohe). But it is hardly likely that Somervell would have commissioned them—they were Modernists, foreigners, *and* socialists.

But the architectural style of the Pentagon was neither Neo-Classical nor Modern. The application to include it on the National Register of Historic Places stated that the architectural mode employed is known as “Stripped Classicism,” commonly employed for public buildings in the United States and other industrialized nations during the 1930s and 1940s. Indeed, it was popular with democracies and dictatorships alike. Noting that it was the last Stripped Classical public building near Washington's Monumental Core, the document explained that in the style,

elements of the classical tradition (e.g. columns, moldings) were retained, but were presented in an austere and simple manner in buildings which were designed in the modern functional style. Facades became simplified, their classical ornaments turning angular and disappearing into the masonry, their walls becoming planar and their window openings shallow and anonymous. Symmetry remained an important element of design, as did the classical exterior layering of decorative elements from top to bottom. The proportioning of composition included closures at the ends and a focal point at the center of the building's facades. Another characteristic was the utilization of new materials for building construction, reflecting advances in construction engineering. . . .

Shortly before the Pentagon was built, in Europe Mussolini, Hitler, and Stalin were using monumental Stripped Classical architecture to “oppressive and soul-destroying ends.” In 1935 Benito Mussolini commissioned the *Esposizione Universale Roma*, a huge complex of office buildings and apartment blocks that he planned to open in 1942 in celebration of 20 years of Italian fascism. *New York Times* journalist Alessandra Stanley, observing that architecture was Mussolini's “favorite mode of propaganda,” pointed out that “Fascist architects . . . sought to blend the classicism of ancient Rome with twentieth-century functionalism and rationalism.”⁷

Albert Speer wrote in *Adolf Hitler. Bilder aus dem Leben des Führers* (*Adolf Hitler. Pictures from the Life of the Führer*) in 1936 that fate introduced Hitler to Paul Ludwig Troost, who had preceded Speer in the role of the Nazi leader's architect. He noted that Troost had an architectural impact on Hitler, who was himself a failed architect obsessed with the idea of building Germania, a modern-day Rome for his Third Reich. Troost's *Haus der Deutschen Kunst* (House of German Art) in Munich, designed in 1933, was one of Hitler's first projects in the Stripped Classical style. Speer observed, “One can already see here the characteristics of the buildings that followed after the seizure of power: austere and plain, but never monotonous. It was simple and

clear, with no false decoration. Decorations were few, but each was in its proper place. The material, form, and lines were elegant.”

As to Stalin, a recent Ukrainian journal editorializes, “Like all dictators, [he] considered himself a leading thinker in a number of fields including architecture.” He imposed “his megalomania on the Soviet people through the . . . erection of dominating architecture designed to inspire awe among the masses. Dubbed ‘Stalinist architecture,’ this phenomenon has become a world-renowned calling card of imperial ideology and propaganda, and typically features monumentality together with eclectic touches of [historic] styles.”

So, in the light of what was happening in European architecture in the 1930s, questions must be asked about the style chosen for the Pentagon. Was it constrained by its Neo-Classical environment, or by the urgency of the project and the austerity of incipient wartime? Was it limited by the skills of its principal designers? Or was there always the intention that, after a war of unpredictable length, it would not become an extravagant records repository, but the tangible focus of a military-industrial complex—to use Washington Headquarters Service’s own words—“associated with events that have made a significant contribution to the geo-political role of the United States as a superpower during the period from World War II to the present?”

BUILDING THE PENTAGON

A cost-plus-fixed-fee construction contract was awarded to three companies: the Philadelphia firm of John McShain Inc., that had been building in the Federal District since 1934, and secondary contractors Doyle and Russell, and the Wise Contracting Co., both of Richmond, Virginia, chosen when Somervell rejected two New York tenderers. At least 500,000 square feet of offices had to be ready for occupation before May 1, 1942. The mechanical services contract was awarded on September 3, 1941, and that for site works 3 weeks later.

Oversight of the massive project was put in the hands of Colonel Leslie Richard Groves, deputy chief of Construction in the Quartermaster General’s Office. He enjoyed a reputation for “high intelligence, tremendous drive and energy”; also, it is said, he was ruthless, arrogant, and self-confident—traits that served him well in slashing the red tape that often delays government projects. Groves guided the earliest stages of the Pentagon; in summer 1942 he was recognized as the fittest person to administer the embryonic Manhattan Project to build the atomic bomb. Meanwhile, he and Somervell selected Captain Clarence Renshaw of the Corps of Engineers as district engineer in charge—Casey called him a “very conscientious person.”

By itself, the disused airport was not big enough for the building and parking area. It was augmented by 57 acres from the southern end of Arlington Farms and 80 from an Army depot site. In addition, more than 160 parcels of

land, many of them in private ownership, were compulsorily acquired to build roads. Of course, Casey's misgivings about building on marshland were justified. The site had to be cleared, graded, and levelled with 5.5 million of tons of earth fill, which would never support the building. The Raymond Concrete Pile Company drove more than forty-one thousand steel-cased, concrete-filled piles 50 feet into the underlying clay.

Some historians have recognized that the Pentagon also had another foundation—one of “lies, secrecy and cost overruns.” Those responsible for the new War Department repeatedly lied about money. Much of the budget blowout was incurred because Somervell increased the number of floors, a decision he hid from Congress. As originally approved, the inner and outer rings of the building had five floors; the intermediate rings had four. Although a doublespeak press release described “a three-story building with basement,” that “basement” was in fact *above* ground; the planned below-ground levels—a sub-basement (euphemistically called a “mezzanine”) and sub-sub-basement—were not mentioned. Then, when work was 40 percent complete, Somervell instructed the contractors to remove the roofs from the intermediate rings and add another floor; other doublespeak submission to Congress called it a “fourth floor—intermediate.” That gave the Pentagon a uniform height: five stories and seven levels.

In September 1941 Somervell's estimate of the cost was \$31 million. In February 1944—about a year after the building was finished — the Army Department reported that \$63.5 million had been spent. That comprised nearly \$50 million for the main building and \$13.5 million for access roads, parking lots, drainage and site works, and the power and heating plant (in a separate structure). The access road system—28 miles of it, at a million dollars a mile—included twenty-one overpasses and bridges and three cloverleaf interchanges, among the earliest constructed in America. In general, landscaping was pragmatic rather than aesthetic—just enough to prevent soil erosion and protect structures. Grading was the minimum required to achieve safe road shoulders. A contemporary report says that the work was done by “squads of Negro women, who all [wore] straw hats, cotton blouses and blue dungaree trousers, giving the countryside something of a plantation aspect.” Later, the austerity of the Pentagon's parking lot-flanked site would be alleviated by expansive, formally landscaped—well, grassed at least—ceremonial terraces in front of the Mall and River Entrances.

It had been decided at some stage to extend water supply and sewerage beyond what was needed for the Pentagon, to serve other federal buildings in the area. Somervell tried to disguise all the extra work as a separate contract and approached the appropriations committees for more funds. Later sources put the final cost at \$83 million. Congress kept on handing Somervell money. Nevertheless, the end, no matter how noble or necessary, does not justify dubious means. His duplicity cannot be excused, but perhaps it can be explained. To quote the English lexicographer Samuel Johnson, “Among the

calamities of war may be jointly numbered the diminution of the love of truth, by the falsehoods which interest dictates and credulity encourages"; the axiom was (supposedly) abridged in 1918 by Republican Senator Hiram W. Johnson as "the first casualty when war comes is truth."

Begun in the looming shadow of conflict, when "national security directed every effort towards provisions for war at the greatest possible speed," about 3 months after groundbreaking work on the building was made much more urgent by the Japanese attack on Pearl Harbor. Consequently, many behind-schedule military projects were re-energized. An *Engineering News-Record* editorial declared, "Building for defense is a thing of the past. The construction industry's new standard must be emblazoned 'Building for Battle.' There is a difference. Time was short. Now there is no more time." The redtaper that earlier had entangled approval processes could no longer be tolerated; national indignation about Pearl Harbor gave *carte blanche* to build an even larger headquarters without the pettifogging interference of city planners, the CFA, or even Congress.

The budget was greatly exceeded for other reasons. The extra cost of pile foundations resulting from the change of site has been mentioned already. To that may be added the increased cost of providing for the mooted postwar use as records storage—that demanded that the reinforced concrete frame had to carry about 2½ times the live loads imposed by normal office traffic.

Moreover, "Haste makes waste." Preliminary design and documentation took about 5 weeks—but it was *only* preliminary. One source says that Bergstrom's office staff of 327 architects and engineers generated a weekly output of between twelve thousand and thirty thousand blueprints, containing directions that were supervised on-site by 117 inspectors. Another enthusiastic journalist put the number of construction professionals at one thousand! Whatever the case, ensuring that the contractors received consistent instructions must have been a nightmare; doubtless much of the documentation was contradictory or at best repetitive. Army Corps of Engineers historian Janet McDonnell writes, "Sometimes construction actually outpaced planning." Revised contract documents (often printed the previous night) were given to builders only hours before the work was to be executed. Other *ad hoc* design decisions were made by the builders themselves, and architects and engineers renovating the Pentagon (over 50 years later) found large sections of the building for which there was no documentation; in cases where there were drawings, they bore little relation to what had been actually built. Such "design on the run" inevitably led to costly inefficiencies.

Other increases were due in part to hurried design development, leading to waste space. Despite the repeated boasts that a "[prime objective], rapid communications with coordinated action, was a design so effective that . . . any one point may be reached from another within the building by a walk of not more than six minutes," only 40 percent of the Pentagon's floor area is usable office space. If ancillary rooms are included, the plan efficiency increases to a

mere 56 percent. Present-day design criteria for offices set the figure at a minimum of 75 percent.

Then there was the extra financial cost—quite apart from the social one—of racial segregation. One of Groves' last decisions was to provide separate dining and toilet facilities for whites and "colored people." When Roosevelt, visiting the nearly finished building, queried the provision of more than two hundred lavatories he was told that the Army was abiding by Virginia's racial laws. Roosevelt immediately overrode Groves' instructions and had the "whites only" signs removed. For a long time the Pentagon would be the only place in Virginia where segregation was forbidden.

The diversion of raw materials for war production constrained the major design decision. The choice of a reinforced concrete, rather than a steel structural frame—saving an estimated 43,000 tons of steel—satisfied the Office of Production Management, which had been formed in January 1941 to manage national resources for defense. In the course of construction, nearly 700,000 tons of sand and gravel were dredged from the Potomac, feeding an on-site mixing plant that produced 3,000 cubic yards of concrete a day to be trucked to the pour sites. The building was constructed as a slab, beam, and girder system supported on mostly square spirally reinforced columns; floor spans were 10-foot centers on lower floors and 20-foot centers on fifth floor. The primary structure of the Pentagon is thus a veritable forest of 42,420 concrete columns—a system that does not lend itself to efficient use of interior space.

There were other savings. The Corps of Engineers' official history notes that to reduce steel requirements concrete ramps were substituted for passenger elevators. Concrete drainpipes were used. There were no bronze doors, copper ornaments, or metal toilet partitions, "no unnecessary ornamentation, no fountains, no 'marble constructing the Pentagon halls.'" Except for some 6-inch bases and just ten pieces of stringer facing, no marble was used in the building; indeed, Roosevelt personally had forbidden it. Vogel remarks that the designers even spent extra to *remove* marble "so as to give [the building] an appearance of frugality." Yet while the builders of the Pentagon strained at gnats they swallowed camels. Certainly they legitimately "minimized or avoided using critical war materials," but the impression of thrift they attempted to convey by minor details was overwhelmingly contradicted by the grossly wasteful overall design.

There were human costs as well. The urgency contributed to an inordinate number of industrial accidents—four times the average for Army construction projects. Generally, they were also of a more serious nature than normal. It has been commented that "speed seemed more important than safety." There were even several rumors that workmen were accidentally buried in the foundations.

As noted, building the Pentagon started as a rush job that became more urgent after the bombing of Pearl Harbor. Separate construction crews were assigned to each of the five "wedges." As a wedge was finished, Army personnel

moved in. By the end of April 1941, the first 600,000 square feet were handed over to the Ordnance Department, and the entire building was completed in just 16 months, by January 15, 1943. Normally, a structure of that size took 4 years to finish. The earlier construction phases were disrupted by (among other things) the decision to add an extra floor, late delivery of reinforcing steel, and strikes by ironworkers and plumbers. Besides that, as Yonatan Lupu writes,

Various members of Congress attempted to curry favor with voters by persuading Somervell to construct the building using materials . . . from their home districts. The Commission of Fine Arts hoped to turn the courtyard in the center of the Pentagon into a “training ground for aspiring muralists and sculptors,” a proposition that today seems quaint and quixotic.⁸

Stanley Nance Allan, a tradesman employed on the site, recalled 60 years later:

We carpenters and several thousand other workmen, comprised the basic construction team—surveyors, drilling rig operators, laborers, water boys, iron workers, cement finishers, stone masons, plasterers, painters, roofers and special technicians. Electricians, plumbers and steamfitters were hard to find. By [1 December 1941] 4,000 men were working three shifts. . . . [Following Pearl Harbor] the number . . . increased to a peak of approximately 15,000. . . .

Workers of all ages, with various useful skills and experience, poured in from all over the region. Well paying construction jobs were just beginning to become readily available after the long years of the Depression. . . . Drinking [and] gambling . . . during lunch breaks or after work on the job-site was forbidden. The on-site union shop stewards for all trades saw to it that everyone was paying their monthly dues. We worked 40 hours each week [for] the union wage of \$1.625 an hour. There was occasional overtime to get ready for a large concrete pour early the next morning.⁹

THE PENTAGON INSIDE AND OUT

With the largest ground area of any office building in the world, the Pentagon covered 34 acres. It had three times the floor area of the Empire State Building and 17.5 miles of corridors. The building consists of five concentric pentagonal ranges, five stories high, around a 5-acre central courtyard. Each of its almost featureless 80-foot high outer walls is over 920 feet long, pierced (except at the top story) with rectangular windows. They are built of reinforced concrete (although nonloadbearing), faced with Indiana limestone and backed with brick. The ranges, separated by interior courts that serve as light wells, are connected by ten radial corridors. The external walls of the inner ranges (also nonstructural) are in-situ, off-the-form concrete; Groves thought that brick would expedite construction, but Bergstrom’s “insistence” on concrete

added \$650,000 to the cost—a bagatelle, given the total outlay. Originally each floor was painted a different color: the first was earthen brown, the second green, and the top three were red, grey, and blue, respectively. The sloped roofs of the innermost and outermost ranges were covered with mottled green Vermont slates, for camouflage purposes; the intermediate ranges had built-up roofing on flat concrete slabs. Ramps and escalators as well as stairs provided access between floors; a dozen elevators were reserved for freight and high-ranking officers.

The huge building housed staff numbers equivalent to over two-thirds the then-population of Arlington County that was almost incomprehensible. One war-time employee recalled, “There was a restaurant, several cafeterias, a beauty parlor, barber shop and many of the conveniences of a small village. There was even a hospital and doctors in residence.”

Three hundred policemen doubled as firefighters. There were 4,000 clocks and 17.1 acres of window glass. Four women were assigned to change the 6,000 light bulbs that burned out daily. [The Pentagon] contained 68,000 miles of telephone wires, and the switchboard could accommodate a city of 125,000 people. A pneumatic tube system rapidly transmitted messages around the building. Each of the five radial intersections on each floor contained a beverage bar. At these, the lunch counters, and cafeterias, 7,000 people could eat and drink at the same time. Fifty-five thousand meals were served daily. During good weather, secretaries could eat their lunches in the . . . center courtyard.¹⁰

During the Cold War there was an apocryphal story about that courtyard. Through satellite surveillance the Russians reportedly saw U.S. military personnel coming and going from the 1980s hotdog stand at its center and thought it led to an underground bunker. It was rumored that a Soviet nuclear ICBM was aimed at the stand, earning it the nickname “Café Ground Zero.” Allegedly, it was painted with a huge bull’s-eye—a grim joke that became tasteless after the events of September 11, 2001. The café was replaced in 2007.

Some employees arrived at the Pentagon by taxicab or in their own cars; the parking lots, though not as large as Somervell wanted, provided for 8,000 vehicles. But most commuted by bus across the Potomac to a “multi-lane main concourse that allowed twenty-eight buses to unload at one time.” Their work schedules were staggered to ease traffic congestion. Lee writes that at first they resented the journey and, together with much of the population of Washington, hated the building:

Washingtonians, accustomed to thinking in terms of gargantuan, were talking in awe of the largest air-conditioned structure and biggest office building in the world. The new design was confusing to [them]. Early in its construction, Pentagonians claimed the designer went mad after its completion; others argued that he was insane before he designed it. [They] called the complex Pantygon

(because you walked your pants off), and Washingtonians referred to it as Hel-langon, because it seemed so remote from the rest of [the capital.]¹¹

Richard Halloran wrote in *The New York Times* in 1982, “Physically and politically, the Pentagon is the butt of endless jokes” and ungrammatically described it as “a low-lying block of concrete that could easily win a booby prize for architecture and has a reputation . . . for being dreary.” Epithets had been attached to it for 40 years; even after it became officially known as The Pentagon, many dubbed it “Somervell’s Folly,” and soon after its completion *The New York Times* labeled it as a “great, concrete doughnut of a building [and] a maze of corridors, courts, ramps and roads.”

The complexity of getting around within the Pentagon is underscored by the following verbatim extract from the *Pentagon Information Kit*, written by one Colonel Tom Moore, and issued by the Office of the U.S. Army Deputy Chief of Staff to its new employees:

Here’s a physical description of the Pentagon: it’s a five sided, five story (plus two basements. . . that we know of . . .) building containing a large central courtyard and five concentric (five sided) rings of offices.

Floors: numbered 1 through 5, except for the basements, which are labeled M (for Mezzanine) and B (for Basement . . .). Note that most people would think of the second floor of the Pentagon as its “main” floor.

Concentric rings: labeled A through E (except in the basement, where there are also ring segments labeled F and G).

Office numbers: starting with 100 and ending with 1099 as one proceeds in a clockwise direction around one of the concentric rings.

Radial corridors: numbered 1 through 10, starting with the radial corridor off the south end of the concourse.

Thus office number 3E210 is on the third floor, in the E Ring, about two tenths of the way around the E Ring in the clockwise direction, starting from the middle of the concourse. The radial corridors go between the concentric rings (and thus radiate outward from the central courtyard) are found where two adjacent sides of the building come together. Oddly enough, the radial corridor numbering and the room numbering are connected. For instance, if you walk down corridor 7 to its intersection with the D Ring, you will find that offices on the D Ring to your left are numbered in the seven hundreds and that offices on the D Ring to your right are numbered in the seven hundreds. Here is your first quiz: find Room BG634A in the Pentagon and report back here. You have ten minutes. (Hint: to make sure you can find your way back to turn in your paper, use a ball of string.)

So “maze” was an appropriate word for *The New York Times* to use. One war-time employee remembered, “People were always getting lost in The Building” (many Pentagon workers still refer to it simply as “The Building”).

He explained, “Since [it] is built in the form of concentric rings, one loses all sense of direction inside of it. Many people had difficulty finding their offices.” Anecdotes about the confusing complexity of the layout abounded. It is said that messengers and delivery boys made their rounds on roller skates or even bicycles. There is also a myth about a Western Union boy who, after being lost in the corridors for 3 days, finally surfaced as a lieutenant colonel. Another tells of a pregnant woman who asked a Pentagon guard to get her to a maternity hospital urgently. “Lady,” he said, “you shouldn’t have come into this building in that condition,” only to be answered, “*I didn’t know* I was in this condition when I came in!”

PENREN: The Pentagon Renovation Program

The Pentagon Renovation Program (PENREN) was prompted not only by terrorist attacks on U.S. government buildings at home and abroad, but also by necessity because the facility was “woefully dysfunctional,” with leaking pipes, asbestos ductwork, a basement floor that in places had subsided by a foot, and electrical and communications systems that had been “incrementally jerry-rigged to bring them up from 1940s standards.” To satisfy modern fire and occupational health and safety codes and to provide up-to-date electrical, air conditioning, and ventilating services, renovations were needed. In 1991 the administrator of General Services transferred ownership of The Building to the Secretary of Defense.

The Defense Department’s stated goal was to achieve by 2014 (later revised to 2010) “a completed project that has uniform and compatible materials and systems that are economic to maintain.” It was estimated that the complex PENREN—the project of its kind in the United States—would cost \$1.8 billion. In combination, the building’s size and the complexity of its services, the need to temporarily relocate personnel, and not least the issues of national security called for careful logistical planning that would include temporary offices for about 20 percent of the building’s occupants at any one time; master planning, budgeting, and replacement of all supporting utility lines into the building; some new facilities on the exterior of the building; relocation of some facilities and the renovation of the entire building—all while keeping it in operation.

A concept plan was approved in 1990: the Pentagon would be renovated in five stages, each dealing with a one million square-foot “wedge”: the basement would be fixed separately. Although exterior walls and windows would be upgraded “to provide a measure of resistance to extreme lateral pressures” (read, bombing), the otherwise ubiquitous renovation would not affect the basic structure, including the stairwells. The most significant work would include the total replacement of all partitions to create flexible open-plan offices—a big call, given the extremely tight column grid at the lower levels—and new

ceilings and floor finishes. The complete gutting of The Pentagon was dictated by the "wide-spread presence of asbestos"; there was an estimated 58,000 tons of asbestos-contaminated material throughout the building. The replacement of the plumbing was prompted by the "high probability of catastrophic failure." The renovation program expansively promised to provide

new mechanical, electrical, and plumbing systems, sprinkler systems, vertical transportation, cable management systems, improvements in fire and life safety systems, and flexible ceiling, lighting, and partition systems. [It] will also provide accessibility throughout for persons with disabilities and will include the addition of over fifty elevators. It will preserve historic elements, upgrade food service facilities, construct co-located operation centers, install modern telecommunications support features, comply with energy conservation and environmental requirements, reorganize materials handling, and provide safety improvements in vehicular and pedestrian traffic.

When the Pentagon's obsolete heating and refrigeration plant, located in a separate building, ceased to be serviceable in 1989, the owners had rented temporary replacements. As the first phase of renovation, new plant was installed in 1998. Renovation of part of the basement on the main building, started in October 1994, was completed in 1999; design of the remaining basement reconstruction began in 1997.

Transformation and Tragedy

The design of Wedge One renovations began in January 1994, and construction started 4 years later. The journal *Program Manager* succinctly reported in January 2002, "Wedge 1 is the chevron-shaped space accessed by Corridors 3 and 4, encompassing all five floors of the Pentagon. . . . Structural demolition and the abatement of hazardous materials began in 1998, followed by the installation of new utilities and the build-out of tenant areas. A phased move-in of tenants began in February 2001." In September 2001 a new team of architects, engineers, and builders had begun construction work on Wedge Two. What happened next was, of course, unforeseen.

A little after 9:30 A.M. on September 11, 2001, terrorists intentionally crashed a hijacked American Airlines Boeing 757 into Wedge One at 500 mph. In one sense, that point of impact was fortuitous, but in every other, tragic. Sixty-four people on board the airliner and 125 Pentagon employees were killed; 110 other people were seriously injured. The jet hit at the ground floor of the external range and penetrated to the central range; together with the explosion and consequent fire, it demolished all five stories and created a 100-foot wide hole. But "the collapse, fatalities, and damage were mitigated by the Pentagon's

resilient structural system. Very few upgraded windows installed during the renovation broke during the impact and deflagration of aircraft fuel." *Civil Engineering* magazine reported that the steel framing that had been added to concrete walls of the Pentagon's held them up for approximately half an hour before they collapsed allowing many staff on the floors directly above the impact to escape the building unharmed. Two-inch-thick blast-resistant windows limited flying glass; and Kevlar-type cloth that had been applied between steel beams to the insides of the external walls arrested fragments that imploded.

Most of the work in the Wedge One phase, completed at a cost of \$258 million, was utterly destroyed. Within a week the PENREN awarded a contract for the "Phoenix Project"—reconstruction of the damaged building. Offices that were only slightly damaged were reoccupied within about 3 weeks, and the unsalvageable areas were demolished by November 19. Symbolically, the reconstruction was completed on schedule on September 11, 2002; it cost \$526 million, around \$200 million under budget. In March 2003 the tenants returned to Wedge One offices. Another \$758-million contract was let for the design and construction of Wedges Two through Five; the nature and extent of the work was the same, and the schedule was revised. Despite the setback, PENREN managers were confident that they would achieve their "overall schedule for completion of the Pentagon in December 2012."

NOTES

1. Rybczynski, Witold, "The Office," *New York Times Sunday Book Review* (June 10, 2007), 1.
2. "The Language of War" broadcast on "America's Defense Monitor." www.cdi.org/adm/Transcripts/345/
3. Oddy, Jason, "Shock and Awe Central," *Independent on Sunday* (March 30, 2003).
4. www.washingtonpost.com/wp-srv/local/2000/pentagon0426.htm
5. "Architects Scolded," *Time* (February 11, 1929).
6. Vogel, Steve, "How the Pentagon Got Its Shape," *Washington Post* (May 26, 2007).
7. Stanley, Alessandra, "Italy's Fascist Buildings in Style, and for Sale," *New York Times* (July 12, 2000).
8. Lupu, Yonatan, "Building the Pentagon—In a Hurry and Over Budget," *San Francisco Chronicle* (June 10, 2007).
9. Allan, Stanley Nance, "Building the Pentagon." www.chilit.org/Papers%20by%20author/Allan%20-%20Pentagon.HTM

10. Lee, R. Alton, "Building the Pentagon," *USA Today*, 121(January 1993).
11. Lee

FURTHER READING

- "Access to the World's Largest Building: The War Dept.'s Pentagon, Washington." *Engineering News-Record* (March 25, 1943), 68–72.
- Alexander, David. *The Building: A Biography of the Pentagon*. St. Paul, MN: MBI Publishing; Zenith Press, 2007.
- Carroll, James. *House of War: The Pentagon and the Disastrous Rise of American Power*. Boston: Houghton Mifflin, 2006.
- Fine, Lenore and Jesse A. Remington. *U.S. Army in World War II. The Technical Services the Corps of Engineers: Construction in the U.S.* Washington, DC: Office of the Chief of Military History, U.S. Army, 1972.
- Goldberg, Alfred. *The Pentagon: The First Fifty Years*. Washington, DC: Historical Office, Office of the Secretary of Defense, 1992.
- "Government Office Building at Arlington, Virginia, for War Department: The 'Pentagon Building'." *American City* (March 1943), 44–45. See also *Architectural Forum* (January 1943), 36–52 and *Architectural Record* (January 1943), 63–70.
- Hunkele, Lester M., Julian Sabbatini and Gary Helminski. "The Pentagon Project." *Civil Engineering*, 71(June 2001), 38–45.
- McDonnell, Janet A. "Constructing the Pentagon." In Barry W. Fowle, ed., *Builders and Fighters: U.S. Army Engineers in World War II*. Washington, DC: Office of History, U.S. Army Corps of Engineers, 1992.
- Ross, F.E. "Architectural Concrete Work on Pentagon Building (War Department), Washington." *Architectural Concrete*, 9(no. 1, 1943), 17–21.
- Vogel, Steve. *The Pentagon: A History: The Untold Story of the Wartime Race to Build the Pentagon—and to Restore It Sixty Years Later*. New York: Random House, 2007.



Courtesy Associated Press

Sears Tower, Chicago, Illinois

“One more mountain”

The Chicago area is an architect magnet. To begin with, as will be shown, the city is rightly regarded as the home of the skyscraper. It is the location of the best work of the “father on modernism”—Louis Sullivan—especially the Auditorium Building (now Roosevelt University). More than 80 years after the event the international design competition for the *Chicago Tribune* building still provides fodder for architectural scholars. And many projects by the German-American arch-Modernist, Ludwig Mies van der Rohe, including his highly influential steel-and-glass high-rise apartment blocks and the Illinois Institute of Technology campus, are in the “Windy City.” The list of great architects and architecture goes on. Not least, in Oak Park and River Forest—now nearby suburbs—stand the early seminal works of the incomparable Frank Lloyd Wright. The region is replete with icons for architects. But, as has been pointed out elsewhere in these essays, the meanings of icons are in people.

The Sears Tower, for many years the tallest building in the world, is presented to the wider public as an icon of Chicago. Asserting that the building’s unusual shape immediately gave it a place alongside John Hancock Center and Marina City as the Chicago skyscrapers most frequently illustrated on souvenirs, the *Chicago Tribune*’s architecture critic Paul Gapp asked, “Is this a bizarre index for archaeologists of the distant future?”—whatever he meant by that. Although architectural historian Dale Allen Gyure sees the “large and impressive” Sears Tower as an “unmistakable symbol of the city’s pride in its heritage as the birthplace of a uniquely American concept, the modern skyscraper,” he observes that it did not quite capture the hearts of Chicago’s citizens in the way that the John Hancock Center did. But he *does* allow that it “epitomizes the bustling prairie metropolis that Carl Sandburg called the ‘City of Big Shoulders.’” Indeed. As the building’s designer put it: “Tall buildings are man-made. Towers have historically been not only the pride of their temporary owners, but of their cities as well. So the Sears Tower, one more mountain, was created for this city on the plains.” And who should know better than its architect?

Besides, each year about 1.3 million tourists take the 45-second elevator ride to the Sears Tower Skydeck. On the 103rd story it is the highest observatory in Chicago. From 1,353 feet above the city streets, on a clear day those visitors can see, not quite forever, but for 50 miles across Michigan to Indiana, Illinois, and Wisconsin. Those who care for such an adventure can experience how the building sways 6 inches from the center on a windy day. A second Skydeck, four floors lower, is used when it is closed; access to the Skydecks is through a separate tourist entrance, added in 1985.

DOES BIGGER MEAN BETTER?

The “race for the sky” began a very long time ago in the Tigris-Euphrates Valley. The book of Genesis recounts, “As people moved toward the east, they

found a plain in Babylonia and settled there. They said to one another, 'Let's make bricks and bake them thoroughly.' They used bricks as stones and pitch as mortar. Then they said, 'Let's build a city for ourselves and a tower with its top in the sky.'” Early in the twentieth century there was in America (really only in New York City) intense rivalry for the tallest building status. At first the race was between the 927-foot Bank of Manhattan Trust Company on Wall Street, completed in April 1929, and the 1,048-foot Chrysler Building on 42nd and Lexington Avenue, whose architect, 6 months later, held a last-minute surprise in store, when he added (in just an hour and a half) the distinctive prefabricated spire that made it not only New York's, nor America's, but the world's tallest building. But both towers were surpassed in May 1931 by the 1,472-foot Empire State Building, which held the record for 42 years. It was succeeded by New York's World Trade Center 1 (tragically destroyed on September 11, 2001). The Sears Tower, opened in 1974, was 3 feet higher again. And it wasn't in New York.

When the twin Petronas Towers in Kuala Lumpur, Malaysia, were completed in 1998, their spires extended 30 feet higher than the Sears Tower roof. This led to an international argument over which building was taller. The U.S.-based Council on Tall Buildings and Urban Habitat (CTBUH), whose mission is to “study and report on all aspects of the planning, design, and construction of tall buildings,” controversially relegated the Sears Tower to not second tallest, but third (presumably because there were *two* Petronas Towers, albeit joined by a skybridge at the forty-first floor), and pronounced Petronas as world's tallest. Consequently (as though it really matters), CTBUH devised four categories of “tallness” for “habitable buildings”—defined as framed structures with floors and walls throughout.

Thus in 1999 the Sears Tower held first place in the “highest occupied floor” and “height to the top of the roof” categories; Petronas held “height to the structural or architectural top (including spires and pinnacles, but not antennas, masts or flagpoles)”; and the World Trade Center held “height to the top of antenna”—a distinction that was lost in 2000 when the Sears Tower added a new broadcast antenna.

Completed in April 2004, Taiwan's Taipei 101 immediately toppled all the records except that held by the Sears Tower. Everything is expected to change again with *Burj Dubai* (Dubai Tower); due to be opened in 2009, it will reach 2,684 feet at the top of its spires. Other Middle Eastern buildings presently in course of construction will go even higher. Jealous competition between developers means that their projects are shrouded in secrecy. *Al Burj*, also in Dubai, may extend to 3,937 feet high; another is the proposed 3,284-foot *Burj Mubarak al-Kabir* in Kuwait, part of a vast 25-year development, *Madinat al-Hareer*, and the proposed Murjan Tower in Manama, Bahrain, will be 3,353 feet high.

It is worth commenting that this race to the sky puts Frank Lloyd Wright's unrealized 1956 design for the mile-high “Illinois” skyscraper in a different

light from when it was first exhibited. Wright, America's greatest architect and then almost 90 years old, hated skyscrapers; he had called New York an "incongruous mantrap of monstrous dimensions!" Wright's own extensive, generally ground-hugging *opus* included only three tall buildings, each innovative in its way. Two were built: the fifteen-story Johnson Wax laboratory tower in Racine, Wisconsin (1944–1950) and the nineteen-story H.C. Price Company Tower in Bartlesville, Oklahoma (1952–1956). The third—the mile-high tower—was visionary.

Wright intended the skyscraper to be the focal point of his theoretical Broadacre City that he had begun planning in the 1920s. As its name implied, Broadacre was essentially a spreading horizontal project, but Wright later decided that even it would benefit from a tall building as a cultural and social nucleus. The foundation of the mile-high tower was massive, a deep rooted inverted-tripod column; it supported a tapering tower with cantilevered floors (all ideas Wright had used before). To reach the upper floors, Wright proposed atomic-powered elevators that could carry one hundred people. The 528-story building, designed for Broadacre City but intended for Chicago, would have housed one hundred thousand people. Had it been realized, it would have been the tallest building in the world. In 1956 it was neither technologically nor economically feasible. But now?

"THE MOST DISTINCTIVELY AMERICAN THING IN THE WORLD"

Only seldom, whether for ideological, political, or pragmatic reasons, has a society produced a new building type that was the product of invention, rather than convention. Even the earliest Christian basilicas had precedents in pagan society. William Starrett, the contractor who built (among many other skyscrapers) the Empire State, called the building type "the most distinctively American thing in the world." The term first had been used in an *American Architect and Building News* article 45 years earlier, referring to structures whose form expressed "that peculiar refined, independent, self-contained, daring, bold, heaven-reaching, erratic, piratic, Quixotic, American thought." The skyscraper was an invention in which those qualities were recognized, not least by deeply interested Europeans.

A network of necessities gave birth to the tall commercial building. By about 1870 America was becoming an urban industrial nation, and Chicago, then the country's fourth largest city, was a major focus of that change. Historian Carl Smith writes that since the Civil War Chicago had been the greatest railroad city in the world.

The level landscape that surrounded it for miles may have lacked stunning beauty, but it helped make Chicago the ultimate railroad nexus. . . . [The] trains carried not only people, but also massive amounts of grain, meat, lumber and

other commodities, as well as a rapidly expanding volume of manufactured goods, establishing Chicago as the country's great inland mercantile and industrial metropolis.¹

Most of Chicago's buildings were wooden, so fires were a constant problem; in fact, there were over six hundred in 1870. But the devastating conflagration that started on October 8, 1871, swept through 73 miles of streets in just 30 hours, killing about three hundred people, leaving one hundred thousand homeless and many more jobless. It destroyed eighteen thousand buildings, causing \$200 million in property damage—one-third of Chicago's total value—and many fortunes were lost. The Great Fire was catalytic—but only catalytic—in combining existing theoretical and structural innovations to form a new architecture. The style that historians have dubbed “Chicago School” was born of the will of pragmatic clients with eyes on the bottom line. Constrained by commercial factors, not least the soaring land prices (a 600 percent increase from 1880 to 1890), their architects created a new building type and, as someone has said, within a couple of decades of the Great Fire downtown Chicago became “the wonder city of the Western world, its famous Loop the laboratory in which to study innovative commercial architecture.”

Designed by Daniel Burnham and John Wellborn Root, the ten-story Montauk Block (1882) for Brooks Brothers of Boston—who insisted that it must be “for use and not for ornament”—was the first building to be called a “skyscraper.” Like the same architects' twelve-story Rookery (1885–1886) and their sixteen-story Monadnock Building (1889–1891), it employed load-bearing brick construction. The fact that the Monadnock's ground-level external walls were 6 feet thick, wasting the most valuable floor space, demonstrated that traditional technology was unsuited to the tall building. The economic imperative of real estate value was met by the technological potential of “metallurgical architecture.” What would soon develop was a tall office building with a metal frame—first of iron and later of steel—entirely covering its site; the large windows made possible by nonstructural walls provided ventilation and daylight that penetrated well into the interior. The electric elevator—a wonder of the age—gave efficient, time-saving access to upper floors.

Chicagoan William Le Baron Jenney pioneered the technique. His evolving ideas may be seen in the “simple, glass-enclosed cage” of his first Leiter Building (1879) followed by his nine-story Home Insurance Building (1884–1885), the first in which an iron frame replaced self-supporting external walls. The latter demonstrated the potential of skeleton construction. Iron had long been used for ornament and architectural hardware, but not for structure. And engineers, free of the aesthetic formalism that hobbled architects, had applied cast- and wrought-iron to bridges and utilitarian buildings. If architects *did* use iron framing, it was out of sight or in such frivolities as John Nash's Royal Pavilion at Brighton (1818–1821). Henri Labrouste's National Library in

Paris (1862–1868) showed how the metal column offered structural flexibility and a new proportion, and Eiffel and Boileau's Bon Marché department store in Paris (1867) showed how iron and glass lent themselves to commercial spaces. As early as 1848 the New Yorker James Bogardus had been experimenting with iron construction, and low-rise commercial buildings with cast-iron fronts and even cast-iron frames proliferated in American cities between 1850 and 1880.

Iron had two great disadvantages: in fires, it failed at relatively low temperatures; and it had little tensile strength. The first issue was easily addressed: building frames could be encased in fire resistant material. Steel, readily available in large quantities of predictable strength after 1875 (though also needing fire protection), would overcome the second problem. Burnham and Root's entirely steel-framed Rand McNally Building (1889–1890) freed the skyscraper from masonry and created "the plan and structure of the [modern] urban office block." The firm followed it with the fourteen-story Reliance Building (1890–1894). Its first four-story stage, designed by architect Charles B. Atwood and engineer E.C. Shankland, has claim to being the first example of the comprehensive system known as "Chicago construction:" a riveted steel frame with plaster fire-proofing, carrying hollow-tile flooring on steel joists. The projecting windows—"Chicago windows"—had a fixed central pane with opening side lights above terracotta spandrels. The other technological invention that literally underpinned the skyscraper was the development of a foundation design method to provide for the concentrated loads imposed upon the earth.

As noted, a safe, efficient mechanical vertical transportation system was also imperative. Steam-powered traction elevators had been used in Britain since 1835. In America, Elisha Graves Otis installed the first steam-powered passenger elevator in 1857, and by 1873 over two thousand commercial buildings throughout the country had Otis systems. The German Werner von Siemens applied an electric motor to a rack-and-pinion elevator in 1880. Motor technology and safe control methods evolved rapidly, and 7 years later an elevator was built in Baltimore that moved the cage by means of a cable wound on a drum. Otis' direct-connected geared electric elevator was first used in New York City in 1889.

The technology of the skyscraper had been established. But what of an appropriate aesthetic for a new building type? Although tall buildings were nothing new, in an age when architects looked to precedents, the skyscraper had none. As noted, it was distinctly American. In the Old World, most nineteenth-century architects were slow to reflect the significant social changes that sprang from the Industrial Revolution and continued to poach historical styles. The French theorist Eugène Emmanuel Viollet-le-Duc (1814–1879) was not among them; he insisted that new materials must be used in accordance with their properties and honestly expressed in the form of the building. His widely published and translated ideas had an impact in Chicago just

when America was beginning to recognize that it was different from the Old World. Whitman, Emerson, and Greenough had called for a home-grown architecture. Some sources cite Henry Hobson Richardson's Marshall Field Wholesale Store (1885–1887) as the stylistic model for the Chicago School. Jenney, though a structural innovator, had less success in expressing the framed building; he began to address the issue in three Chicago projects, the second Leiter, Fair Store, and Manhattan buildings, all completed by 1891. But better answers were provided by others.

David van Zanten hails Louis Sullivan as the “master of the skyscraper.” The Borden Block (1879–1880) by Sullivan and Dankmar Adler had been among the first tall buildings to repudiate solid wall or heavy pier construction. But their first work that exclusively used metal framing, the Wainwright Building (1890–1891) in St. Louis, Missouri, is probably the best prototype of the skyscraper aesthetic. Van Zanten writes,

It was a ten-story box, as all rental “skyscrapers” were at the time, but it showed its bones as no office building had before. Sullivan’s tour de force was to make the exterior transparent of the interior functions. He wrote about this innovation in an 1896 article “The tall office building artistically considered,” in which he gave modern architecture its famous dictum: “Form ever follows function.”

The first floor was intended to house shops, which required wide openings on the street. The second floor would have public offices . . . with direct access to the first floor by stairs. Above the second floor would soar a stack of floors with identical windows. Sullivan called each office “a cell in a honeycomb . . . nothing more.” A closed floor screening the water tanks and the building’s machinery would crown the top.

And finally, the Wainwright Building is supported by a thin steel skeleton . . . whose even grid pattern is evident in the equally spaced piers marking the broad window fields of the exterior. The column-like piers stretch vertically, closely spaced to draw the eye upward. This communicates what Sullivan considered the final distinguishing characteristic of a building: its verticality. He once declared, “It must be in every inch a proud and soaring thing.”²

Sullivan insisted that the façade should include a base (public floors), a shaft (any number of identical upper floors) and a capital (a pronounced cornice crowning the composition). Although he denied that this articulation reflected the column of classical antiquity, the connection is inescapable. All our endeavors, in whatever field, are built upon what we already have.

THE GERMAN CONNECTION: THE SECOND CHICAGO SCHOOL

In 1919 the German architect Walter Gropius, having been appointed director of the Academy of Fine Art and the Academy of Arts and Crafts in Weimar,

amalgamated them to create the National Bauhaus with a focus on improving applied and industrial design. His initiative was influential, probably beyond his expectations; for example, 3 years later the Association of Arts and Industries was established in Chicago “to further the application of good design in industry” and to facilitate keener competition with European products.

In 1924 the social-democratic government of the Weimar Republic was replaced by a conservative party who slashed the Bauhaus’ funding and revoked its teachers’ contracts. The school moved to Dessau. When Gropius resigned the directorship 4 years later the communist Swiss architect Hannes Meyer succeeded him and introduced architecture into the curriculum. In 1930 a German, Ludwig Mies van der Rohe (Mies), one of the pioneers of Europe Modernist architecture, replaced Meyer. At the end of 1932 the National Socialist (Nazi) government moved the greatly reduced Bauhaus to Berlin-Steiglitz. The Nazi’s persistent intimidation compelled Mies to announce its closure in August 1933. The current and former staff—most were on the political left and many were Jewish—fled Germany.

In 1937 the Chicago Association of Arts and Industries invited Gropius to establish a school in Chicago to continue the work of the Bauhaus. But he had already accepted an appointment at Harvard, so he recommended the Hungarian *Bauhausler* László Moholy-Nagy to head the “New Bauhaus: American School of Design.” Classes began in October; sadly, financial and other problems led to its closure in a year but in another form it became the Institute of Design, subsumed in 1949 by the Illinois Institute of Technology (IIT). But that is another story. In 1938 Mies arrived in Chicago to assume the role of director of Architecture, Armour Institute of Technology (later IIT) and commenced a private architectural practice. The Art Institute of Chicago exhibited his work, December 1838 to January 1939. These three significant Bauhaus teachers—two of them in Chicago—soon gathered former colleagues around them; their presence changed the approach to architecture and design in their new homeland—and indeed, much further abroad.

According to Mies’ biographer Franz Schulze, “the origins of the Second Chicago School are traceable to two powerfully interactive factors: the advent of modernist architecture as a whole in America and Mies’ arrival.” Mies undertook the extensive redevelopment of the IIT campus, construction of which began toward the close of World War II. In the late 1940s the developer Herbert Greenwald commissioned him to design several high-rise apartment blocks, and Mies “came to regard structure in the abstract as the most important objective of the building art” more than the plan or elevational treatment.

Schulze points out that Mies’ dual influences—as a teacher and as an architect to be copied—made themselves “felt most in Chicago” and

by the late 1950s . . . the first works suggesting the presence of a Miesian school had been realized. Nonetheless, as the fifties passed into the sixties, the term “Miesian” seemed too personal to accommodate a growing body of Chicago

architecture indebted to him but not directly imitative of him, and the notion of a *Chicago* school gained currency. . . . In some quarters an effort was made to show a kinship with what had come to be regarded as a *first* Chicago school, centering on the metal cage and undecorated (or nearly undecorated) frame of the building. Nevertheless, there are as many differences of expressive intent as similarities between the two groups.³

Mies' own second Chicago School buildings include the definitive glass-and-steel apartment towers at 860-880 Lake Shore Drive (1951), the Federal Center (1964–1971), and the IBM Building (1971). Other firms associated with the school include C. F. Murphy Associates, who in the 1960s and 1970s designed most of the buildings at O'Hare International Airport; Loeb, Schlossman, & Bennett, architects (with others) of the Richard J. Daley Center (1965); and Harry Weese—it has been said that no tall building in the city has a façade more typical of the Chicago frame than his Time-Life Building of 1969.

But probably the first large firm to put up the high-rise glass-and-steel buildings that demonstrate the main features of the second Chicago School was Skidmore, Owings, & Merrill (SOM). Now an international architectural and engineering megafirm, SOM was established in Chicago in 1936 by architects Louis Skidmore and Nathaniel Owings; 3 years later they were joined by architect/engineer John Merrill. The following year they opened a second office in New York, where in 1952 they completed their first “international style” skyscraper, Lever House. The practice has designed many of the world's tallest buildings including the 1,400-foot Jin Mao Tower in Shanghai (1998) and the *Burj Dubai*, already mentioned, scheduled for occupancy in September 2009.

They also built the Sears Tower. The partners responsible for the project were architect Bruce J. Graham and structural engineer Fazlur Rahman Khan, assisted by Srinivasa (Hal) Iyengar. Graham believes that his professional collaborations with Khan “grew not only because of sympathetic aesthetic preoccupations or the mutual respect with which [they] regarded each other, but also out of [a] vision of the city, of the city beautiful, the purpose of cities and of the pride of human existence.”

BRUCE GRAHAM (1925–): “SIMPLE STATEMENTS OF THE TRUTH”

Graham was born to a Canadian father and Peruvian mother in La Cumbre, Colombia. His early education was gained in San Juan, Puerto Rico, after which, with a scholarship at the University of Dayton in Ohio, he studied civil engineering for 2 years. He joined the U.S. Navy in 1942 and returned to study after World War II, receiving a bachelor's degree in architecture from the University of Pennsylvania in 1948. Graham then worked in the Chicago architectural firm of Holabird, Root, and Burgee from 1949 until 1951, when

he joined SOM's Chicago office. He was made a partner in charge of design in 1960 and over the next 30 years specialized in high-rise commercial buildings in Chicago. The first was the Inland Steel Building (1958), a "second Chicago School" skyscraper. Oral historian Betty J. Blum writes,

Graham's contribution has profoundly shaped and irrevocably changed the character of [Chicago]. Set squarely in the [city's] tradition of structural innovation, Bruce sees his work as a straight-line development that pushes the existing boundaries and clarifies and refines the structural components of architecture. . . . In his own words, [he] describes the cultural framework and personal driving force by which his design production has been guided, as "clear, free of fashion, and simple statements of the truth."⁴

Over thirty of Graham's designs at home and abroad won awards. Among the Chicago projects were the Hartford Building (1959), the Brunswick Building (1965; now the Cook County Administration Building), the John Hancock Center (1970; see sidebar), the Sears Tower—of course—and Holy Angels Parish Church (1990). Elsewhere in the United States he was honored for (among others) the First Wisconsin Center Bank, Milwaukee (1974); Sixty State Street, Boston (1977); and Citicorp Plaza, Los Angeles (1985). In England, where he was awarded honorary membership of the Royal Institute of British Architects, he designed the Boots Company Headquarters in Nottingham (1968), W.D and W.O. Wills Corporation building in Bristol (1974), and London's Canary Wharf Master Plan (1988). He produced the Banco de Occidente in Guatemala City (1977).

Retiring from SOM in 1989, Graham moved with his wife Jane to Hobe Sound, Florida, where they established an architectural practice. He was elected a fellow of the American Institute of Architects (AIA) in 1966 and named an honorary member of the Royal Architects Institute of Canada and the Institute of Urbanism and Planning of Peru.

FAZLUR RAHMAN KHAN (1929–1982): "EINSTEIN OF STRUCTURAL ENGINEERING"

Receiving his early education in Calcutta, India, Khan obtained a first-class degree from Shibpur Engineering College in 1950. After working as an assistant engineer in the India Highway Department and as a teacher at Ahsanullah Engineering College in Dacca, East Pakistan (now Dhaka, Bangladesh), in 1952 he won Ford Foundation and Fulbright scholarships. He enrolled at the University of Illinois at Urbana-Champaign, where in 3 years he earned two master's degrees (in theoretical and applied mechanics and structural engineering) and a doctorate in structural engineering. Briefly back in Pakistan, he was appointed executive engineer of the Karachi Development Authority but "frustrated by administrative demands that kept him from design work," he

returned to America in 1955 and joined SOM's Chicago office. In 1961, he was made a participating associate; in 1966 he became an associate partner and a general partner 4 years later. In 1967 he became a naturalized U.S. citizen.

One of his biographers, Richard Weingardt, claims that during the second half of the twentieth century Khan ushered in a renaissance in skyscraper construction and characterized him as "a pragmatic visionary" who

epitomized both structural engineering achievement and creative collaborative effort between architect and engineer. Only when architectural design is grounded in structural realities, he believed—thus celebrating architecture's nature as a constructive art, rooted in the earth—can "the resulting aesthetics . . . have a transcendental value and quality." . . . Fazlur Khan was always clear about the purpose of architecture: . . . [He believed that] "the technical man must not be lost in his own technology. He must be able to appreciate life; and life is art, drama, music, and most importantly, people."⁵

Another critic asserts that "[Khan's] contributions and innovative approach to tall building design and attention to aesthetic details . . . have been so significant that he has been called 'the Einstein of structural engineering' and 'the father of modern skyscraper.'" Among his works for SOM were the DeWitt-Chestnut Apartments (1964), the Brunswick Building, the John Hancock Center, the One Magnificent Mile building (completed 1983, after his death), and the Onterie Center (completed 1986)—all in Chicago, as well as One Shell Plaza, in Houston (1971). Outside the United States, his best known projects include the Haj Terminal of the King Abdul Aziz International Airport (1976–1981) and King Abdul Aziz University (1977–1978), both in Jiddah, Saudi Arabia. Khan had other claims to fame—he was a philosopher, writer, and educator and during Bangladesh's 1971 War of Liberation "made laudable contributions in creating public opinion and amassing an emergency fund for the misery stricken people of [what was then East Pakistan]." He died from heart failure in March 1982.

Between 1965 and 1979 Khan was cited five times among those who "served the best interests of the construction industry." During his life he was regaled with many other honors, too numerous to list here: honorary doctoral degrees, awards and medals from professional engineering and architectural organizations in America and abroad, and the Aga Khan Award for Architecture in 1973. The same year he was elected to the U.S. National Academy of Engineering. The Government of Bangladesh posthumously awarded him its Independence Day Medal in 1999 and issued a commemorative postage stamp. In 2005 The Bangladeshi-American Foundation named him the twentieth century's most famous Bangladeshi-American.

When in May 1998 the city of Chicago named the street intersection at the base of the Sears Tower "Fazlur R. Khan Way," President Clinton declared, "Drawing on the richness of his Bengali background and the vigor and energy

of American culture, Fazlur Khan pushed the boundaries of modern architecture and dramatically changed the physical landscape of the great city of Chicago.”

“SHOP AT SEARS AND SAVE”

The Sears Tower may be iconic because of its superlative height, but it enjoys that status because it is—or was, when it was built—the *Sears* Tower.

The firm of Sears, Roebuck, and Company, now superseded by Sears Holdings, remains an American icon; its fame is international, spread throughout the English-speaking world through references in pervasive—dare one say invasive—American culture. And on the U.S. domestic stage, as Boris Emmet and John E. Jeuck expansively write, the company has “intrenched itself in the American mind, idiom, humor, and folklore to an extent unequaled since Paul Bunyan and probably unsurpassed in the commercial history of the nation.” Fellow historians Tom Mahoney and Leonard Sloane agreed that “no other company is as close to the heart of suburban and rural America.”

The compelling rags-to-riches story of Richard Warren Sears (1863–1913), one America’s great entrepreneurial geniuses, has been told many times—often with generous embellishment.⁶ At the age of 16 he became his family’s breadwinner; by 1886 he was working as a station agent for the Minnesota and St. Louis Railroad in Redwood Falls, Minnesota. When a local retailer, Edward Stegerson, refused to accept a speculative consignment of cheaply made watches from a Chicago manufacturer, Sears negotiated a private deal to sell them, making \$2 on each watch; within 6 months the young opportunist had made \$5,000 profit.

Moving to Minneapolis, he rented space in the Globe Building and established the R.W. Sears Watch Company, a mail-order business with a potential clientele in isolated rural communities. He began by writing letters to prospective buyers, but to expand his market he soon starting advertising in farm publications and mailing out brochures. In March 1887 he moved his operation to a building on Dearborn Street in Chicago, and a month later he hired self-taught watch repairman Alvah Curtis Roebuck (1864–1948) to fix the many defective watches returned by dissatisfied customers.

The following year he began publishing a catalogue, promoting mostly watches, jewelry, and silverware. But more of that later. Then in 1889 Sears abruptly decided to sell the business for \$100,000, turning a \$72,000 profit. He briefly tried a career in banking in rural Iowa; but soon losing interest, he renewed his association with Roebuck. Two years later, having made “a small fortune” at the age of 28, the mercurial Sears again retired from business; but after only a week he approached Roebuck about again reviving their partnership. In 1892 A.C. Roebuck Inc. was established; it was reorganized and formally incorporated as Sears, Roebuck, and Company a year later. They opened

an office on West Van Buren Street, Chicago, in 1892 and soon after moved into a five-story building on West Adams Street. When they quickly outgrew that building, they again moved in 1896, this time to the Enterprise Building at the corners of Fulton, Des Plaines, and Wayman Streets. By then, Roebuck had left the partnership. The astronomical growth of business over the next 6 years made successive extensions necessary; in addition to its headquarters, the company also rented buildings throughout Chicago to house its merchandise. That was obviously an unsatisfactory arrangement.

“THE NATION’S WISH BOOK”

Of course, the key to Sears and Roebuck’s success was the catalogue, carefully, persuasively, and not always truthfully written by Sears himself. It has been claimed that at the turn of the century it had become one of the two books read in rural America. For the “working poor and the geographically isolated” the products it described were the stuff of dreams. The 1891 R.W. Sears Watch Company catalogue had presented a meager thirty-two pages of watches with an eight-page insert of jewelry and sewing machines. The 1892 edition added several pages of testimonials from many contented customers; the next edition had 196 pages. By 1895 the restructured firm was distributing a 532-page book—popularly known as “The Farmer’s Bible” and “The Nation’s Wish Book”—which included many other items: to name a few, “shoes, women’s garments and millinery, wagons, fishing tackle, stoves, furniture, china, musical instruments, saddles, firearms, buggies, bicycles, baby carriages and glassware.” Groceries and patent medicines were added in 1896. At its peak in 1915, the general merchandise catalog contained one hundred thousand items in twelve hundred pages and weighed four pounds. Its grateful audience was still rural America, millions of consumers who otherwise had access only to their local general store, which offered a narrow range of goods marked up to outrageous prices for their captive clientele. In many towns, children were converted to bounty hunters, promised a free movie ticket for every Sears catalog they brought into the local store to be destroyed.

During the 1890s the durable, long-lasting catalogue items, such as bicycles, cream separators, and sewing machines were the most popular, so to keep merchandise prices low Sears, Roebuck relied on high turnover of less durable, lower unit-price lines. Customers were offered the opportunity to purchase C.O.D., but all orders initially required a one-dollar “good faith” deposit. There was also a money-back guarantee, an idea copied from the older rival mail order firm, Montgomery Ward. In 1893 Sears, Roebuck’s sales passed \$400,000; 2 years later the figure had grown beyond \$750,000.

With impeccably bad timing (but because of ill health) in 1895 Roebuck sold his interest to Sears for \$25,000. At his partner’s request, for the next 4

years he managed, as a salaried employee, the watches and jewelry side of the business, and later the Home Entertainment Department. Meanwhile, he “pursued other interests,” serving as president of the Emerson Typewriter Company and establishing a manufacturing company and a motion picture equipment company, which he sold in 1924. He semiretired to Florida, where he invested in real estate. But following his losses in the crash of 1929 he returned to Chicago to rejoin Sears, Roebuck—again as a nonexecutive employee—where he devoted his time to promotion and compiling a history of the firm’s early days. He died in June 1948.

Following Roebuck’s departure in 1895, Sears offered a half-partnership to Aaron Nusbaum, the owner of a pneumatic-tube company. Nusbaum in turn interested his brother-in-law, Julius Rosenwald, a successful Chicago men’s clothing manufacturer. In 1896 Rosenwald, who “brought a rational management philosophy to the firm,” became a vice president, and in 1901, treasurer. When Sears took on his new partners the company’s annual turnover, as noted, was \$750,000; 5 years later, sales reached \$11 million. In 1900 about eight hundred fifty-three thousand catalogues were distributed to Midwestern and Western households. “The success of the company was helped by fortuitous timing; railroads were expanding across the United States . . . and the Rural Free Delivery Act, which went into effect in 1896, guaranteed the catalogs would be delivered to every single American home, no matter how remote.” However, there was friction among the partners. Nusbaum’s indecisiveness was a major problem, and at Sears’ insistence, Rosenwald and he bought out Nusbaum in 1901.

Constrained by unchecked growth, 3 years later Sears, Roebuck purchased about 42 acres in North Lawndale on Chicago’s west side and commissioned architects Nimmons and Fellows to design a complex of buildings “so large that they were compelled to ask the City Council of Chicago to close streets so that they might build over them.” Beginning in late January 1905 Rosenwald oversaw the construction of the complex, that included a five-story Administration Building (1905–1914) and a nine-story Mail Order Plant—the world’s largest commercial building at the time—with almost 70 acres of floor space. It adjoined the 225-foot, fourteen-story Sears Merchandising Building Tower (1906), the “tallest office building in the U.S. west of Chicago’s downtown.” There was also a six-story Merchandise Development and Laboratory Building (1906), where the catalogues were printed; and the largest private power plant in Chicago. By 1906 Sears, Roebuck was the largest mail-order business in the world; with annual sales approaching \$50 million, it was capitalized at \$40 million and had about nine thousand employees. In that same year, needing to raise additional capital, Sears and Rosenwald for the first time sold stock on the open market.

Alarmed by an economic depression in 1907 that caused a 4 percent drop in sales, Sears wanted to spend more on advertising. He and Rosenwald fell

out over the matter, and as a result, “opposed not only by his partner but by men he had personally trained” in 1908 he resigned as president. Appointed chairman of the board, he attended only one meeting before retiring to his farm north of Chicago. He later sold his shares to the Wall Street investment bankers Goldman, Sachs for \$10 million. When he died in Waukesha, Wisconsin, in September 1914, he left an estate estimated at \$25 million.

“THE GENERAL’S GENERAL STORE”

On Sears’ resignation, Rosenwald was named president. He continued in that role until 1924, when he became chairman of the board, a position he held until his death in 1932. Marketing expert Robert Blattberg observes that “Rosenwald created a structure that allowed Sears to be successful,” noting that while “Sears was a great marketer, but he didn’t really have the internal structure to turn Sears into what it became. Julius Rosenwald . . . was the genius behind the company.” According to the corporation’s official history, Rosenwald resolved that the company’s “primary goal must be responsibility to the customer. He established the ‘satisfaction guaranteed or your money back’ pledge and conducted his business dealings by the creed ‘Sell honest merchandise for less money and more people will buy.’”

Sears, Roebuck had opened branches in Dallas, Texas, and Seattle, Washington, but, although annual sales reached \$235 million by 1920, the growth of the mail-order industry was slowing. After the Great War the company faced financial problems. “Rosenwald pledged some \$21 million of his personal fortune to rescue the company [and] by 1922, Sears had regained financial stability.” The next important player in the firm’s history was the former acting Quartermaster General Robert Elkington Wood (1879–1969).

In 1919 Wood had joined Sears’ rival Montgomery Ward as its general merchandise manager, later becoming a vice president. In 1924, after disagreeing with the older executives, he left Ward’s to become vice president of Sears. Wood recognized the retailing trend that would lead to the modern regional shopping mall and successfully expanded Sears’ business into regional stores that were easily accessible to the automobile. The company opened its first such store in 1924; 5 years later there were over three hundred across America. Wood was made president in 1928 and maintained the company’s growth through the Great Depression. In 1931 Sears, Roebuck established the Allstate Insurance Co., an automobile insurance business that soon became “one of its parent company’s fastest growing and most profitable divisions.” It later added life insurance to its portfolio. In 1939, Wood became chairman of the board at Sears, and within two years annual sales reached almost \$1 billion. He remained at the helm during World War II, adding success to success. Following the war, *Time* magazine reported,

Six years ago [while] other merchandisers pulled in their horns in fear of the “inevitable” post-war recession, Wood launched the greatest expansion in merchandising history [spending \$300 million] to open 92 new Sears stores in the U.S. and Latin America, and enlarged and shifted the locations of 212 more. . . . Wood’s faith in the expanding American economy—aided by the backlog of demand for goods built up during World War II—was more than justified. Last year Sears sold [\$2.78 billion] worth of goods. . . . Its estimated net profit was \$113 million. Sears is now the sixth biggest corporation . . . in the U.S. Besides its mail-order business, which is run from eleven plants, Sears has 691 stores in 47 states, Hawaii and four foreign countries.⁷

Sears’ 1952 spring and summer catalogue, sent to 7.2 million customers, had thirteen hundred pages offering one hundred thousand different items. By the time Wood retired in 1954, annual sales had passed \$3 billion and Sears was America’s leading retailer.

A NEW HOME

In 1969 Sears, Roebuck had become *the world’s* largest retailer, with almost \$9 billion in annual sales and about three hundred fifty thousand employees. The directors decided to consolidate their thirteen thousand Merchandise Group employees, then scattered in offices throughout the Chicago area, into one building at 233 South Wacker Drive on the western edge of the Loop. The company’s immediate office space needs of three million square feet, “efficiently designed to house the small army,” would be provided on sixty floors. According to a 1973 *Time* article, “Sears recently retired chairman, Gordon Metcalf [said]: ‘Being the largest retailer in the world, we thought we should have the largest headquarters in the world.’”

But the genesis of the Sears Tower is more complicated than that. When the company decided to leave its sprawling old headquarters on Chicago’s deteriorating West Side, height was the furthest thing from the executives’ minds. They had bought a two-block plot on the western edge of Chicago’s Loop and approached the problem of building the headquarters in exactly the same way as they planned any of Sears’ stores throughout the world—from the inside out.

The company began by studying its space needs, down to the number of desks for personnel. Then it projected its office requirements to the year 2003. Next, Sears hired the New York design firm of Environetics to recheck the projections, draw floor plans, and figure out where every department should be located in relation to every other department. The result was . . . “a building profile”—a jagged shape that looks like a child’s random construction with wooden blocks of varying sizes. When this interior scheme was shown to the building’s architect, Bruce Graham . . . , he gasped: “How do you expect me to design around that!”⁸

Graham recalled that Metcalf “wanted to build downtown.” It was not so much to occupy a monument—in fact the building that they had in mind was only sixty stories high, but with a massive floor area. Graham convinced his client that with such a plan the building would be difficult to sell if Sears should ever move out. Sears’ projected expansion demanded more space, which could be let to small businesses until the company took it up; but to be marketable, that leased space could not occupy “super-floors,” and the building needed a higher window to floor space ratio and access to services.

In the event, Sears’ growth projections were overoptimistic. By the 1970s, although annual sales had reached \$10 billion, and Sears was about to move into its new headquarters, it was facing increasing market competition from its traditional rivals and even more challenges from discount retail chains such as Kohl’s, Kmart, and Wal-Mart. Within 30 years Sears’ Chicago area workforce would shrink by thousands. Neither was there demand for rental space in Sears Tower, competing as it had to with other 1980s developments in Chicago. After unsuccessful attempts to sell the building, in 1989 Sears resorted to other means to offload its “white elephant.” In November Stanley Ziemba wrote in the *Chicago Tribune*:

Having removed the “For Sale” sign . . . Sears, Roebuck & Co. now faces a problem it had hoped to avoid—finding a new anchor tenant. When Sears’ 6,000-member Merchandise Group moves [in 1992], the company will have to find one or more firms to lease the 1.8 million square feet of office space in the 110-story skyscraper that the retailing division will be vacating.

Sears could have avoided the problem had it sold the building outright, leaving a new owner stuck with the task. Sears tried to sell the Tower. In fact, a sale to Toronto-based developer Olympia & York Developments Ltd. for \$1.04 billion appeared imminent last summer, but fell through in the fall. Sears could find no other takers. The firm now is said to be seeking an \$850 million convertible mortgage—in other words, taking its equity out of the building while retaining at least partial ownership.⁹

He pointed out that Sears would be vacating 1.8 million square feet of space—equivalent to two major office towers—and noted that its configuration limited its market appeal to “large insurance companies, banks, engineering firms and maybe . . . accounting or architectural firms.” He added, “Most other office users, such as law firms, [need] lots of private offices with windows. Not too many people can be next to or near a window on a 50,000-square-foot floor.” According to one source, the ownership of Sears Tower has changed several times since 1992, although the company has retained the naming rights for the building, which is now occupied by many different companies, including “major law firms, insurance companies and financial services firms.”

In 1992 Sears retreated to the northwest suburbs. Now, Sears Holdings, occupying a state-subsidized low-rise corporate headquarters “campus” in

Hoffman Estates, Illinois, is America's sixth-largest retailer, managed by an eight-person board of directors chaired by Edward S. Lampert. It was formed in March 2005 by the merger of Sears Roebuck and Co. and Kmart. The combined companies operate more than thirty-eight hundred stores. In 2006 Sears Holdings reported revenues of \$53 billion and net income of \$1.49 billion.

But what of the architecture?

Sears' architectural brief was extended to 4.5 million square feet of office space. Graham later recalled, "[Gordon Metcalf] said that he didn't want any of those damn diagonal things like the Hancock building. So by this time, I was working with Fazlur Khan on a lot of tube buildings. . . . It's very efficient." The concept of a tube-framed skyscraper—a structure in which a rigid screen of perimeter columns braces the building and allows open floor plans—was first applied at SOM's The Plaza on Dewitt (1966). At about the same time, SOM—that is to say, Graham and Khan—developed the double-tube in the Brunswick Building. It employed a tube-within-a-tube structural system in which the core and perimeter are hollow, rigid tubes that brace the building and allow column-free interiors. Khan took the principle further in the John Hancock Center and, of course, the Sears Tower.

The Sears Tower is in fact a *bundle* of steel tubes. It has been explained by what might be called the "cigarette analogy." Many claims have been made to its authorship, but the uncertainty makes it no less apposite. One source says that "Bruce Graham . . . told the story that when he was trying to think of a design for the . . . Sears Tower in Chicago, he was playing with a bunch of cigarettes at his desk. Soon, he realized that if you bundle up the cigarettes, they made a stronger tower than a single cigarette." According to Graham himself, "We had built so many single tubes that I took out my cigarettes and I said to Faz, 'Why don't we build a whole bunch of little tubes that stop at different heights?'" But *Time* magazine gave Khan the credit: "Fazlur Khan, illustrates the concept by grasping a bundle of nine upright cigarettes." In 1998 Graham disclosed that "originally there were more tubes, it wasn't just nine. The original design had six more tubes, so it was fifteen, a series of tubes going up and down."

Whatever the case, each cigarette represented a separate 75-foot square building, the nine inherently strong, rigid square "tubes" form the Sears Tower's basic structure. By combining all nine tubes the building needs less structural steel than a conventional tower. In fact the first fifty floors are nine interdependent tubes, followed by floors made of seven tubes, then five tubes in cruciform format; the top ten floors consist of just two tubes. This gives the Sears Tower its form that one critic called "a driftwood carving by some giant." Graham's and Kahn's ingenious building—then the world's tallest—met Sears's needs. Graham explained,

The stepback geometry of the 110-story tower was developed in response to the interior space requirements of Sears, Roebuck and Company. The configuration incorporates the unusually large office floors necessary to Sears' operation along with a variety of smaller floors. The building plan consists of nine 75 x 75 foot column-free squares at the base. Floor sizes are then reduced by eliminating 75 x 75 foot increments at varying levels as the tower rises. A system of double-deck express elevators provides effective vertical transportation, carrying passengers to either of two skylobbies where transfer to single local elevators serving individual floors occurs.¹⁰

The client and the City of Chicago approved the design, and on July 27, 1970, the retailer "trumpeted its plans for the world's tallest building." Construction commenced almost immediately; the first steel was placed in April 1971 and the structure was completed in May 1973. The tower cost in the order of \$150 million, equivalent to about \$1 billion today.

For those who need more detail, the project has been analyzed by Michael W. Su of Princeton University School of Architecture:

[The foundation] begins about 100 feet below grade with a concrete mat foundation . . . supported by 200 rock caissons bored to reach the bedrock another 100 feet below. [The bundle of nine "framed tubes" is] bound together by, individually, deeply-sectioned spandrel girders, and collectively, one- and two-story tall belt trusses. . . . The tubes fall away with height—rather like a rocket shedding booster stages . . . only two reach [the full height.] Although framed tube structures are materially very efficient, their fabrication is more complicated. For the Sears Tower, steel sections of . . . about three horizontal bays and two stories high were especially prefabricated in the controlled environment of a shop. . . . These column-girder trees . . . were then hoisted into place and simply bolted to each other. Construction was also accelerated by the use of an innovative flooring system of [eighty-foot span trusses, about three feet deep, bolted to preformed concrete slabs.]¹¹

The completed tower received a mixed critical reception. In 1974 Paul Gapp wrote, "What we have here is a building whose exterior profiles are a bold, vital, and exciting departure from orthodox mediocrity; in sum, a finely engineered piece of sculpture, even if its interior is largely nondescript."¹² But 11 years later he was singing a different tune: "Even the shape became a bit of a bore after the novelty wore off, and the building's setbacks (which do not begin until the 50th story) never yielded the dramatic tapering quality of older skyscrapers. . . . But while the design was visually unsatisfying *from the start*, it fell short in other respects, too" (emphasis added).¹³

As to the "largely nondescript" interior, Graham still later recalled that when the architectural critic Ada Louise Huxtable visited the Sears Tower "before they made the changes on it—because the remodeling that has been done is anti my ideas—she said it was the only democratic high-rise building she ever saw.

And it was. It was very simple, there were no big stainless steel interiors. There were white plastic elevators. And the building was very simple.”

In 1983 Sears, Roebuck and Company commissioned SOM to design \$25 million in renovations to the lower-level, public spaces of the building. Gapp described them:

The most striking change [is] the creation of a large new glassed-in entrance on the Wacker side—a vaulted transparent structure that is 135 feet wide, 60 feet deep and 58 feet tall. It replaces a skimpy little marquee and an exposed outdoor staircase of 21 steps—which was a ridiculous entrance to a tower 1454 feet tall. . . . The other most obvious, costly and complicated change was made on the Franklin Street side of Sears Tower, where floors were pierced to create a large atrium [designed by Bruce Graham.] The five-floor atrium not only makes good marketing sense, but relieves the formerly cramped feeling just inside the Franklin entrance. From outside, however, the entrance still looks like a back door of little consequence. . . .¹⁴

But he still complained: “Sears Tower is simply too big. Its height is excessive. Its worker population and 4 million square feet of floor space on a single city block impose densities that in my judgment are unacceptable.” However, if we may paraphrase George Bernard Shaw, “Those who can, do; those who can’t, criticize.”

When Sears, Roebuck, having failed to sell the building, moved to Hoffman Estates in 1992, it engaged Chicago developer John Buck to manage the tower. He commissioned architects James De Stefano and John Albright to renovate the lobbies and public spaces level yet again—“to warm up the base of Sears without tarting it up.” New canopies were added to the Wacker and Franklin Street entrances, and major changes were made to “humanize” the plaza. Inside, elevator lobbies were moved to a sunken level and the main lobby was enlarged and heightened by relocating most of the shops to the basement, removing the low ceilings and hanging steel “chandeliers” from new 50-foot ceilings. Stanley Ziemba gratuitously offered his opinion. Noting that because of Mies’ influence, “it is hardly coincidental that Sears’ exterior is black and essentially boxy, like Mies’ epoch-defining apartment towers,” and that “it was not for nothing that critics referred to the world’s tallest office building as 110 stories of soaring nonchalance,” he wrote that “the old Sears was one of the most cold and fortress-like towers ever constructed—from some vantage points, a soaring presence on the skyline; from all sides, a dud at street level” and that the mid-1980s changes to the atrium at the Wacker entrance “flopped miserably in its attempt to transform Sears into a pedestrian-friendly office building.”¹⁵

But the last word on the Sears Tower should be left to its creator, Bruce Graham: “The Sears Tower itself is much like the idea behind San Gimignano [della Belle Torre (of the beautiful towers), in Italy], but unlike most tall buildings in New York, it is a tower of the people, not the palace of a bank.”

John Hancock Center, Chicago

In 1989 the architecture critic Paul Goldberger wrote in *The New York Times*, "It is no accident that tiny metal and plastic models of the Hancock Center fly out of the souvenir shops: along with its slightly taller cousin, the Sears Tower, the building is the icon of modern Chicago." Others agree that the one-hundred-story John Hancock Center at 875 North Michigan Avenue, known locally as "Big John" is "probably the Chicagoans' favorite skyscraper." When completed in 1969, it was the tallest building in the world outside New York City (including its TV antennas, it stands at 1,500 feet); surpassed in 1973 by Edward Durell Stone's bland Standard Oil Building (now the Aon Tower), "Big John" remains the fifth-tallest skyscraper in the United States. According to Blair Kamin, the "muscular, structurally expressive" building is a "brooding, X-braced giant that is the city's Eiffel Tower."

Although it is not *solely* a commercial building, the Hancock Center is on the "magnificent mile" in the heart of Chicago's commercial district. When it was built, it was advertised as the only building in the world where people lived above the sixtieth floor; in fact, the forty-eight residential floors start at the forty-fourth. About seven hundred high-status condominiums are served by a heated swimming pool, workout rooms, saunas, "hospitality rooms, receiving room, valet service, mail room, a full-line grocer" and a restaurant on the ninety-fifth floor. From the street upwards: the lowest five levels house commercial tenants; the next seven, parking; and the next thirty-one, offices. The level above the apartments accommodates an observatory; the remainder are occupied by radio and TV broadcasters and mechanical services. According to one critic, "Controversial from the start for its enormous hulk and dark metal cladding, this mixed-use project . . . broke all the rules of its genteel, mostly low-rise Michigan Avenue neighborhood."

The architects Skidmore, Owings, and Merrill (SOM) offered their client, John Hancock Mutual Life Insurance Co., two options: a seventy-story apartment building and a forty-five-story office block located at the northeast and southwest corners of the site, or one very tall tower. Project architect Bruce Graham wrote that the design "was influenced by its unique site."

[The client] insisted on producing a tall building with residences above, offices and commercial uses below. The search for a new kind of structure which would accommodate multiple uses and also express the scale and grandeur of a one-hundred-story tower, lead Dr. [Fazlur] Kahn and me to the diagonal tube. It was as essential to us to expose the structure of this mammoth as it is to perceive the structure of the Eiffel Tower. For Chicago, honesty of structure has become a tradition.

The architect-engineer Kahn developed the structural system employed earlier in 1969 by SOM in San Francisco's Alcoa Building. Paul Clerkin describes "Big John" as "a super-tall steel tube," in which "steel columns and beams are concentrated in the skyscraper's perimeter, and five enormous diagonal braces on the exterior walls . . . give it extra strength in the wind." The structure, with a central service core, needed no interior columns. That had two advantages: it allowed more flexible use of floor space, and it used between 50 and 60 percent less steel than a conventionally framed building. Honestly expressing that system, as Graham said, gave the building its visual distinctiveness. The tower tapers toward the top on all sides, providing additional stability against wind forces. It narrows by a total of 105 feet on the east and west and 65 on the north and south, "in order to accommodate the different floor space requirements [from 40,000 square feet at the base to 18,000 square feet at the top] of a variety of uses. . . ." Graham explained, "The tapered form provides structural as well as space efficiency. The exterior columns and spandrel beams, together with the diagonal members and structural floors, create the steel tube. The diagonals, spandrels and columns are clearly articulated to depict the primary elements of this tube." The black anodized aluminum façade begins at the second floor. The walls at street level were originally clad with white travertine, but this was later replaced with dark granite.

The building stands on only half the lot; an elliptical-shaped pedestrian plaza on Michigan Avenue and formal landscaping occupies the rest. The plaza and the interior were remodeled in 1995. Further modifications were made around 2003. The John Hancock Center has received several honors: the 1970 Office Buildings Distinguished Building Award of the American Institute of Architects (AIA) Chicago Chapter (1970); the 1971 Architectural Award of Excellence, American Institute of Steel Construction; and in 1999 the AIA, Chicago Chapter's 25-Year Award and the AIA's National 25-Year Award.

NOTES

1. Smith, Carl, "Where All the Trains Ran: Chicago," *Commonplace*, 3(July 2003), 1.
2. Zanten, David van, "Master of the Skyscraper," www.neh.gov/news/humanities/2002-03/skyscraper.html. Adapted from *Sullivan's City*, New York: W. W. Norton, 2000.
3. Schulze, Franz, "Architecture: The Second Chicago School," in *The Electronic Encyclopedia of Chicago* (2005), www.encyclopedia.chicagohistory.org/pages/64.html
4. Blum, Betty J., *Oral History of Bruce John Graham*. Chicago: Art Institute, 1998, iv.

5. Weingardt, Richard, "Fazlur R. Khan," in *Great American Civil Engineers, 32 Profiles of Inspiration and Achievement*. Reston, VA: American Society of Civil Engineers, 2005, 78.
6. "R. W. Sears Biography." www.bgsu.edu/departments/acs/1890s/sears/sears2.html
7. "The General's General Store," *Time* (February 25, 1952), cover story.
8. "The Tallest Skyscraper," *Time* (June 11, 1973).
9. Ziemba, Stanley, "Sears Faces Tough Sell Leasing Tower Office Space," *Chicago Tribune* (November 5, 1989).
10. Graham, Bruce, *Bruce Graham of SOM*. New York: Rizzoli; Milan: Electa, 1989, 56.
11. Su, Michael W., "Sears Tower. In-Depth Analysis." www.allaboutskyscrapers.com/sp.sears_tower.htm
12. Gapp, Paul, "The Sears Tower," *Chicago Tribune* (February 9, 1974).
13. Gapp, "Architectural Giantism," *Chicago Tribune* (November 17, 1985).
14. Gapp, "Architectural Giantism."
15. Ziemba, Stanley, "Towering Changes," *Chicago Tribune* (October 10, 1993).

FURTHER READING

- Ali, Mir M. *Art of the Skyscraper: The Genius of Fazlur Khan*. New York: Rizzoli, 2001.
- Ascoli, Peter M. *Julius Rosenwald: The Man Who Built Sears, Roebuck and Advanced the Cause of Black Education in the American South*. Bloomington: Indiana University Press, 2006.
- Asher, Frederick. *Richard Warren Sears: Icon of Inspiration: Fable and Fact about the Founder and Spiritual Genius of Sears, Roebuck & Company*. New York: Vantage Press, 1997.
- "Bigger May be Better: Chicago's Sears Tower Is Nine Skyscrapers in One." *Architecture Plus*, 1(1973), 56–59.
- Condit, Carl W. *The Chicago School of Architecture*. Chicago: University of Chicago Press, 1964.
- Danz, Ernst. *Architecture of Skidmore, Owings & Merrill, 1950–1962*. New York: Praeger, 1963. See also Axel Menges, *Architecture of Skidmore, Owings & Merrill, 1963–1973*. New York: Architectural Book Publishing Company, 1974, and Albert Bush-Brown, *Skidmore, Owings and Merrill: Architecture and Urbanism, 1973–1983*. New York: Van Nostrand Reinhold, 1984.
- Dixon, John Morris. "The Tall One." *Architectural Forum*, 133(July-August 1970), 36–45.
- Emmet, Boris, and John E. Jeuck. *Catalogues and Counters: A History of Sears, Roebuck and Company*. Chicago: University of Chicago Press, 1950.
- Graham, Bruce. *Bruce Graham of SOM*. New York: Rizzoli; Milan: Electa, 1989.
- Huxtable, Ada Louise. *The Tall Building Artistically Reconsidered: The Search for a Skyscraper Style*. Berkeley: University of California Press, 1992.

- Ingersoll, Richard, et al. "The John Hancock Center, Chicago, Illinois." *Design book review: DBR* (1988), 15–34.
- Jaquet, G. Jake. "The Remapping of an Icon." *Inland Architect*, 36(July 1992), 59–62.
- Khan, Fazlur. "The Future of Highrise Structures." *Progressive Architecture*, 53(October 1972), 78–85.
- Khan, Yasmin Sabina. *Engineering Architecture: The Vision of Fazlur R. Khan*. New York: Norton, 2004.
- Lindgren, Hugo. "Sears Tower." *Metropolis*, 14(November 1994), 25–30.
- Marlin, William. "Sears Tower: The Mail-Order Approach to Urban Form. . . ." *Architectural Forum*, 140(January-February 1974), 24–31.
- Mertins, Detlef. "Interview with Bruce Graham." *SOM Journal*, 2(2003), 152–165.
- Mills, Raymond A. *The Sears Tower: A Spectator's View*. Tucson, AZ: Wheatmark, 2007.
- Oharenko, John. *Historic Sears, Roebuck and Co. Catalog Plant*. Charleston, WVA: Arcadia, 2005.
- Pridmore, Jay. *Sears Tower*. San Francisco: Pomegranate, 2002.
- Stoller, Ezra, and Yasmin Sabina Khan. *The John Hancock Center*. New York: Princeton Architectural Press, 2000.
- Weil, Gordon L. *Sears, Roebuck, U.S.A.: The Great American Catalog Store and How It Grew*. Briarcliff Manor, NY: Stein and Day, 1977.
- Winter, John. "John Hancock Center, Chicago; Architects: Skidmore Owings & Merrill." *Architectural Review* (April 1972), 202–210.



Courtesy Library of Congress

Statue of Liberty, New York City

"A changing icon"

The huge copper-clad statue of “Liberty enlightening the world” (in French, “*La liberté éclairant le monde*”) stands on Liberty Island in New York Harbor. Lady Liberty, as she is popularly known, is draped in a voluminous classical *stola* and tunic; her pre-Raphaelite head is crowned with a seven-spiked diadem. Her fully upstretched right hand lifts a flaming torch; her left hand, hanging at her side, carries a tablet emblazoned with “4th July 1776” in Roman numerals; broken chains lie useless at her sandaled feet. The figure is over 152 feet high; including its broadly detailed granite pedestal, it rises to 303 feet. The Statue of Liberty National Monument was listed on the National Register of Historic Places on October 15, 1966. In 1984, it was added to UNESCO’s World Heritage List because it represents “a masterpiece of human creative genius” and is “directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.”

The statue’s *raison d’êtres* were political, complex, and not altogether American. The *intended* meaning of the Statue was unequivocal. Its French proponents wanted to send a message to European peoples (especially their own) about enlightened republican government, as exemplified in the United States. In 1875 its major sponsor, historian Édouard René Lefèvre de Laboulaye, called it a “monument of independence.” That objective was confirmed by its sculptor, Frédéric Auguste Bartholdi, who in a U.S. patent application of January 1876 described the figure as “a commemorative monument of the independence of the United States,” reinforcing the point by drawing attention to the tablet inscribed with the date of the Declaration.

In a twenty-five cent pamphlet published as a souvenir of the Inauguration of the Statue of Liberty—although half of it was advertisements for everything from sewing requisites to an amazing range of snake oil cures and even Buffalo Bill’s Wild West Show—Bartholdi wrote floridly of his (literally) *magnum opus*,

May God be pleased to bless my efforts and my work, and to crown it with the success, the duration and the moral influence which it ought to have. I shall be happy to have been able to consecrate the best years of my life to being the interpreter of the hopes of the noble hearts whose realization was the monument to the French-American Union.¹

But though it was conceived in those terms, “a simple accident of location” (to use historian Elizabeth Koed’s words) would very quickly transmute it into an icon of America’s welcome to Europe’s displaced masses. David Glassberg asserts that “in an era of global mass communication . . . it is a symbol representing abstract ideals of freedom and liberty to peoples around the world.” He suggests that each successive *political* meaning, assigned by others than its original sponsors, supplanted the preceding one: it has been, in turn, an icon of the abolition of slavery; of national unity; of economic opportunity;

of global political freedom; and (since the September 11 attacks) of the resilience of the people of New York City.²

THE LAMP BESIDE THE GOLDEN DOOR

Often the wider public spontaneously identifies a significance that displaces the one contrived by an object's designers. With just 105 words the poet Emma Lazarus forever enshrined the statue as an icon of welcome, economic opportunity and political freedom for Europeans fleeing crushing poverty, religious or political persecution, or war. In the first half of the nineteenth century five million of them came to America. By 1905, the *annual* number had passed one million.

In 1883 the New York Republican politician William Maxwell Evarts, chairman of the American Committee of the Statue of Liberty—more will be said of that body later—invited Lazarus to write a piece for a fund-raising event, the awkwardly named “Art Loan Fund Exhibition in Aid of the Bartholdi Pedestal Fund for the Statue of Liberty.” At first she declined but, thanks to the persuasiveness of her friend Constance Cary Harrison, her sonnet, “The new Colossus,” appeared in the catalogue. Even for someone far removed from the project in time, space and experience, it is deeply stirring. The meaning of a “welcoming mother, a symbol of hope to the outcasts and downtrodden of the world” was attached to the statue only in the twentieth century. According to the Jewish Women's Archive,

The famous sonnet echoes many of the conflicting identities and ideals Lazarus dealt with in her own life. As an American author, she felt that ancient lands could keep their old traditions and “storied pomp.” At the same time, Lazarus invoked her ancient Greek ideals by transforming the “brazen giant” into a “Mother of Exiles” who retains Greek majesty, beauty and defiance as a *new* Colossus. The compassion of the lines “huddled masses yearning to breathe free” welcomes the tired immigrants, but the following image of the “wretched refuse of your teeming shore” hints at the condescension these refugees were to suffer. And while this Mother of Exiles' eyes command, and she stands alone beacon to all the world, she is still an ambiguous figure of power, speaking only with “*silent* lips.”

Struggling beneath the poem's surface, these tensions—between ancient and modern, Jew and American, voice and silence, freedom and oppression—give Emma Lazarus' work meaning and power. As James Russell Lowell wrote her, “your sonnet gives its subject a *raison d'être*.”³

Emma Lazarus died of cancer in 1887, at the age of 38. Apart from occasional republication in New York newspapers, her poem was largely forgotten for about 20 years. In May 1903 her friends, philanthropist Georgina Schuyler and editor Richard Watson Gilder, having waded for 2 years through

bureaucratic obfuscation, successfully lobbied to have a bronze plaque bearing the text of “The new Colossus” displayed on a second floor landing within the great statue’s pedestal—not necessarily because of the sentiment it expressed—in fact, Schuyler had never read it—but in memory of its author. The plaque remained virtually ignored for more than a generation. But as the Great Depression and then Nazism and Fascism drove many Europeans from their homelands, the sonnet was revived, recited in radio broadcasts across the United States, and even set to music by Irving Berlin. “It ultimately melded with the statue itself as a source of patriotism and pride,” reaching a climax during World War II. Thus, although the Statue of Liberty had not been conceived as a symbol of immigration, its association with Lazarus’ sonnet rewrote its role to become the greeter of immigrants because it expressed what the statue itself had wordlessly communicated to the world’s oppressed people for six decades. In 1986 the “New Colossus” plaque was moved to an introductory exhibit inside the pedestal.

A TANGLED SKEIN

The origins of the Statue of Liberty lie in a tangled skein of history, myth, and romantic vision. The simplistic version, accurate enough, is that the generous people, not the government, of France presented the monument as a gift to the people, not the government, of the United States as a gesture of enduring friendship, in celebration of the centenary of America’s independence from Britain, and to honor her “cherished [republican] ideals of freedom and opportunity for all.” But the motivation was far more complicated and included, perhaps even as a priority, a deliberate statement of a republican ideology in France.

There is an oft-repeated tradition that the gift was first discussed in summer 1865 by a small gathering of French politicians literati and artists and at a dinner party in Édouard de Laboulaye’s home at Glavingny near Versailles. It must be noted that the single source of that claim is a fund-raising pamphlet written by Bartholdi; other historians believe that the plan was conceived in 1870 or 1871. Through the 1860s de Laboulaye, the so-called ideological father of the statue, and his circle, opposed to Emperor Napoléon III’s authoritarian rule, sought to establish a liberal democratic republic. The Emperor was deposed in September 1870 during the Franco-Prussian War. But monarchist sentiment lingered—as it seems to do in ex-monarchies—and many people expected, even desired, the rebirth of constitutional authoritarianism, at least in some form. De Laboulaye was elected to the *Assemblée Nationale* and sponsored the creation of the Third Republic. So the Statue of Liberty was conceived because he and other French Republicans wanted to present their “sister” republic as a tangible focus of republican virtues. Marvin Trachtenberg asks, “What better way to cement their image of France . . . than with a

truly grandiose monument linking the history and destiny of France with the great modern republican state, the America that had not only triumphed over its internal enemies but was ascendant in every sphere, already marked to be one of the great world powers?”⁴

Several Freemasons were among the initiators of “*La liberté éclairant le monde*”: Edmond and Oscar de Lafayette (grandsons of Washington’s comrade-in-arms), the Marquis de Noailles, the Marquis de Rochambeau, historian Henri Martin, and others. Taken with the ideas he probably had shared with them, de Laboulaye and his peers turned to Bartholdi to create what they believed would be a powerful political machine for shaping French government and society. There is evidence that the sculptor himself embraced republican ideals, but it is likely that he was more attracted by the opportunity afforded his personal artistic aspirations. To find meaning in the Statue of Liberty, those aspirations and their sources must be understood.

LIBERTY AND IMMENSITY

Frédéric Bartholdi was born in the Alsatian city of Colmar in 1834, the younger son of a civil servant and wealthy landowner Jean-Charles Bartholdi and his wife Augusta Charlotte. When Jean-Charles died 2 years later, his “stern and possessive” widow moved to Paris. During Frédéric’s childhood they often visited Alsace, and he developed a deep affection for the region; he studied drawing with Martin Rossbach in Colmar. In Paris he studied architecture with the rationalists Henri Labrouste and Eugène-Emmanuel Viollet-le-Duc, both pioneers in the use of iron-framed structures. And an ever-widening interest in art led him to take painting lessons with the classical portraitist Ary Scheffer; he learned to sculpt in the ateliers of Jean-François Soitoux and Antoine Etex, creator of the huge “Peace” and “Resistance” groups on the *Arc de Triomphe*. Thus, well-trained, well-connected, and well-heeled, Bartholdi fit almost anywhere into the elite world of art. When he was only 18 years old he secured his first public commission: his 12-foot tall bronze portrait of Colmar’s Napoleonic hero, Lieutenant-General Count Jean Rapp, was completed in 1856.

In that same year, on an extended vacation with the orientalist painters Léon Belly, Narcisse Berchere, and Jean-Léon Gérôme, Bartholdi navigated the Nile in a rented boat, visiting the Pyramids and the Sphinx at Giza, the expansive temple complex at Thebes, and the colossal statues of Ramses II at Abu Simbel. The experience elevated his artistic aspiration from the larger-than-life, as in the Rapp portrait, to the gigantic as he sketched, photographed, and made notes about the ancient works that so excited him. About 30 years later, when he had revisited Egypt, he wrote in rapturous terms of the profound emotions that he felt “in the presence of these colossal witnesses, centuries old, of a past that to us is almost infinite, at whose feet so many generations,

so many million existences, so many human glories, have rolled in the dust. These granite beings, in their imperturbable majesty, seem to be still listening to the most remote antiquity.”

Although “academic scruples” prevented Bartholdi from simply copying Egyptian art, its colossal grandeur overwhelmed him, and he began to dream of emulating it in his own work. On returning to France, his reputation established by the Rapp statue, for the next decade Bartholdi received no commission that called for such monumentality. But his career as a sculptor of patriotic monuments—on a decidedly smaller scale—was launched. Many of his projects were in Colmar: a statuette of Martin Rossbach (1856); a memorial fountain to Admiral Armand-Joseph Bruat (1856–1864); and a portrait of the fifteenth-century German painter and engraver Martin Schongauer (1861–1863).

One anonymous assessment of this phase of Bartholdi’s career identifies him as “a proficient lobbyist for his own artistic ambitions.” Certainly as early as 1867 he demonstrated his entrepreneurial adroitness in a proposal made to the Ottoman Khedive of Egypt, Ismail Pasha. Conceived 8 years earlier by the former French Consul in Cairo, Ferdinand de Lesseps, the Suez Canal was completed during Ismail’s administration; it would be opened to shipping in November 1869. The Khedive boasted, “We are now part of Europe. It is therefore natural for us to abandon our former ways and to adopt a new system adapted to our social conditions,” and when he visited the Paris *Exposition Universelle* of 1867, Bartholdi laid before him a scheme for a colossal statue-cum-lighthouse at the Canal’s southern end, which the sculptor tentatively had named “Progress” or “Egypt Carrying the Light to Asia.” Such a monument would draw attention to Ismail’s efforts to modernize his nation.

Descriptions and sketches of Bartholdi’s proposal vary widely. It has been claimed that his ideas were a synthesis of the Egyptian colossae he admired so much and other ancient models, notably the so-called wonders of antiquity, the Rhodes Colossus and the Pharos at Alexandria, which were also beacons. A friend of the sculptor recalled seeing a drawing of “a beautiful woman clothed in the ancient style, with a headdress [*nemes*] in the style of the Egyptian sphinx. . . . The right arm carried the lamp of a lighthouse, the left arm fell along the side of the body.” Sketches and maquettes proliferated; some showed the torch raised by the *left* arm; others showed the beacon in the headgear, rather than in the flambeau.

For the next 2 years, certainly not discouraged by the Khedive, Bartholdi experimented with the pose of the figure. Late in 1869 he attended the extravagant opening ceremonies of the Suez Canal as a member of the French delegation. He showed his developing design to de Lesseps, who offered “polite encouragement” but warned him that Ismail, enthusiastic as he may have been about the statue, could not afford it. Indeed, Ismail continued to lead Bartholdi on but never offered a commission. When the project was shelved the sculptor, disappointed, returned to France.

During the Franco-Prussian War of 1870–1871, Bartholdi served in the *Garde Nationale*, as commander at Autun and as a major in the defense of Colmar. The Prussian annexation of Alsace deeply affected him, and he frequently revisited the theme of French heroism in his subsequent works. Remarkable among them was the “Lion of Belfort,” finished in 1880 and honoring the 103-day stand taken by only seventeen thousand valiant men, mostly civilians, against forty thousand German soldiers. Doubtless drawing upon the ancient sphinx at Giza, the 75-foot long, 40-foot high stylized animal was carved from blocks of local sandstone on a ledge in the cliff below Belfort Castle. Bartholdi intended that it should look defiantly toward Prussia, but for political reasons that was changed. Bartholdi began his work on the Statue of Liberty while still creating the Lion.

Believing that the centennial of the Declaration of Independence would be the most fitting time to commemorate the France–U.S. friendship, de Laboulaye sponsored a visit to America by Bartholdi, during which the sculptor could canvass the proposal and find a site for the monument. On June 8, 1871, Bartholdi, accompanied by an artist friend and bearing letters of introduction from the Glavingny republican group, sailed aboard the French mail steamer *Pereire*. He later recalled—or reinvented—his patron’s words of encouragement:

“Go to America, study it, bring back your impressions. Propose to our friends over there to make with us a monument, a common work, in remembrance of the ancient friendship of France and the United States. We will take up a subscription in France. If you find a happy idea, a plan that will excite public enthusiasm, we are convinced that it will be successful on both continents, and we will do a work that will have a far-reaching moral effect.”⁵

Even before he disembarked in New York Bartholdi identified the perfect location for the statue, “an admirable spot where people get their first view of the New World . . . it is Bedloe’s Island, in the middle of the bay.” The site, Bartholdi later rationalized, was ideal for a couple of reasons: the island, owned by the federal government was on “national territory, belonging to all the states, just opposite the Narrows, which are . . . the gateway to America.” Of course, he could have known none of that as he stood on the deck of the *Pereire*. What he *did* know was that should his statue be erected on Bedloe’s Island, it would be the first structure seen by European immigrants and visitors coming to America.

The islet (officially renamed Liberty Island in 1956) had passed from private hands to the City of New York in the mid-eighteenth century, and later to New York state. In 1800 it was ceded to the federal government, and 10 years later Fort Wood, an eleven-point star-shaped artillery battery was built to defend New York Harbor. The fort subsequently served at various times as a garrison, an ammunition dump, a prisoner of war infirmary, a recruiting station, and sometimes as a quarantine station.

In 1885 Bartholdi would claim that he “formed some conceptions of a plan of a monument” during his trans-Atlantic crossing but “at the view of the harbor of New York the definite plan was first clear to [his] eyes.” The romantic claim perpetuated by many that the artist did not have even a rough drawing of the proposed monument until the moment he first entered Lower New York Bay, then in a flash of inspiration quickly grabbed a brush and paper and made his first notional watercolor sketch of the Statue of Liberty is nonsense. But more of that later. . . .

Acting on de Laboulaye’s advice, for 5 months the “intelligent, warm, persuasive and charming” Bartholdi traveled through the United States, on what he called an “artistic journey through the cities and wild regions as well,” visiting, besides New York, Philadelphia, Washington, D.C., Chicago, St. Louis, Salt Lake City, San Francisco, Niagara Falls—probably to sightsee—and other locations, familiarizing himself with the republic and (of course) promoting his great statue.

He enthusiastically shared his watercolors and a model of his proposal with President Ulysses S. Grant (who responded with indifference); scientist Louis Agassiz; industrialist Peter Cooper, founder of the Cooper Union; John W. Forney, European commissioner for the Philadelphia International Exhibition, that was already in the planning stage; newspaper publisher Horace Greeley; the landscape designer Frederick Law Olmsted; Henry Wadsworth Longfellow; General Philip Sheridan and Brigham Young, founder of Mormonism, as well as other influential figures. Although most seemed receptive, none beside Massachusetts Republican Senator Charles Sumner was willing to make a commitment to the project. Bartholdi returned to France.

WHEN “PROGRESS” BECAME “LIBERTY”

Historian June Hargrove believes that “The Statue of Liberty secured Bartholdi a fame perhaps disproportionate to his artistic talent, but commensurate with his ambition, drive, and showmanship in the promotion of great artistic undertakings.” She adds that though he “aspired to create ‘monuments of great moral value,’ [his true genius was in] exploiting his organizational flair and enthusiasm for technology. His work was well received by his contemporaries, but only Liberty brought him the international recognition he sought.”⁶

So we should read his own account of his achievements in that light. Although his choice of words about how his design for the Statue of Liberty was born, “the *definite* plan was *first* clear,” was careful, the weight of evidence—historical and physical—points to the fact that his design was already well-developed before he arrived in America. Certainly, he had discussed the monument’s general form and scale with the de Laboulaye enclave, and even its detail had begun to firm in his mind and theirs in the second half of 1869.

Even a cursory comparison of the respective preliminary drawings and models demonstrates clearly that “Liberty enlightening the world” is a variation of the abandoned Suez Canal colossus; it might be said, “an attempt to snatch victory from the jaws of defeat” and to redeem what otherwise may be considered to have been wasted effort. So many elements of the works were common: two huge, torch-bearing robed female figures, two lighthouses placed at strategic locations in major sea-routes; two symbolic nineteenth century values, Liberty and Progress, linking two continents.

And in each design the lighthouse was not planned for the torch, which was purely symbolic, but for the figure’s forehead. But Bartholdi strenuously protested—some would say, too much—in a newspaper interview, “The only resemblance . . . is that both held a light aloft. Now . . . how is a sculptor to make a statue which is to serve the purpose of a lighthouse without making it hold the light in the air?” He also denied having executing “anything for the Khedive, except the features of a female *fellah*.” In fact he had produced several maquettes of the Suez monument over a 2-year period.

About 30 years ago, an Australian professor of art history, doubtless courting controversy, dared to suggest that true art must be *only* serendipitous; the implication was, of course, that neither Rembrandt’s “Night watch” nor Picasso’s “Guernica” is art, but art is—wait, the esteemed professor could give not a single example to make his point. The book of *Exodus* tells how Aaron, during the temporary absence of his brother Moses, fashioned a golden calf for the Israelis to worship. On his return to the camp Moses, furious at the orgiastic goings-on that accompanied their idolatry, demanded an explanation. Aaron’s lame excuse? He had acceded to the people’s request for a tangible deity, “So I said, ‘Who has gold?’ And they took off their jewelry and gave it to me. I threw it in the fire and out came this calf.” Out came this calf? Works of art are not serendipitous; they evolve through a process of concept, choice, assessment, and adjustment. That’s how it was with the Statue of Liberty.

Beginning in 1869 or 1870 Bartholdi, in consultation with his patron, developed the form of the statue through several clay study models that were essentially a rehash of “Progress.” He arrived at the approved version toward the end of 1875; in it, he retained the upraised right arm bearing a torch, but of course the Egyptian clothing had to go.

A possible major inspiration for the modifications was a figure on a medalion conceived by Benjamin Franklin in 1782, to promote Franco-American goodwill. “*Libertas Americana*” bore a woman’s head with flowing hair and the Phrygian cap that symbolized freedom. *Libertas*, the Roman goddess of liberty, “usually pictured as a matron in flowing classical dress . . . began emerging in America during the colonial era as part of the American quest for political independence from Britain.” Eschewing the humble cap, even in its earliest versions Bartholdi’s Liberty wore a spiked diadem or aureole, like that seen in classical images of Helios, the Greek sun god; otherwise, her costume

evokes images from Roman antiquity. He seems to have been undecided about what she should carry in her left hand; in the earliest models it was a shattered vase which he next he changed for a broken shackle before (at de Laboulaye's prompting) deciding upon a tablet emblazoned in low relief with "July IV, MDCCLXXVI." Paradoxically, the blocky lettering was not Roman but *sans serif*. In the completed statue the shackle lies near her right foot and its broken chain disappears under the hem of her *stola*. For practical reasons further, less noticeable changes would need to be made.

THE FACE IS FAMILIAR . . .

Although his design was already approved, important details were unresolved when Bartholdi applied for a U.S. patent in January 1876. A drawing apparently lodged with the application shows a very early version of the statue. Intriguingly, it accompanied a bronze cast of the study model in which Liberty's face differed greatly from the final version. Because of lack of documentation the question of whose face it is has never been conclusively answered, but there has been much speculation.

One source insists that Bartholdi's model was Isabella Eugenie Boyer, the beautiful widow of the sewing machine magnate Isaac Merritt Singer. Others believe that the "classical, yet severe and calm, features" belonged to the sculptor's mother. The only evidence is anecdotal and Bartholdi never denied nor explained the resemblance (although that means little enough). Still others claim that Augusta Bartholdi tired quickly when posing because she was about 70 years old, so Bartholdi posed his mistress, Jeanne-Emilie Baheux de Puyieux, for the torso and arms. He met her in Newport, Rhode Island, during his first U.S. visit, and they married in December 1876. Other intriguing but unsubstantiated suggestions as to who was the model include the madam of a Paris brothel and an anonymous glove shop proprietor from Nancy, France.

In 1998 there was a widespread flurry of conjecture, apparently springing from earlier and insupportable claims made by Leonard Jeffries of New York City College, that Lady Liberty's primary purpose was to commemorate the African Americans who fought in the Civil War. In that connection, it was rumored that a black woman was the model for the face. An extensive investigation of the statue's early history, led by National Park Service (NPS) anthropologist Rebecca M. Joseph, cagily pronounced that though it was impossible to say whether Bartholdi's design evolved from his earlier sketches of Egyptian women, there was no evidence of any intention to make special reference to the abolition of slavery. The report commented that Bartholdi, acting in character, "cast the project in the broadest terms, hoping to encourage additional commissions." Then, he always had an eye to the main chance.

REALIZATION

The next phases of the project were, of course, interdependent: the transformation of a four-foot maquette into an immense reality, and raising the money to do it. De Laboulaye was elected chairman of the *Union Franco-Américaine*, a group composed of what were claimed to be the “most notable names in France.” “*La liberté éclairant le monde*” was to be a jointly achieved: the French people would build the statue, and transport and erect it; the American people would build the pedestal. The *Union* formally asked President Grant to set aside a site on Bedloe’s Island. On November 6, 1875, the *Union* hosted a banquet at the Hotel du Louvre for about two hundred wealthy and influential French and American guests; launching the fundraising campaign, the event raised 40,000 francs. The initial budget was fifteen times that amount, and the final cost of the statue and its transportation to the United States would be 2.25 million francs. The success of the *Union*’s first public appeal for funds allowed Bartholdi to start work.

Of course, for such a gigantic piece, casting was out of the question, especially because it needed to be safely shipped across the Atlantic. So Liberty would be of dual construction, with a structural wrought-iron armature carrying a 1/10-inch thick skin of copper, the material that would best resist corrosion in the marine atmosphere of New York Harbor. To permit expansion and contraction, each sheet would be independently supported on a secondary framework of iron bars and straps; the sheets would be riveted together. The structure was designed by the architect Viollet-le-Duc, who once had been Bartholdi’s mentor. To improve its stability, Lady Liberty’s pose was slightly changed, and increasing the folds in her *stola* made the structure more rigid.

When Viollet-le-Duc died in 1879 he was succeeded as structural designer by the bridge engineer Alexandre Gustave Eiffel (who later would build the famous tower in Paris), “assisted” by Maurice Koechlin, the real unsung hero of the project. They revised the structure, creating a 98-foot high, 120-ton iron column composed of four trussed pylons, and extended to support the right arm. The French industrialist Pierre-Eugène Secrétan donated over 6,000 square feet of sheet copper. There is a tradition that the metal was mined at the Visnes copper mines on Karmoy Island near Stavanger, Norway. Others have suggested Nizhniy Tagil in Russia. Because of Secrétan’s business connections, Spain or North or South America are also possible sources.

Construction began in the Paris foundry of Monduit et Béchét (later Monduit, Gaget, Gauthier et Cie) around the turn of 1876. Bartholdi’s model went through three enlargements. The final detail was developed on the second, 36-foot version; then the figure was divided into three hundred sections, each of which was scaled up to four times larger, and cast in plaster. From the casts, craftsmen made “negative” laminated wooden molds, which served as forms for hammer dressing the copper sheets, a traditional technique known as

repoussé, much more commonly used by silversmiths and jewelers at a much smaller scale. When the statue was assembled, each of the copper sections was stiffened by wrought iron bands and rods. The components were feather-edged and fixed together with 1/5-inch flush-headed copper rivets.

In France, various means—different entertainments, the sale of two hundred signed and numbered terra cotta copies of the “study model” and even a government-sanctioned lottery—were used to raise money, allowing work on the statue to proceed. The *Union Franco-Américaine* had hoped that the colossus would be completed in time for the Centennial International Exhibition in Philadelphia. In the event, only the right forearm, hand, and torch were displayed. In June 1878, the completed head and shoulders were exhibited in the gardens of the Champ de Mars, at the Paris *Exposition Universelle*. Hundreds of visitors queued every day to ascend forty at a time into the head of the Statue of Liberty, from which they could overlook the exposition grounds.

By June 1880 the statue fund was fully subscribed, without assistance from the French government. Donations had been received from cities, towns, and chambers of commerce but mostly from individuals—literally, from the people of France.

“Liberty enlightening the world” first stood, *sans* pedestal, outside the rue de Chazelles workshops in suburban Paris, where she was made. The American minister to France, Levi Parsons Morton, placed the first rivet at a ceremony in October 1881; by January 1884 the finished form, then dark copper, loomed above the narrow streets. During the statue’s fabrication and assembly and until it was taken down for shipping to America, three hundred thousand people visited the workshops—it was more popular than any other monument in the French capital. The completion was celebrated at a dinner given to Bartholdi on May 21; about a month later he invited his Masonic Lodge at Alsace-Lorraine to review it. Appropriately on July 4 and again with due ceremony, Ferdinand de Lesseps, the new president of the *Union Franco-Américaine* (sadly, de Laboulaye died in 1883, never to see his vision realized), formally presented the statue to Morton, who received it on behalf of the United States.

MEANWHILE, ACROSS THE ATLANTIC . . .

Beginning in August 1876 the completed right forearm, with its hand and the torch, was displayed at the Centennial International Exhibition in Philadelphia, which had a daily average of about sixty thousand visitors. When the exhibition closed early in November, the massive fragment was moved to Madison Square Park in New York City, where it remained before being returned to France in 1882.

In January 1877 the American Committee of the Statue of Liberty was formed at New York’s Century Club. Its early membership of 114 would

grow to include over 400 “prominent gentlemen” throughout the nation; efficient communication would have been hardly possible. Prompted by President Rutherford Hayes, a joint resolution of the U.S. Congress accepted the French gift on February 22 and committed to the future maintenance of the statue as a beacon. Hayes authorized General William T. Sherman to select the location. Working strictly to the script, and urged by the American Committee to confirm Bartholdi’s preference, the retired soldier named Bedloe’s Island, and the decommissioned Fort Wood was designated as the base of the pedestal. Retired Major General Charles Pomeroy Stone was appointed engineer-in-chief, and when work eventually started, the New York contractor David H. King Jr. “had general charge from the laying of the first stone of the pedestal to the driving of the last rivet.” King worked *pro bono publico* and in fact sustained financial loss in completing the project.

A design competition, offering a \$1,000 premium, was held for the pedestal. The winner was the internationally acclaimed Richard Morris Hunt, the first American architect trained at *L’École des Beaux-Arts* in Paris; he donated the prize toward reassembling the statue. Hunt presented the American Committee with alternative schemes, some domical, some pyramidal (a possibility entertained earlier by Bartholdi), some towers, and others in pre-Columbian styles. By the end of July 1884 a short list of three was compiled.

The president of the New York Beaux-Arts Alliance, David Garrard Lowe, describes the selected design as “deftly embellished with classical elements” and “appropriate in scale.” Although the second point was probably correct (given Lady Liberty’s size), there is little deftness and even less classicism in Hunt’s 89-foot high centrally planned bastion. The pedestal is unlike anything else in his largely domestic oeuvre. Its ponderous elements, as could be expected of any Beaux-Arts product, seem to be of his own invention: heavily rusticated battered walls of Connecticut granite, quasi-loggias framed by stocky square columns of an indeterminate order, broad moldings, and heavy string courses—none finds a precedent in classical antiquity. The lowest tier is surrounded with circular “shields” intended for the coats of arms of the (then) forty states. Although the states were approached to supply details, the heraldic devices were never executed, probably for reasons of economy. Lowe noted that it received “universal acclaim.” Admitting that the architect’s other work has met with everything from “crests of approval to troughs of condemnation,” he asserted, “The base of the Statue of Liberty has never been questioned.” However, he cited no contemporary adverse criticisms, but only a recent extravagant accolade by the New York Metropolitan Museum’s Lewis Sharp: “The height and mass of the pedestal—the major architectural considerations—are perfect.” But perfect architecture is impossible to define, much less to attain.

News came from Paris in 1882 that the French subscription fund was filled and that Liberty would be complete within a year. Demolition of buildings within the ramparts of Fort Wood began in October 1883, followed by

construction of the pedestal's foundation. The American Committee had \$125,000 in hand, most of it collected in New York. Despite delays and increased costs (both caused by the need to fill a network of unmapped tunnels and corridors), the 53-foot deep foundation of mass lime concrete was completed by mid-May 1884.

The Masonic Grand Lodge of the State of New York was invited to conduct an "appropriate" cornerstone ceremony. While some anti-Freemasonry conspiracy theories are dubious—one claims that the Statue of Liberty was simply a gift from French to American Masons—it is true that the Brotherhood has figured significantly in events in American history. That includes the statue; for example, Bartholdi, Eiffel, and Hunt all were Masons. Anyway, on the afternoon of August 5, 1884, about a hundred Grand Lodge members, with state government and civic leaders from across the nation as guests, arrived at Bedloe's Island aboard the *Bay Ridge*, bedecked in the *Tricolore* and the Stars and Stripes. After an Army band played *La Marseillaise* and *Hail Columbia* the cornerstone was laid by Grand Master William A. Brodie.

Despite excited publicity about the statue throughout the United States since the Centennial, many Americans still hesitated to help pay for the pedestal. The reasons were complex. Fostered by hostility in some sections of the press—especially complaints about the cost, estimated to be as much as the statue itself—public apathy persisted. It was argued also that such a huge statue was impossible to make and that it was "New York's lighthouse" anyway, with no national relevance. That raised disagreements over location. Many took to heart the old adage, "Beware of Greeks bearing gifts"; of course, the Statue of Liberty was the gift of a friend, not an enemy, but American xenophobia stirred "suspicions about implications of such an international gift."

Neither was the parsimony of the general public the only impediment to the growth of the fund. In 1884 New York's Governor Grover Cleveland vetoed a \$50,000 grant from the state legislature. Costs rose and the American Committee's capital dwindled, and with a shortfall of \$100,000 (the amount of federal funding vetoed by President Chester Arthur), work stopped in fall 1884, when only 1/6 of the masonry had been completed.

The feisty publisher Joseph Pulitzer renewed the fund-raising appeal through the pages of *The New York World* in March 1885. He contended, "It would be an irrevocable disgrace to New York City and the American Republic to have France send us this splendid gift without our having provided even so much as a landing space for it. . . ." Daily, his editorials castigated the rich for failing to contribute to the pedestal, and the middle class for its complacency: "Let us not wait for the millionaires to give this money. It is not a gift from the millionaires of France to the millionaires of America, but a gift of the whole people of France to the whole people of America." That was his constant

theme: because the statue had been paid for by “the masses of the French people,” Americans—because it was not just for New York City but the whole nation—should “respond in like manner.” He offered to publish the name of every contributor in the *World*, no matter how small the donation.

Some cynics have suggested that Pulitzer cannily recognized a chance to increase *The World's* circulation while raising funds and having a chance to censure the rich. Indeed, sales of the paper grew by nearly fifty thousand copies, largely among blue-collar workers. Whatever the case, his campaign brought results. The press in other cities and many African American newspapers supported his cause, and together stimulated nation-wide interest and ownership of the statue. The *Baltimore American* claimed that Baltimore would pay for the pedestal if Liberty were located there; similar offers were received from Boston, Cleveland, Minneapolis, Philadelphia and San Francisco. More important, the fund began to grow, with “single-dollar donations from grandmothers, pennies from schoolchildren [from] as far away as California, Colorado, Florida, and Louisiana.” Work on the pedestal resumed on May 11, 1885.

HANDS ACROSS THE SEA

Just 10 days later the three hundred fifty components of “Liberty enlightening the world,” carefully packed in 214 enormous custom-built wooden crates—seventy railroad truckloads—were dispatched from Rouen, France, aboard the steam-and-sail gunboat *Isère*. Each piece was marked to expedite reassembly. Having weathered a 3-day storm during which the shifting crates threatened to sink her, *Isère* hove to at Sandy Hook, New York, on June 17. Two days later, Major General Stone, on a tug surrounded by a welcoming flotilla of dinghies and about sixty pleasure yachts, steamers, and naval ships that were then in the harbor, formally accepted the title deeds of the statue.

The momentous event may have given Pulitzer's fund a final boost: on August 16 the *The World's* banner headline proclaimed, “One Hundred Thousand Dollars!” The amount donated by over one hundred twenty thousand people was in fact \$101,091. Although businesses and some individuals had given up to \$2,500, 80 percent of the contributions were under \$1. It was agreed by the American Committee that \$1,000 of this should be spent on a testimonial gift for Bartholdi, made by Tiffany and Co.

The pedestal was finished in April 1886. It has been estimated that \$390,000 was spent by the American Committee before Liberty finally stood in place, looking across the Atlantic toward France. The pedestal cost about \$250,000, the interior structure \$25,000, and the labor to erect the statue, another \$25,000, bringing the total cost, including the Lady herself, to about \$740,000.

LIBERTY HAS HERE MADE HER HOME

Four months after arriving in America, “Liberty enlightening the world,” stood at last on her massive granite base. On Dedication Day, October 28, 1886, Bedloe’s Island was swept by icy winds and shrouded in mist. Heedless of the weather, New York dressed itself in red, white, and blue bunting and declared a holiday. *The World* described the city as “one vast cheer.” Wall Street was the only district that went to work; but then, business is business. About a million people lined the streets to watch a twenty-thousand-strong military and civic grand march led by General Stone. Beginning from 57th Street at 10 A.M., the pageant took the salute from President Cleveland and his cabinet, New York’s Governor David B. Hill and his staff, the French ambassador and “other French and American notables” in Waverly Place before moving through Broadway, Mail Street, and Park Row, reaching the waterfront at 12:30 P.M. *The New York Times* told how office boys from hundreds of windows spontaneously showered the parade with the paper tape used by stock ticker machines, thus inventing the ticker-tape parade, whose name has stuck long after the machines have disappeared.

The official party boarded the presidential yacht *U.S.S. Despatch* and led about three hundred other vessels of all kinds down the North River into the Upper Bay. They arrived at 2.45 P.M. around the eastern end of Bedloe’s Island, where eight U.S. Navy ships and several French vessels lay at anchor. *The New York Herald* reported that as *Despatch* drew near “the men-of-war’s men were seen springing aloft. . . . Spryly they ran out along the yards and stood elbow to elbow. . . . The rainbow of fluttering bunting that arched each frigate and corvette contrasted prettily with the blue suits of the jolly tars.” A twenty-one gun presidential salute thundered from ships’ cannon and the harbor defenses. The Twenty-second Regimental Band’s rendition of “Hail to the Chief!” was drowned out by the noise of the crowd as the presidential party moved to a platform where the American Committee, State governors, members of Congress, military officers, the French delegation, and other dignitaries faced a seated audience of about twenty-five hundred. One observer remembered: “The platform looked small like a poppy at the base of the statue. . . . The whole island seemed to be one human being.” Although light drizzle and artillery smoke masked the view from the hundreds of boats on the river, even the sight of Liberty herself, one report claimed that “a million people, afloat and ashore, saw through the mist at least a part of the inauguration.”

All did not go as intended. On behalf of the French people de Lesseps presented “Liberty enlightening the world” to William Evarts. The senator began an eloquent, not to say loquacious, reply; it was planned that as his speech ended, Bartholdi and David King, waiting in the statue’s head for a signal from a boy on the ground, would pull a rope to release the *Tricolore* that swathed Liberty’s head to reveal her burnished copper face. Of course, at that

moment she did not have the green copper oxide complexion that she wears today. It all would be very dramatic. But when the audience applauded a rather fine piece of the orator's prose the boy, confusing the speaker's pause with his conclusion, signaled prematurely. Bartholdi and King released the flag, providing "the signal for another enthusiastic outburst of the steam-whistles from the flotilla anchored in front of the island, and a national salute from the ships of war, drowning out completely . . . the strains of the *Marseillaise* from the band."

The uproar was sustained for about 15 minutes before President Cleveland's succinct acceptance speech followed. Forgetting that, as governor of New York, he had refused to fund the pedestal, he now promised, "We will not forget that Liberty has here made her home, nor shall her chosen altar be neglected. Willing votaries will constantly keep alive its fires and these shall gleam upon the shores of our sister Republic thence, and joined with answering rays a stream of light shall pierce the darkness of ignorance and man's oppression, until Liberty enlightens the world."

The stirring closing address was by Chauncey Mitchell Depew (incidentally, also a Freemason), known as "the orator of silver words." Although the French delegation numbered fifteen, the only official French speaker, besides Bartholdi, was the *Ministre Plenipotentiaire et Delegué Extraordinaire* W. A. LeFavre. The Assistant Episcopalian Bishop Henry C. Potter (yet another Freemason) ended the program with a benediction, and *Despatch* bore the President away to the echo of another salute from forts and warships.

Across the Atlantic, *The London Daily News* reported the occasion. Perhaps still smarting over the American Revolution—the British name for the War of Independence—and America's victory in the War of 1815, or reflecting England's centuries-old antagonism to France, the newspaper sulkily asserted, "It is a great mistake to think the statue will increase the friendship between the two countries. America did not want the statue. She took it because it was offered to her. When the last cannon boomed New York was richer by a remarkable statue, and that is about all."

Lady Liberty was conceived as a beacon, and on November 22, 1886, her torch became, for a while, a navigational aid for ships entering New York Harbor. It was the first lighthouse in the United States to use electricity—the technology had been available for only a few years. General Stone wanted to install lights that would shine into the air from the torch, and to illuminate the whole statue with five floodlights strategically positioned at the angles of the star fort. A steam turbine plant was installed on the island. After "weeks of false starts, confusion, and grappling with the new technology," when the nine arc lamps in the torch were switched on they cast a deep shadow over the upper part of the statue: their angle had been wrongly calculated. The torch could be seen from 24 miles out to sea, but as a critic has observed "the dimness of the lighting was little help to vessels entering the harbor." Attempts were made to increase the illumination, and an oil-powered generator was

installed in 1897. But the light levels were still inadequate, and in March 1902 the U.S. Lighthouse Board ceased to use the flame as a navigational aid and turned the station over to the War Department.

Of course there were changes, administrative and material, made throughout the twentieth century. On October 15, 1924, a Presidential Proclamation declared Fort Wood (and the Statue of Liberty) a National Monument and set its boundary at the perimeter of the fort. Nine years later responsibility for the monument was transferred to the NPS, and in September 1937 its boundaries were extended to include all of Bedloe's Island. In 1956, as noted, the island was renamed Liberty Island. Then in May 1965 Ellis Island was transferred to the NPS by President Lyndon B. Johnson to become part of the Statue of Liberty National Monument. Toward the end of the 1900s the statue was showing her age. The copper surface was pitted with thousands of holes caused by a century of salt-air exposure; the iron framework was distorted by continuous stress and metal fatigue; and previous repair "solutions" had generated different problems and more deterioration. President Ronald Reagan appointed Lee Iacocca to direct a public/private partnership between the NPS and The Statue of Liberty-Ellis Island Foundation to restore the statue. Fund-raising began for the \$87 million project in 1984, just as UNESCO designated Lady Liberty as a World Heritage Site. The Statue reopened to the public on July 5, 1986.

REDUCING THE SUBLIME TO THE RIDICULOUS

Doubtless with publicity in mind, Bartholdi's 14-year patent licensed images of his statue for use in advertising in Europe and the United States, permitting representations in "any manner known to the glyptic art in the form of a statue or statuette, or in alto-relievo or bas-relief, in metal, stone, terra-cotta, plaster-of-paris, or other plastic composition." Within only a few years a wide range of American and foreign spoons—those most collectible of collectibles—was internationally available. But wait, there's more!

Liberty has appeared on U.S. and French postage stamps, including an American-French joint issue for her centenary in 1986. She was featured on War Bonds in 1917 and on patriotic posters for both World Wars. She has graced the covers of hundreds of magazines and figured in thousands of political and editorial cartoons. Iconic as a tourist destination (every year she has more than five million visitors) she has been the subject of countless variations of postcards.

Images of the Statue of Liberty continue to proliferate dizzyingly in American folk art and in popular culture, including advertising. One company in Arkansas offers an "incredible, life size [*sic*] version," assuring potential customers that "Like most 7 ft. tall women, this lady of liberty catches the attention of every passerby. She would be at home just about anywhere and would

make a great photo-op for any business. . . . Made from heavy-duty resin material.”

Liberty is represented in gold and silver jewelry and medallions; on ornaments; as a theme in pageants and parades; and in such kitsch souvenirs—many bearing the legend “made in China”—as pill- or candy boxes, cookie jars, paperweights (with or without a clock or a “light-up torch”), and snow domes. The list descends to the ridiculous and irreverent: “patriotic balloons and patriotic inflatables” are produced, as well as stress balls, “genuine hand crafted and painted [and grotesque] plastic bobble heads,” chocolate bars, and costumes comprising plastic diadems and gowns (one size fits all) in pale green to evoke the patina on Liberty’s copper skin. In France she has even been used to sell cheese. In the electronic age, she has appeared in video games. The examples are too numerous to list.

She is used as a “location image” in television series and movies and has been a significant element in literally dozens of films since 1917, as well as an incidental inclusion in hundreds more, too many to deal with in detail. Her most familiar (albeit by no means literal) evocation in movies is in various incarnations of the Columbia Pictures logo that first appeared in 1924. From the 1930s through the 1990s the *stola*-clad, torch-bearing “Columbia Lady” has undergone many changes, but at only a glance association with Lady Liberty is immediate and inescapable.

At many levels and in every way the Statue of Liberty holds a place in the hearts and minds of the American people. That is what makes it an icon, although not an icon of the idea for which she was first intended; that adjustment has been made by people: as her creators would have put it, “*Chacun à son goût* (to each his own).”

NOTES

1. Garnett, John J., ed., *The Statue of Liberty. Its Conception. Its Construction. Its Inauguration*. New York: Dinsmore, 1886. www.endex.com/gf/buildings/liberty/libertyfacts/LibertyCCI/LibertyCCI.htm
2. Glassberg, David, “Rethinking the Statue of Liberty: Old Meanings, New Contexts.” www.libertyellisplan.org
3. Jewish Women’s Archive, “JWA—Emma Lazarus—The New Colossus,” <http://jwa.org/exhibits/wov/lazarus/el9.html>
4. Trachtenberg, Marvin, *The Statue of Liberty*, New York: Viking Penguin, 1976, 30.
5. Townsend, James B., “The Statue of Liberty,” *Frank Leslie’s Popular Monthly*, 20(August 1885), and extensively elsewhere.
6. Hargrove, June, “Liberty: Bartholdi’s *Quest for a Visual Metaphor*.” July 1986. www.worldandi.com

FURTHER READING

- Allen, Leslie Beth. *Liberty: The Statue and the American Dream*. New York: Statue of Liberty-Ellis Island Foundation and National Geographic Society, 1985.
- Baker, Paul R. *Richard Morris Hunt*. Cambridge, MA: MIT Press, 1980.
- Bartholdi, Frédéric Auguste. *The Statue of Liberty Enlightening the World*. New York: North American Review, 1885. Reprinted New York: New York Bound, ca. 1984.
- Bermond, Daniel, and Robert Belot. *Bartholdi*. Paris: Perrin, 2004.
- Cunningham, John T. *Ellis Island: Immigration's Shining Center*. Charleston, SC: Arcadia, 2003.
- Dillon, Wilton S., and Neil G. Kotler, eds. *The Statue of Liberty Revisited: Making a Universal Symbol*. Washington, D.C.: Smithsonian Institution, 1994.
- Garnett, John J., ed. *The Statue of Liberty. Its Conception. Its Construction. Its Inauguration*. New York: Dinsmore, 1886.
- Gilder, Rodman. *Statue of Liberty Enlightening the World*. New York: New York Trust Co., 1943.
- Gschaedler, Andre. *True Light on the Statue of Liberty and Her Creator*. Narberth, PA: Livingston, 1966.
- Hayden, Richard Seth, Thierry W. Despont and Nadine M. Post. *Restoring the Statue of Liberty*. New York: McGraw-Hill, 1986.
- Joseph, Rebecca M., et al. *An Inquiry into the History and Meaning of Bartholdi's Liberté éclairant le Monde*. Boston: National Park Service, 2000.
- Lemoine, Bertrand. *The Statue of Liberty*. Brussels, Belgium: Mardaga, 1986.
- Moreno, Barry. *The Statue of Liberty Encyclopedia*. New York: Simon & Schuster, 2000.
- Stakely, J. Tracy. *Cultural Landscape Report for Ellis Island: Statue of Liberty National Monument: Site History, Existing Conditions, Analysis*. Brookline, MA: National Park Service, Olmsted Center for Landscape Preservation, 2003.
- Trachtenberg, Marvin. *The Statue of Liberty*. New York: Viking Penguin, 1976.

INTERNET SOURCES

- Official NPS website. www.nps.gov/stli/
- Glassberg, David. "Rethinking the statue of Liberty: old meanings, new contexts." www.libertyellisplan.org



Courtesy Library of Congress

United Nations Headquarters, New York City

"Peace, justice and well-being"

The United Nations Organization (UN) Headquarters is bounded by First Avenue west, East 42nd Street south, East 48th Street north, and the East River in New York City. The Organization says that the complex of six buildings “remains both a symbol of peace and a beacon of hope.”

To its eighteen acres come representatives of the earth’s 6 billion people, to discuss and decide issues of peace, justice and economic and social well being. Here, about 4,900 employees of the . . . Secretariat work to implement these decisions. Each year the 192 Member States send over 5,000 delegates to the annual sessions of the General Assembly; 700,000 visitors yearly; and more than 3,600 permanently accredited journalists—over 10,000 are present during major meetings.¹

New York tourist authorities list the UN Headquarters as one of the major tourist attractions in the City. Since 1952, approximately thirty-eight million visitors have taken the guided tour of the buildings; numbers peaked at more than 1.2 million in 1964. The Secretariat Building, rising above the flags of the 192 member nations on a 500-foot curve along United Nations Plaza is universally familiar as an icon of world architecture. The view from across the river is equally well known.

THE UN IN POPULAR CULTURE

Because of its prominent role in world politics, the UN has been widely represented (often under an alternative name) in popular media—films, books, music, and latterly computer games. Early among these appearances was Metro-Goldwyn-Mayer’s *The Man from U.N.C.L.E.*; shown in the United States on NBC television from 1964 until 1968, it featured an agency called the United Network Command for Law and Enforcement, with New York headquarters and an international staff. The following year Marvel Comics created Supreme Headquarters International Espionage Law-enforcement Division (S.H.I.E.L.D.), another New York-based “extra-government intelligence and security organization.” And *Batman*, a 1966 Twentieth Century-Fox movie pilot for ABC’s television series (1966–1968), featured the United World Organization, complete with a nine-member Security Council and headquarters on East Gotham Drive.

Since then the UN has been rebadged in other fictional works and has even been used to religious ends. In Russell S. Doughten’s 1980 movie *Image of the Beast*, based on the *Left Behind* series of pop-eschatology novels, it became the United Nations Imperium of Total Emergency (UNITE), a future, maligned one-world government (some of the books use the alias Global Community). The 2000 movie adaptation of *Left Behind* flopped at the box office, and its sequel *Left Behind II: Tribulation Force* was released on video only. The

“understudies” of UN Headquarters are plausible in neither; in the earlier film, Canada’s provincial and territorial flags are flown as those of member nations.

But why stop at Earth? As early as 1966 a parallel version of the UN was launched into the final frontier as *Star Trek*’s United Federation of Planets. A decade later other cosmic clones appeared, beginning with the Galactic Republic in the *Star Wars* movies and books of the films. The 1993 film *Babylon 5* and its 1994 spin-off TV series included the Earth Alliance, the Interstellar Alliance, and the League of Non-Aligned Worlds. The animated sitcom *Futurama*, seen on pay TV in the United States from 1999 until 2007, had an interplanetary organization called the Democratic Order of Planets (DOOP), whose flag bore a striking resemblance to that of the United Nations. All these productions made oblique references to the UN *Organization*, but none included the UN building. That was left to moviemakers. The Internet Movie Database lists almost one hundred films made since 1947—acted and animated, dramatic and documentary—dealing with the UN. Thirteen of the dramas were based on novels, and three on stage plays. Not all especially feature the building, but in some (for example, *The Art of War*, *U.S. Marshals*, and *The Second Renaissance*) it is germane to the plot. Here, comment is offered upon a few.

The 1959 Disney animated feature, *Donald in Mathmagic Land*, significantly cited the UN building as an example of theoretical proportion applied to modern architecture. Such systems were important to Le Corbusier, one of the building’s designers, who wrote two treatises on the subject. *Vers une architecture (Towards One Architecture)*, that analyzed buildings according to the mathematics of the “golden mean,” appeared in 1923. A 1927 English translation bore the inaccurate title, *Towards a New Architecture*. In 1948 Le Corbusier published a personal mathematical theory that appeared in English in 1951 as *The Modulor: A Harmonious Measure to the Human Scale, Universally Applicable to Architecture and Mechanics*.

Also in 1959, Alfred Hitchcock made his classic movie *North by Northwest*. The famous director wanted to film a scene in the UN General Assembly, where one of the ambassadors is murdered; it was not allowed. The opening credits against a green grid evoke the Secretariat building’s expansive glass curtain wall—although by the time the film was made, such walls were common in New York. Hitchcock took a still photographer to secretly photograph the public lobby (it is said) so that it could be re-created on a sound stage. Ground-level exterior shots of the hero entering the building were filmed from a carpet-cleaning truck that concealed a VistaVision camera. The scene showing the hero’s precipitate exit was totally different: a tiny figure is glimpsed fleeing from the building, dwarfed by an aerial shot of Le Corbusier’s Secretariat tower. Because of the UN prohibition of photography, that image was a montage. But Hitchcock was good at montage: 4 years later, the final scene in *The Birds* was combined from twenty-eight visual elements!

To date, Sydney Pollack's \$80 million thriller *The Interpreter* (2005) is the only movie shot on location in the UN—albeit just on weekends. Former Secretary-General Kofi Annan, with whom Pollack personally negotiated, insisted that “the intention was really to do something dignified, something that is honest and reflects the work that this Organization does. And it is with that spirit that the producers and the directors approached their work.” *The New York Observer* opined that Pollack's success was related to the UN's need at that moment for good publicity, because its worth was being questioned. Anthony Lane reviewed the film in the *New Yorker*, “We get a disappointingly slim grasp of UN life. I can tell you no more now about the layout of the place . . . than I could before watching the movie. . . . The single UN scene in *North by Northwest*, for which Hitchcock had to use mockups, delivers a more colorful punch than Pollack's respectful panoramas of the General Assembly.”²

The UN headquarters has been destroyed in a few movies. In Toho Studios' *Destroy All Monsters* (released in Japan as *Complete Monster Attack* in 1968), a difficult-to-believe Godzilla destroys it with his radioactive breath. The special effects were hardly better in Blake Edwards' *The Pink Panther Strikes Again* (1976), in which the crazy chief inspector Charles Dreyfus uses a Doomsday Machine to disintegrate the building. And in DreamWorks' “infuriatingly predictable and wholly uninvolved” *The Peacemaker* (1997) a Serbian terrorist, blaming the UN for the death of his family, sets out to blow up its headquarters with nothing less than a nuclear bomb. There are outside location shots, but nothing was filmed inside the building. By the way, the attempt was foiled. Not so in the Animatrix short film *The Second Renaissance* (2003) where destruction is wrought by a machine ambassador to the UN.

The gift center in the UN Headquarters public concourse does not specialize in the usual kitsch. The merchandise—aprons, tote bags, mugs, coasters, T-shirts and key chains—is available for those visitors who must have a souvenir, but it is all exclusive to the center, embossed with the UN logo and appropriately dignified. The center sells flags, handicrafts, and souvenirs from member states. New York shopping guru Dana Schuster writes that its “real goodies are far more global. . . . Haitian, Columbian or Ethiopian dolls and Kenyan Woodcarung statues, meant to protect the home [and] an impressive collection of jewelry, like 18th-century Austrian enamel lockets and . . . necklaces from the Democratic Republic of Congo.”

AN IDEA THAT FAILED: THE LEAGUE OF NATIONS

World War I (1914–1918) surpassed all earlier wars in its scale of devastation. The complicated underlying issues are beyond our present scope, but the conflict was sparked in June 1914 by the assassination in Sarajevo of the

Austro-Hungarian Archduke Franz Ferdinand and his wife. To avenge their deaths—pretext or not—Austria invaded Serbia, and the dominoes began to fall: Serbia turned to Russia for help; Germany, bent on imperial expansion, invaded Belgium and Luxembourg and declared war on Russia and France, both which mobilized to defend their respective territories. Britain declared war on Germany because it had violated Belgium's neutrality.

Most thought the conflict would last only months, but for over 4 years a total of sixty-five million men and boys fought in a war between the Central Powers (Germany, the Austro-Hungarian empire, Bulgaria, and Turkey) and the Allied Powers (the British Empire, Belgium, France, Italy, Russia, and—from 1917—the United States). About ten million died in battle, twice as many were wounded; and ten million civilian lives were lost. The conflict extended into the antagonists' colonies in Asia and Africa; sea battles were fought in the South Atlantic and the Pacific. Eventually, Germany's spring 1918 offenses on the western front failed, and by midyear her armies began to be driven back by the Allies. In the fall, as German workers at home were "suffering from food and fuel shortages [and] threatened revolution," Germany, afraid of a communist coup, pressed U.S. President Woodrow Wilson for an armistice. Fighting ceased at 11 A.M. on November 11, 1918.

Wilson, a passionate advocate of "a general association of nations," chaired the Paris Peace Conference (of the victors) in December. He led a committee optimistically charged with setting up a body "whose purpose was to preserve world peace through open diplomacy and global consensus." France's Minister of War Georges Clemenceau remarked that Wilson's ideal "was a very high one, but it involved great difficulties, owing to these century-old hatreds between some races." Nevertheless, on April 29, 1919, the final version of the Covenant of the League of Nations was adopted, and almost exactly 2 months later it became Part I of the Peace Treaty of Versailles that formally ended what was believed to be "the war to end all wars." The Covenant had three essential objectives: to ensure collective security, to assure functional cooperation, and to execute the mandates of peace treaties. Because it could begin to function officially only after the Treaty of Versailles came into effect, the thirty-two member League of Nations was inaugurated on January 10, 1920; thirteen other states—on the fulfillment of certain conditions the League was open to all—were invited to join.

The U.S. Senate, in an assault led first by Idaho Republican William E. Borah, strenuously opposed the League. Political historian Robert C. Byrd writes, "Known as 'the Great Opposer' . . . [Borah] was . . . a staunch defender of the Constitution, and a confirmed isolationist. . . . [He] emerged as the leader and spokesman of the "irreconcilables"—the group of predominantly Republican senators [with] unbending opposition to American participation in the League of Nations." While President Wilson was engaged in treaty negotiations in Paris, Borah toured the United States, claiming, "America has arisen to a position where she is respected and admired by the entire world.

She did it by minding her own business.” In July 1919 Henry Cabot Lodge launched his ultimately successful campaign to defeat the League by delaying the final vote while adding reservations to the treaty that would render it unacceptable to Wilson’s supporters. The irreconcilables opposed the League in any form. According to Byrd, on November 19,

Several other senators spoke against or in support of the League of Nations during the grueling five-and-a-half-hour debate [Borah filled two of those]. The Senate voted . . . as the session drew to a close. The Democrats, who, at Wilson’s insistence, refused to accept the reservations, combined with the irreconcilables to defeat the treaty with the “Lodge reservations” by a vote of 39 to 55. In a subsequent vote, the treaty without reservations was defeated by a vote of 38 to 53. Four months later, on March 19, 1920, [it] once again failed to receive the two-thirds Senate vote needed for approval.³

That rejection was ironic. Twenty-five years later America would scramble to become the permanent location of the United Nations Organization, successor to the League of Nations.

The League had four main components. The Council, of four permanent and up to ten nonpermanent States, met three times a year; its principal role was to settle international disputes. The Assembly addressed issues affecting world peace, membership of the League, amendments to the Covenant, the election of nonpermanent members of the Council and the budget. The Secretariat, appointed by the Secretary-General, was responsible for all administrative matters. The Court of International Justice sat in the Hague to determine disputes an international character.

In 1920, the League’s temporary office moved from London to Geneva, and throughout the decade its Council meetings and conferences were also held there. At the urging of Woodrow Wilson, Switzerland was chosen as the seat of the new organization because had maintained neutrality since 1515. That status became void when it joined the League but was regained in the 1930s. As Harry Lime remarked in the 1949 movie *The Third Man*, “In Switzerland, they had brotherly love and 500 years of democracy and peace, and what did that produce? The cuckoo clock.” In 1927 an international design competition was held for a “palace” in Geneva intended to house all the organs of the League of Nations. Reviewing almost four hundred submissions, the jury awarded nine first prizes; five architects—Swiss, French, Italian, and Hungarian—were asked to develop the final proposal. The surrounding scandal would affect, in a measure, the eventual design of the UN Headquarters.

The League of Nations started well, resolving quarrels between Sweden and Finland, and Greece and Bulgaria. In October 1925 it brokered the Locarno Agreements, paving the way for diplomatic reconciliation between Germany and its former enemies; the Weimar Republic became a member in 1926. By the end of the decade, the French delegate even had suggested forming a

federated Europe, prophesying the twenty-seven-state European Union that exists today. But the League was unable to prevent the Japanese invasion of Manchuria in 1931. And when in 1935 Italy attacked Ethiopia without declaring war, the organization, while unanimously condemning Italy's aggression, took no effective action. Neither did it act in 1938 when Adolf Hitler, in violation of his earlier declaration that Nazi Germany had no intention of annexing Austria, proclaimed *anschluss*. In the course of the 1930s Japan, Italy, and Germany withdrew from the League.

Altogether, from 1918 until the outbreak of World War II there were about sixty civil and international wars of various size and duration. The impotence of the League to prevent further world conflict, the alienation of some member states, and the war itself contributed to its death from 1940. But there had been successes too, in a "secondary aspect of its objectives: international technical cooperation . . . in areas as diverse as health and social affairs, transport and communications, economic and financial affairs and intellectual cooperation. . . . The work on behalf of refugees carried out by the Norwegian Fridtjof Nansen from 1920 should also be stressed."⁴

At the end of World War II, although in every practical sense the League of Nations had ceased to function, it still had forty-three member states. Formal closure was necessary, and its real estate, buildings, library, archives, and historical collections were passed to its successor, the United Nations, at a London meeting between the League's Supervisory Commission and the UN's Preparatory Commission, established in 1945. The last Assembly—the twenty-first—of the League of Nations was held in Geneva on April 8, 1946. Lord Robert Cecil encouraged the members that its efforts had not been futile, because without them the new organization could not exist. He closed the Assembly with the words: "The League is dead, long live the United Nations!" Ten days later the remaining forty-three member states unanimously declared that as of April 20, 1946, the League of Nations would cease to exist.

To go back five years . . .

"THE LEAGUE IS DEAD, LONG LIVE THE UNITED NATIONS!"

In August 1941, together with high-ranking military officers of their governments, President Franklin D. Roosevelt and British Prime Minister Winston Churchill met secretly on HMS *Prince of Wales*, "somewhere at sea" off Newfoundland to devise what became known as the Atlantic Charter, "a set of common principles that repudiated territorial aggression by [the Berlin-Rome-Tokyo Axis] and supported the right of self-determination." On January 1, 1942, representatives of twenty-six Allied nations, jointly pitted against that axis, met in Washington, D.C., to sign the declaration by "United Nations"—the first official document to use the term coined by Roosevelt—and guarantee their support for the Charter.

In Moscow toward the end of 1943 the leaders of Britain, the United States, the Soviet Union, and China called for the urgent establishment of an international organization to maintain peace and security, an intention reaffirmed in Teheran on December 1. The four powers agreed upon the first draft of the aims, structure, and functioning of the UN at talks in autumn 1944, held at Dumbarton Oaks, a private mansion in Washington, D.C. According to official UN sources, “discussions were completed on October 7, 1944, and a proposal for the structure of the world organization was submitted . . . to all the United Nations governments, and to the peoples of all countries, for their study and discussion.” It stated that within the UN organization there was to be “a General Assembly composed of all the members. Then came a Security Council of eleven members. Five . . . were to be permanent and the other six were to be chosen from the remaining members by the General Assembly, to hold office for two years. The third body was an International Court of Justice, and the fourth a Secretariat. An Economic and Social Council, working under the authority of the General Assembly, was also provided for.” It was an almost exact reflection of the League.

The essence of the plan was that responsibility for preventing future war should be conferred upon the Security Council. The General Assembly could study, discuss and make recommendations in order to promote international cooperation and adjust situations likely to impair welfare. It could consider problems of cooperation in maintaining peace and security, and disarmament, in their general principles. But it could not make recommendations on any matter being considered by the Security Council, and all questions on which action was necessary had to be referred to the Security Council.⁵

Later generally adopted as a Charter, the plan provided that members were to make armed forces available to the Security Council in its task of preventing war and suppressing aggressive acts, The League of Nations’ Covenant had contained no such provision—a “fatal weakness in [its] machinery for preserving peace.” But it may be observed as an aside that since the foundation of the UN, with its access to “peacekeepers,” about 170 wars have been fought in the world. As the organization admits, the term *peacekeeping*, not found in the Charter, defies simple definition. Dag Hammarskjöld, the UN’s second Secretary-General, placed it between diplomatic means of dispute resolution (negotiation and mediation) and forceful action. But we anticipate.

The plan was fully discussed throughout the Allied countries. In the United States the State Department distributed almost two million copies and enlisted the press, radio, and even the film industry to explain what was involved in this “new plan for peace.” The Dumbarton Oaks talks had not established the Security Council’s voting procedure. On February 11, 1945, Churchill, Roosevelt, and Stalin, again meeting with their foreign ministers and chiefs-of-staff, this time at Yalta on the south shore of the Black Sea, decided that issue and “resolved upon the earliest possible establishment with [their] Allies

of a general international organization to maintain peace and security.” To that end, they agreed that a Conference of United Nations should be called to meet at San Francisco on April 25, 1945, to prepare a Charter along the lines proposed at Dumbarton Oaks.

In November 1943 a forty-four nation summit at the White House had initiated the United Nations Relief and Rehabilitation Administration (UNRRA). During World War II over one hundred million soldiers and civilians were killed, wounded, or disabled; an estimated twenty-one million people had been dispossessed or dislocated. By 1949 the UNRRA would return about seven million displaced persons to their European or Asian homelands and provide refugee camps for another million who were afraid to go home, especially to the Soviet Union. Cooperating with over sixty voluntary organizations from fifty-two countries, the UNRRA provided emergency food, medication, and restoration of public utilities for war-ravaged populations. Eventually, its role would be handed to specialized United Nations agencies: the International Children’s Emergency Fund (UNICEF) in December 1946, the World Health Organization (WHO) in 1948, and the Office of the High Commissioner for Refugees (UNHCR) in 1950. In 1996 Sir Brian Urquhart, a former UN undersecretary-general, hailed the UNRRA as “the greatest relief operation ever launched. It put the world on its feet. Run by Governor Herbert Lehman of New York, it was the most extraordinary operation—This was an American idea . . . a tremendously far-sighted plan.”⁶ The UN would assume many functions formerly undertaken by the League of Nations. For example, economic activities were transferred to the new Economic and Social Council; the work of the Nansen Office was continued by the UNRRA and the UNHCR; the Health Organization was replaced by the WHO; the Nutrition Committee became the Food and Agriculture Organization (FAO); and the League’s Committee of Intellectual Cooperation became the Educational, Scientific and Cultural Organization (UNESCO).

At the UN Conference on International Organization convened in San Francisco, the USSR, China, Britain, and the United States acted as the “sponsoring powers”; forty-six other states participated, all of whom had signed the January 1942 UN Declaration or had declared war on the Axis before March 1945. Together, they fielded 282 delegates; there were nearly fifteen hundred other “officially accredited” attendees and “representatives of scores of private organizations interested in world affairs.” Following Germany’s surrender in May, meetings continued for 6 weeks. On June 26, 1945, in the Veterans Auditorium (now Herbst Theatre) of San Francisco’s War Memorial Opera House, fifty countries signed the UN Charter as founding members. President Harry S. Truman, in office for barely 2 months, told them,

Oh, what a great day this can be in history! There were many who doubted that agreement could ever be reached by . . . countries differing so much in race and religion, in language and culture. . . . History will honor you [for writing the

UN Charter] . . . If we had had this charter a few years ago—and above all, the will to use it—millions now dead would be alive. If we should falter in the future in our will to use it, millions now living will surely die. . . . That we now have this Charter at all is a great wonder.⁷

Almost exactly a month later he gave the order to drop the atomic bombs that devastated the Japanese cities of Hiroshima and Nagasaki.

Space was left on the Charter for the fifty-first signature, Poland's, added on October 15 because its government was not established until 2 days after the signing. The BBC reported that the UN was inaugurated on October 24, 1945, "at the State Department in Washington [when] twenty-nine countries ratified the UN Charter."

NEW YORK! NEW YORK!

On December 10, 1945, the U.S. Congress unanimously resolved to invite the UN to establish its permanent home in America. Although many offers and suggestions for permanent sites had been received, and despite opposition from Britain, France, and The Netherlands, the decision to locate UN headquarters near New York City was made on February 14, 1946, during the General Assembly's First Session in the Methodist Central Hall, Westminster, London.

A full 2 months before the U.S. invitation was accepted, American cities had vied for the honor. *Time* magazine humorously reported a "rich and raucous" debate in the "oak-paneled, semi-ecclesiastical room . . . where world statesmen were considering where the world's capital . . . should be." It is amusing enough to be cited at length:

American boosters . . . trooped one by one to the lectern to air their local prides. First came Atlantic City's A.W. Phillips, in a neat blue suit and rimless glasses. He spoke for only three and a half minutes, since the committee was already well briefed by an elaborate brochure which included a spread of the Atlantic City beauty pageant.

Boston's delegation was headed by Governor Maurice J. Tobin, armored in black coat and striped pants. . . . Tweedy President Karl T. Compton of Massachusetts Institute of Technology, made the committee sit up by announcing that [local unions] had promised that "there will be no strikes of their members in connection with any work done for the [UN] in the Boston area." Compton also pointed out Boston's library facilities. This gave Chicago's Barnet Hodes an opening; he claimed that Chicago's libraries had 125,000 more books than Boston's. . . . Chicago, like the other delegations, had a newsreel to show its beauties. As the commentator said, "This is the sort of thing worthy of study in Chicago," the reel stuck, and a bevy of fan dancers on ice skates froze on the screen, grinning toothily at the statesmen.

Philadelphia was touted by Judge L. Stauffer Oliver. Colorado University's whip-smart Robert Stearns cried havoc on his coastal rivals for tidal waves,

earthquakes and tornadoes. Tongue in cheek, San Francisco's urbane Mayor Roger Lapham recalled being frozen fast in the harbors of both Boston and Philadelphia in his early yachting days.

The star performer was Paul Bellamy, a bull-necked businessman who represented no city, but the bleak Black Hills of South Dakota, where men are men and steaks are three inches thick. When he described the latter, . . . Stoyan Gavrilovic, the UNO subcommittee chairman, was visibly affected. Bellamy's best argument had a pessimistic undertone: Boston, Philadelphia and the other coastal cities were within easy reach of atomic bombings. "In the Black Hills there are no military objectives, and the gentlemen who are striving for the peace of the world can live at peace while the atomic bombs are falling." It was no part of Bellamy's job . . . to ask what the gentlemen would be doing at that point.⁸

New York City, not mentioned in the *Time* article, was supported by about half the delegates. By the end of October 1945 San Francisco had been struck from the short list, probably because of its remoteness from Europe. Boston's postwar financial problems were greater than even New York's. Philadelphia was so convinced that it would attract the UN that the city fathers had already initiated plans to clear land near the University of Pennsylvania.

It has been cynically but accurately observed that the UN came to have its headquarters in New York "largely as a result of substantial inducements." The progress toward the final choice of location makes a compelling story. A. M. Rosenthal summarized the first chapter in a tongue-in-cheek article:

The first United Nations headquarters was room 786 at the Waldorf-Astoria. It was there that A. H. Feller, general counsel of the United Nations, checked in on Feb. 19, 1946, with orders to find first a temporary home in New York, then a permanent one. . . . [Later] more hotel rooms were rented as offices, a few more phones installed. . . . After the Waldorf, the United Nations wandered about New York for a couple of years, from the Bronx campus of Hunter College . . . whose students had been shifted downtown . . . by a city eager to collect the United Nations' \$9,000 monthly rent; to a boardroom at 630 Fifth Avenue, to a dumpy hotel on West 57th Street.⁹

But the Henry Hudson Hotel "and a few borrowed board rooms at Rockefeller Center were far too small to conduct business with any regularity." The UN desperately needed a permanent home.

On March 25, 1946, it accepted the 40-acre Hunter College site (now Lehman College) in the northwest Bronx for its temporary headquarters. Within a fortnight the gym building became chambers for the Security Council and the Economic and Social Council; faculty offices and classrooms were occupied by the Secretariat and delegates. In Rosenthal's words, until mid-August the campus became the "diplomatic center of the universe." One romantic writer believed that "the bucolic treelined campus and broad vista over the waters of the Jerome Park Reservoir . . . coincided with the conventional

wisdom about what an ideal site for a permanent United Nations facility should look like.” No, it didn’t.

New York Mayor William O’Dwyer, determined to retain the UN, offered the New York City building at the 1939 World’s Fair site in Flushing Meadows as a temporary venue for the General Assembly; he even “found” a little over \$2 million to refurbish a skating rink for the purpose. The former Sperry Gyroscope plant in the dormitory community of Lake Success near Great Neck, Long Island—only 20 minutes away by car, and about 45 from New York City—was suggested for the Secretariat’s and Security Council’s interim base. Some of Lake Success’ twelve hundred citizens initially resisted the conversion of the Sperry building, but an unofficial referendum voted to invite the UN to the village, and the General Assembly approved the relocation on February 14, 1946. Renovation was still incomplete in mid-August when the UN moved in 6 months later: the cavernous defense plant was partitioned to create office space and the Security Council met in a former conference room.

The search for a permanent location had included small towns in Nassau and Westchester counties, as well as Connecticut’s Fairfield County, but the proposals aroused opposition in neighboring communities, who told the State Department that they didn’t want the UN in their area. The feeling was mutual; the delegates didn’t want to be isolated in suburbia. Manhattan was the only alternative, but there were problems. There was no vacant site large enough. Even if there were, the organization could not afford to buy it, much less develop it. The UN also insisted on exemption from city taxes, a confronting demand when New York City was broke; it could hardly afford to subsidize the UN when its priority was to rebuild public housing, hospitals, schools, and infrastructure, all neglected during the war.

O’Dwyer instructed the Parks Commissioner Robert Moses to assemble a task force to negotiate with the UN Headquarters Committee. Moses co-opted James A. Farley, the former postmaster-general; Thomas Watson, the president of IBM; Arthur Hays Sulzberger, publisher of *The New York Times*; James J. Lyons, the Bronx Borough president; and Nelson Rockefeller and his cousin, banker Winthrop Aldrich. But by early November 1946 UN Secretary-General Trygve Lie had almost despaired of a New York City location. Then he was contacted by Moses, who told him that something had come up that might allow the city to find space in crammed Manhattan.

The Turtle Bay area on the island’s eastern slope had long been home to cattle-holding yards, abattoirs, and meat-packing plants. William Zeckendorf, Sr. of Webb & Knapp Inc. saw it as ripe for redevelopment. He commissioned architect Wallace Harrison to design the speculative X-City, “a private, mixed-use development [that] included offices, apartments, waterfront parks and a domed, lozenge-shaped building intended for an opera house and an orchestra hall.” Although they had long resisted selling, in December 1945 the Chicago owners of about 9 acres of the land offered it to Zeckendorf for \$17 per square foot. His \$12 counteroffer was declined, but when his partners

pointed out that redeveloped real estate three blocks away was bringing twenty-five times as much, he paid \$6.5 million for the tract—\$1 million down and a year to pay the balance. He then engaged a number of different brokers to clandestinely buy surrounding properties at \$2 to \$5 per square foot. Eventually he acquired about seventy-five properties for an average \$9 a square foot. Webb & Knapp then owned 17 acres.

They had to finalize payment for the original nine acres on December 11, 1946—coincidentally, the date set by the UN Headquarters Committee to determine a permanent site. Five days before the double deadline, Zeckendorf read of the UN's problem in *The New York Times*. He phoned O'Dwyer to say that he would sell a large area of Manhattan to the UN for whatever they wanted to pay. O'Dwyer informed Moses, and Moses phoned Nelson Rockefeller, who had been dickering with his family and the UN about suitable sites. Over the next few days there was a “nonstop conclave” of Rockefeller family members, consultants, and friends. Negotiations that normally would have taken months were concluded in the 4 days before the UN Headquarters Committee met. Moreover, there were loose ends: land not under Webb & Knapp's control had to be acquired; access to the site would need to be gained by widening 47th Street, meaning that city property would have to be relinquished; New York State would have to allow the closing of some streets, and the federal government would have to be asked for an interest-free loan.

John D. Rockefeller, Jr. decided to make a cash gift to the UN, which would then buy the land from Webb & Knapp. On the night of Tuesday, December 10, Zeckendorf accepted Rockefeller's offer of \$8.5 million. The next morning Warren Austin, America's delegate to the UN, announced the gift, “stipulating that the City would add another \$2.5 million to build a half-mile tunnel beneath First Avenue, street widening and other improvements.” On December 12 a UN committee voted overwhelmingly (but not unanimously) to accept Rockefeller's gift. Three months later Mayor O'Dwyer committed another \$15 million to rehabilitate the area next to the UN compound.

As F. Peter Model comments, Zeckendorf's “seemingly impetuous decision to scrap twelve months of elaborate planning for [a large] urban complex . . . and make the land available to the United Nations at a huge financial sacrifice to himself and his partners is usually depicted as an extraordinary act of civic generosity.” But, he argues, “The worldwide media exposure . . . gave him instant credibility in the financial world [and] launched one of the most spectacular careers in the annals of modern real estate development.”¹⁰

INTERNATIONAL ORGANIZATION, INTERNATIONAL STYLE, INTERNATIONAL ARCHITECTS

The second half of the 1920s had seen a generally free interchange within Europe of the radical ideas of contemporary architecture, largely through the

modernist domination of professional journals. Thirty years earlier a similar phenomenon had spread the Arts and Crafts message. But whereas the Arts and Crafts movement was essentially unified, the modernists of France, Germany, Holland, and—for a moment—Russia saw the need to adapt to the structural changes in society and to meet the demands of industrialization, and mutually moved by the perceived urgency to reform urbanistic and especially housing policies, sang the anthem of Internationalism in several part harmony.

Three events were especially significant. In 1927 the *Deutscher Werkbund* appointed its first vice president, Ludwig Mies van der Rohe (who would later become head of architecture at IIT) to manage a collaboration between itself and the municipality of Stuttgart. He organized the construction of the Weissenhofsiedlung, a settlement of twenty-one prototype houses (comprising sixty dwellings) for lower- and middle-income families, designed by prominent modernists. Most of the thirteen invited architects were German but one was Swiss and two were Dutch. The settlement formed part of an exhibition, “*Die Wohnung*” (“The dwelling”), held from July to October.

The following year Friedrich T. Gubler, secretary of the *Werkbund*’s Swiss chapter, persuaded Madame Hélène de Mandrot to make available her chateau at La Sarraz, Switzerland, for a meeting of Europe’s leading architects. The outcome of that gathering was the establishment of the *Congres Internationaux d’Architecture Moderne* (CIAM, the International Congress of Modern Architecture). Many of the twenty-five attendees (from Austria, Belgium, France, Germany, The Netherlands, Spain, and Switzerland) commanded great moral authority and already enjoyed a European, if not universal reputation. They identified rationalization and standardization as priorities in humanely solving the housing and city planning problems that each faced in his own country.

Le Corbusier would later write in *UN Headquarters*, “In 1928 . . . the CIAM was born. Real precursor of our United Nations, this Congress, having harmonized what might be called the ‘dissenters’ of architecture and urbanism, worked 20 years perfecting a doctrine of architecture and urbanism.”

CIAM held four more congresses and had planned a sixth, aborted just as Europe was plunged into World War II. For the duration of the conflict the group was sustained in the United States as CIAM, Chapter for Relief and Postwar Planning. The first postwar conference was organized by the British Modern Architectural Research Group (MARS) at Bridgewater, England in 1947, followed by others at Bergamo, Italy, Hoddeston, England, and Aix-en-Provence, France. At the Dubrovnik, Yugoslavia, congress in 1956 CIAM was replaced by a “loose association of friends” of the modern movement. Although its philosophies were centered on housing and city planning, they greatly affected the design of UN Headquarters.

In February–March 1932, New York’s Museum of Modern Art (MoMA) mounted “Modern architecture: international exhibition” that introduced the American public to the work of the European modernists. The work of Le Corbusier, J.J.P. Oud, Walter Gropius, Mies van der Rohe, and (by contrast) Frank Lloyd Wright formed the bulk of the show, but there was also work by other Americans—altogether some forty architects representing fifteen countries. In the catalogue the organizers—Alfred Barr, Jr., MoMA’s director; Philip Johnson, curator of its Architecture and Design department; and historian/critic Henry-Russell Hitchcock—credited Le Corbusier, Mies, Gropius, and the Hollander Oud with the foundation of what they dubbed the “International Style.” Hitchcock and Johnson also published *The International Style: Architecture Since 1922* to coincide with the exhibition. They concluded that there was indeed an international *style*—Barr capitalized the word in his preface but the authors did not—recognizable by several elements: space enclosed, regularity, and rejection of ornament. Certainly those commonalities are instantly observable in Modernism, but the product of each of the architects mentioned was diverse, distinctive, and recognizable as his own.

Of course, the idea of an “international architecture”—an aesthetic that would reflect the role of the organization—was important to the United Nations. Participating designer Ssu-Ch’eng Liang believed that “this group of buildings should be not only international in character, but un-national—expressing no country’s characteristic but expressive of the world as a whole.” That goal was achieved: Jeanne Kirkpatrick, erstwhile U.S. ambassador to the U.N. (1981–1985) said that the building had a “universal style but it has achieved that by adopting the personality of no country and no culture.”

In 2003 K. Normandin and M. Petermann wrote that “United Nations Headquarters is considered a highly significant living monument because it was created to symbolize an accord to unified world peace. [It was] meant architecturally to symbolize new political ideals and their aesthetic embraced a formal unadorned style of modernism to create large complexes representing political power.”¹¹

Recalling that the 1927 competition had “drawn scandal to the League of Nations” and despite demands by the AIA and others that there should be an international competition, the UN appointed a design committee of architects, engineers, and planners from ten member nations; it was headed by New York architect Wallace Kirkman Harrison. Questions were raised about the propriety of his appointment; after all, he was the Rockefeller family’s personal architectural adviser and the designer of William Zeckendorf’s cancelled City-X project. *And* his brother-in-law was married to John D. Rockefeller, Jr.’s daughter, Abby. After the UN Headquarters was complete, *Time* magazine ingenuously reported that UN Secretary General Trygve Lie, who appointed Harrison as director of planning, believed that he was specially qualified for the post of top UN architect: he had helped build Rockefeller Center, he had been on the committee that brought the UN to Manhattan,

and he helped Rockefeller in his “purchase and gift of the building site.” There was nothing about his skill as an architect.

A consulting Board of Design—a “politically selected consortium of internationally recognized architects”—was recruited from member nations. Architectural historian Eric Mumford comments on what many resented as the “seemingly arbitrary selection.”

Other members . . . whom Le Corbusier suggested to Harrison for appointment were [Alvar] Aalto, [Walter] Gropius, Mies, [Oscar] Niemeyer, [Jose Luis] Sert, [the Ukrainian engineer Vladimir] Bodiansky, Eero Saarinen . . . , Edward Durrell Stone, and Mathew Nowicki. . . . The first three were not acceptable because Finland and Germany were not then members of the UN, and Harrison rejected Saarinen and Stone on the grounds that they were not New York architects. Sert was rejected because Harrison considered him “more of a planner.” Of Le Corbusier’s candidates Harrison accepted Niemeyer for Brazil, Sven Markelius for Sweden and Gaston Brunfaut . . . for Belgium. Harrison also nominated . . . from Australia (Gylè Soilleux), Canada (Ernest Cormier), China (Ssu-ch’eng Liang), USSR (Nikolai Bassov), and Uruguay (Julio Vilamajó), who were not CIAM members. For Britain [he named] Howard Robertson.¹²

Clearly, the selection was fraught with nepotism and politics. Harrison appointed his junior partner Max Abramovitz as deputy director of planning. It seems that Le Corbusier also enlisted his associate, Yugoslavian Ernest Weissmann. The five permanent nation-members of the Security Council ensured that they were all represented. Bassov was sent to present Moscow’s requirements. Greece insisted that Jean Antoniadis, a former city planner in Athens, be appointed as a consultant.

The Board met forty-five times between February and June 1947, “playing with blocks, scribbling sketches, and disagreeing in a half dozen languages.” In essence the members were unanimous: all shared Harrison’s preference for strict functionalism. More than twenty years earlier Le Corbusier had coined “*machine-à-habiter* (machine for living in)” to describe the modern house; the Board of Design saw the headquarters as a “machine for working in.” Because the participants decided that their personal contributions would be anonymous, exact questions of authorship remain unanswered. But guesses can be made. Le Corbusier’s urban concepts dominated the proceedings. He and Harrison tussled for 4 months.

At first, the Board considered a single building but finally agreed on a separate high-rise slab for the Secretariat and an expressive form to distinguish the General Assembly. Open esplanades complemented the whole, . . . tied together in an elegant composition devised by Niemeyer. In fact, writes Phipps, Harrison convinced the Brazilian (who “had consistently declined to do so, in deference to his former mentor, Le Corbusier,”) to put forward his scheme. In *A Workshop for Peace*, Harrison’s assistant George Dudley, who observed and documented the 4-month design process, remarks that

Niemeyer's presentation was a major breakthrough that, with changes suggested by Le Corbusier and others, formed the basis of the final design. Tom Dyckhoff recently wrote in *The Times*, "Niemeyer's design won over the jury but . . . he agreed to collaborate with Le Corbusier. The result, many argue, is mostly Niemeyer's—though Le Corbusier got most of the glory."

Other sources, not least himself, have credited the design to Le Corbusier, based on his conceptual "Scheme 23A." Nevertheless, as Phipps observes, "Accused by Le Corbusier of stealing the UN design, and denigrated by others as a 'committee architect,'" it was Harrison "who moved the design forward through countless small arguments and efforts by individual architects to promote their own schemes. . . ." Harrison made the design buildable. He wrote in his final report to Trygve Lie, "The world hopes for a symbol of peace. We have given them a workshop for peace." And he would tell a meeting of the Royal Institute of British Architects that one of the greatest problems he had ever had to face, "was that of trying to build, quickly and well, a headquarters for the UN. [Trygve Lie] assembled . . . a group of architects and engineers (speaking at least 10 languages and from 14 different countries) to design . . . a home for the UN. We disagreed, we fought, but we worked hard and each day we returned ready to start anew. We knew we had to succeed."

The now-hackneyed axiom, "A camel is a horse designed by a committee," does not apply in the case of the UN Headquarters. Dudley writes, "The design of the UN was an international effort . . . resulting in a landmark building that was functionally and symbolically important in its time, and marking the emergence of modern architecture as the dominant language of postwar institutions and cities." Architecture critic Herbert Muschamp agrees: "The committee produced not a camel but an icon, an architectural sign that modernity and world peace were mutually reinforcing."

CONFLICT WITH THE CRITICS: ROUND ONE

In June 1947 publication of the design (albeit a "tentative layout scrawled on an envelope by 'an authoritative source'" in *The New York Times* (and reinterpreted in *Life* magazine) inevitably brought the critics out of the woodwork. *Time* reported that "generalized but nonetheless official sketch [was] enough to raise the hackles of conservative architects." Architect Charles C. Platt, president of Manhattan's Municipal Art Society, [said]: "It seems to me simply slabs turned up and slabs lying on their belly, with no unity of composition. . . . A diabolical dream." Another architect, Perry Coke Smith, remarked that it looked like "sandwich on edge and a couple of freight cars." Asked by a British architectural journalist for his opinion of the proposal, the great Frank Lloyd Wright replied, "Architecture has never come out of collaboration alive. Each laborer could do better by himself. Out of this committee for designing UNHQ has come a sinister emblem for world power.

This monstrous commercialized tombstone for the graveyard of peace.” Lewis Mumford, in his *New Yorker* “The Sky Line” column, hoped that “the present designs for the buildings will no doubt be improved, perhaps radically modified.”

The first estimate of \$85 million proved unacceptable to the UN, so the budget was trimmed to \$65 million by reducing the number of floors in the Secretariat from forty-five to thirty-nine. In February 1948 President Truman persuaded Congress to approve an interest-free loan to build and furnish the complex; the last \$1 million installment was repaid in 1982. Eleven months later the construction contract was awarded to a consortium of four Manhattan companies, Fuller-Turner-Walsh-Slattery; the cornerstone was ceremonially laid on October 24 and at the peak of activity twenty-five hundred building workers were engaged on-site. Secretariat employees occupied their offices in August 1950 and the UN Headquarters opened on January 10, 1951.

The most prominent of the four buildings—the one that attracted the most comment—was the 550-foot, thirty-nine-story steel-framed Secretariat tower at the south end of the complex. Its orientation was decided partly because otherwise it would have cast a shadow over much of the site. It had east and west curtain walls of blue-green Thermopane glass in aluminum frames. The spandrels masking the between-floor spaces were painted black on the inside and there were bands of louvered air intakes on the sixth, sixteenth, twenty-eighth, and thirty-eighth floors. Its windowless end walls were clad with Vermont marble. Three basement levels, connecting with the Conference Building, housed parking garages, an automobile service station, and mechanical plant rooms.

The five-story General Assembly Building, a sloping structure with concave sides, stood beyond a small plaza to the northwest of the Secretariat. The main public entrance to the complex, through another landscaped plaza, was at its north end; at its other end a 54-foot high window provided a view from the delegates’ lobby across the Secretariat plaza. The east and west exterior walls were clad with English limestone with Vermont marble dressings. The gold, blue, and green Assembly Hall, measuring 165 by 115 feet occupied the second, third, and fourth floors. Its 75-foot ceiling was crowned with a shallow dome. The General Assembly chamber was originally designed to seat delegates from seventy member states (that allowed for some expansion of the UN, but it now serves 192 nations) and also provided rows of seats for the news media and the public. The space was flanked by glass-walled interpreters’ booths. The building’s lower two levels housed one large and four smaller conference rooms and the communication hub of the complex, as well as visitor facilities.

The Conference Building extended 400 feet along the waterfront and connected the other buildings; in fact, it was cantilevered over Franklin D. Roosevelt Drive. Most of its second and third floors housed the chambers of

the Security Council, the Economic and Social Council, and the Trusteeship Council. Each room was 135 by 72 feet with a 24-foot ceiling. The second floor also provided a large delegates' lounge, overlooking extensive gardens to the north end and a smaller lounge at the south end. The delegates' dining room, private dining rooms, and a staff café were on the fourth floor; the first floor had three capacious conference rooms.

The complex expressed *zeitgeist*—the spirit of the age. In *The Guardian* in April 2006, Jonathan Glancey called it “a glorious time warp, an international wonderland, its interiors pickled in a curious kind of cold war-meets-Festival of Britain aspic. For fans of authentic period design, it is a slap-up banquet for the eyes.” In keeping with the international spirit, materials were selected from many lands: British limestone, Italian and American marble, furniture and furnishings from Britain, Czechoslovakia, France, Greece, Scandinavia, and Switzerland. Decorative interior timbers came from Belgium, Canada, Cuba, Guatemala, The Philippines, Norway, and Zaire (now the Democratic Republic of the Congo).

Even the gardens were international. When developed, they would contain “some 1,500 prize-winning rose bushes, 140 flowering cherry trees, 95 pin oak, 59 honey locust, 48 London plane-trees and 30,000 daffodil bulbs, as well as a fine group of hawthorn, sweet gum, pin oak [sic] and sycamore trees. Lining the asphalt walks are Texas ilex, California privet, azaleas, English ivy [and] wisteria.”

CONFLICT WITH THE CRITICS: ROUND TWO

In 1951, many reputable architects hailed the UN Headquarters as a great architectural achievement. Not everyone agreed. Mumford, for example, dismissed the Secretariat as “a Christmas package wrapped in cellophane” and “a triumph of irrelevant romanticism,” offering a scathing detailed critique:

In this building . . . the [movement that] sought to identify the vast and varied contents of modern architecture with its own arid mannerism . . . has reached a climax of formal purity and functional inadequacy. Whereas modern architecture began with the true precept that form follows function . . . this new office building is based on the theory that . . . function should be sacrificed to form.

. . . If anything deserves to be called picture-book architecture, this is it, for all the fundamental qualities of architecture seem to have been sacrificed to the external picture, or rather, to the more ephemeral passing image reflected on its surface. Should one look behind this magician's mirror, one should not be surprised to find, if not a complete void, something less than good working quarters for a great world organization. . . . [This] is not a building expressive of the purposes of the UN, but an extremely fragile aesthetic achievement. . . . As a conscious symbol, the Secretariat adds up to zero; as an unconscious one, it is a negative quantity, since it symbolizes the worst practices of New York, not the best hopes of the UN.¹³

GROWTH AND OUTGROWTH

The first major addition to the UN complex was the Dag Hammarskjöld Library, linked to the Secretariat Building at the southwest corner of the site. It was dedicated on November 16, 1961, in honor of the second Secretary-General, who had died in a plane crash in September. The library, funded by a gift from the Ford Foundation and designed by Harrison, Abramovitz, and Harris, was “erected to meet the Organization’s growing demands for library services” and had six stories, three of which were below ground; it was intended primarily for the use of Secretariat staff, delegations to the United Nations, members of permanent missions, and other official users. Three years later, also in memory of Hammarskjöld and fifteen other victims of the accident a stained-glass “Peace window” by the French artist Marc Chagall was placed in the lobby of the Secretariat Building.

When the UN complex was first designed there were fifty-seven member states and, as noted, the architects were asked to allow for an increase to seventy. That number was exceeded by 1955 and an expansion, mainly of meeting areas, for a membership of 126 was carried out by 1964. In 1976 the General Assembly authorized further enlargement of the seating capacity and refurbishing of its own Hall, the Trusteeship Council Chamber and the Security Council office and lounge area, as well as the large conference rooms; the work was completed in September 1980. By mid-1981 a two-level documents reproduction plant had been built under the lawn north of the Assembly Building, and in 1982 a new structure to house an interpreters’ offices, meeting rooms, and a cafeteria for staff and delegates was built at the southeast corner of the Secretariat Building.

Inevitably, growth meant that the UN overflowed its site and office buildings outside of the complex (most of them in UN Plaza) accommodate specialized agencies. According to official sources,

Since the growth of the staff could not be accommodated in the existing Secretariat Building, it has been necessary to rent office space in adjacent buildings. A large number of staff, including the personnel of the United Nations Development Corporation, are located across First Avenue on 44th Street. The Corporation is a public-benefit, non-profit Organization created by New York State to provide facilities for the United Nations and related Organizations. The multi-use buildings also house a luxury hotel, an apartment hotel and a health club on floors not occupied by the United Nations. A third building was erected in early 1987 by the Corporation to house the United Nations Children’s Fund (UNICEF).¹⁴

“AN INTERNATIONAL SYMBOL OF NEGLECT”

In the early 1990s the UN became aware that its iconic but aging Modernist buildings were not only failing, but—had they been subject to New York

City's fire and safety codes—were actually illegal. According to Senator Charles E. Schumer, it posed “a risk to the lives of those who work in the building, the neighborhoods adjacent to the building, and the first responders who would be called onto the scene in the event of an emergency.” At the end of the decade Christopher S. Wren, writing in *The New York Times*, called the UN Building “an international symbol of neglect,” and listed a number of problems:

Roofs leak. A marble wall in the Dag Hammarskjöld Library has threatened to collapse. Asbestos insulation needs to be replaced. Plastic sheeting was installed to protect library desks and computers from dripping water. And some motors and water pumps that keep the building running are so antiquated that spare parts are no longer made. . . . Perhaps more alarming is that [the 39-story Secretariat] is . . . without a sprinkler system, which the city's fire code normally requires. One of the emergency exits available to delegates in case of fire is the third-floor roof of the Conference Building, which “has deteriorated beyond repair and needs to be replaced,” according to a proposed new budget. . . . The headquarters now cost nearly \$10 million a year to heat in winter and cool in summer, partly because of 5,400 windows installed . . . when energy was cheap. And asbestos insulation in place for nearly 50 years is drying out.¹⁵

Despite the development of a renovation plan by 2000, remedial action was delayed for many reasons. Most were political issues between the UN and the federal government—“concerns over preserving national sovereignty, isolationist attitudes towards international law, negative attitudes towards certain countries and social systems, disagreements over UN efficiency and cost, and the frequent minority status of the U.S. in the General Assembly”—or minor disagreements with New York State and City governments. They are compelling issues, but outside the scope of this essay.

In July 2007 the UN announced that Swedish-owned Skanska USA Building Inc. had been engaged to undertake the preconstruction phase of a \$1.9 billion refurbishment of the Secretariat, General Assembly, and Conference buildings, beginning with a “Capital Master Plan” scheduled to start early in 2008. It is planned for completion in 2014.

Curtain Walls

Throughout history, the walls of buildings have served structural and environmental functions. That is, they carried the weight of the building to the ground and, while providing light, ventilation, and access through openings, protected occupants from the intrusions of weather, noise, and unwanted visitors. The introduction of framed structures—seen first in later medieval cathedrals—in which loads are carried by beams and columns, allowed the

wall to serve solely as a relatively thin “environmental filter.” This liberation would not be complete until the advent of metal- and reinforced concrete-framed architecture in the nineteenth century. The curtain wall, a metal and glass membrane hung on the structural frame, is associated principally with multistory buildings after about 1880.

Early Chicago skyscrapers, such as the Rookery (1885–1886) and Monadnock Building (1889–1891), both designed by Burnham and Root, had conventional load-bearing walls, but soon the economic necessities of efficient construction and space optimization demanded buildings whose outer walls consisted almost entirely of windows supported by columns and beams. This was a first step toward the true curtain wall, continuous *in front of* the structural frame. The earliest was in Albert Kahn’s Packard Motor Car forge shop in Detroit (1905), followed by his Brown-Lipe-Chapin gear factory (1908), and Ford T-model assembly plant in Highland Park, MI (1908–1909). The idea was taken up in Europe: Peter Behrens emulated it in the A.E.G. Turbine Factory (1909–1910) in Berlin; so did Walter Gropius and Adolf Meyer in the iconic Fagus Works in Alfeld-an-der-Leine, Germany, a year later.

Most historians agree that Willis Jefferson Polk’s eight-story Hallidie Building (1917–1918) in San Francisco was the first curtain wall office block. Despite florid cast-iron ornament, the street façade, bracketed to cantilevered floor slabs, presented an unbroken glass skin 3 feet 3 inches in front of the structure. Others dreamed (and only dreamed) of crystal-sheathed towers. Among them was H. Th. Wijdeveld’s *Amsterdam 2000* (1919–1920), Le Corbusier’s *Ville contemporaine* (1922), and—probably the best known—Ludwig Mies van der Rohe skyscrapers projected for Berlin between 1919 and 1923. But available technology could not turn vision to reality. Holabird and Root’s A.O. Smith Research Building in Milwaukee, Wisconsin (1928–1930), with large sheets of glass in aluminum frames, was the first full curtain wall multistory building.

Defense technologies developed in World War II increased the possibilities for tall curtain wall buildings. Key among them was economic aluminum production; it is light, its surfaces can be hardened by anodizing, and it can be extruded into the complicated profiles needed to frame the glass and stiffen the wall against wind loads. Reliable cold-setting synthetic rubber sealants also became available. And more efficient sheet glass manufacture, especially polished cast glass and float glass (after 1952) was another important factor; more of that later. Eventually it became possible to shop-fabricate large wall frame components that could be transported to the site, fixed and glazed, avoiding the “wet” processes that slow down conventional building operations. The final phase would be to employ preglazed elements. Beside curtain walls, other engineering developments included reverse-cycle air conditioning (after 1928) and fluorescent lighting, first demonstrated at the 1938 Chicago

World's Fair. All these innovations could be seen in Pietro Belluschi's twelve-story Equitable Building in Portland, Oregon (1944–1948), described by one historian as "an ethereal tower of sea green glass and aluminum." The United Nations Secretariat building closely followed.

In 1927 Le Corbusier had entered the design competition for the League of Nations' Geneva headquarters. It has been said that his proposal probably would have shared a first prize but was disqualified because he had not drawn it in Indian ink as specified in the competition rules. "However, with its wall of insulating and heating glass [*mur neutralisant* (neutralizing wall)], it is one of the finest examples of [his] gift for functional analysis. For the first time anywhere, he proposed an office building that corresponded in its structure and design to a strict analysis of function." Between 1929 and 1933 he refined—but could not afford to apply—the *mur neutralisant* for his Salvation Army hostel, the *Cité de Refuge* in Paris. And as early as 1947 he warned that it was "senseless" to construct a building in New York, "where the climate is terrible in Summer, [if its] large glass areas . . . are not equipped with a *brise soleil*. I say this is . . . very seriously dangerous." The *brise soleil*, invented by him in 1934, was simply an independent sun screen. Anyway, as British academic Michael Wigginton asserts, "If the *mur neutralisant* had been tried for the UN Building, it would probably have worked."

But Le Corbusier was preempted. In 1930 the American refrigeration engineer C. D. Haven invented "Thermopane"—hermetically sealed double glazing units with a half-inch air gap. It was first marketed in 1935 by Libbey Owens Ford. Harrison specified it for the UN Secretariat's curtain walls. Although it presented huge area of glass to the east and west, the building "worked" because it was air conditioned. Mechanical engineers produced a heating/cooling system that could overcome with the associated thermal problems. Conditioned air was delivered from the ceiling and through convector units just inside the glass, to moderate heat loss or gain. Together with Mies van der Rohe's Lake Shore Drive Apartments (1951) in Chicago and Gordon Bunshaft's Lever House (1952) on Park Avenue, New York, the UN Headquarters contributed to the universal standard for high-rise buildings.

But curtain walls had other latent problems that offset their advantages. By the end of the twentieth century, the immaculate façades of these admirable buildings had failed in several ways—among them, water penetration, corrosion, and glass breakages. The design of curtain wall systems has been revised continually, mostly in attempts to reduce weight while retaining strength. Stiffened sheet aluminum, enameled steel and insulation sandwiches, and even thin sheets of stone have been used for spandrel panels. Joint design—joints are problem spots for leaks—has been improved and more durable sealants developed. The availability of reliable adhesives (derived from space technology) allowed architects to indulge in so-called fish tank jointing of

glass panels, eliminating frames. "Thermopane" gave way to nonactinic (heat-absorbing) glass and in the 1960s to reflective glass, used to reduce heat gain within buildings. In 1984 heat mirror glass was developed; combined with double glazing, its insulating value approaches that of masonry, but aesthetically it denies the building's form, merely reflecting what's around it.

Given that the curtain wall's two significant advantages are the reduction of weight and speed of erection, it might be concluded that it cost less than conventional construction. Although probably true in terms of capital outlay, its thermal performance often resulted in higher costs of air conditioning over the life of the building. The curtain wall was in vogue, so to speak, when energy was cheap and climate change was not on the social agenda; but such factors are critical in the age of global warming.

In his confronting 1967 comedy *Playtime*, the French filmmaker Jacques Tati pronounced judgment upon the anonymous tall building. To shoot the movie, he built a huge scale-downed city ("Tatville") of moveable model skyscrapers on the outskirts of Paris. Critic Nik Huggins writes that the main character, the bumbling Monsieur Hulot (played, as usual, by Tati) ambles "through a fully modernised Paris of sleek glass and steel office towers, now transformed to resemble every other major city in the world, as depicted in numerous tourism posters . . . The Eiffel Tower, the Arc de Triomphe and numerous other icons of . . . French culture are spotted in reflections as people pass through the clear glass doors. . . ." Appearing in the background of many scenes, tourism posters are *almost* identical. Each illustrates an identical row of curtain wall skyscrapers (exactly the same as those in Tatville); the only differences being "Visit London" has a red double-decker bus in the foreground, "Visit Mexico" has a cactus, and so on.

The tall glass prism was America's major contribution to what some believe was an International style of Modern architecture. But, thankfully (at least in some cases) it was eclipsed by the rise of Postmodernism, and the crystal towers that a German Nazi publication dismissed as resembling "greenhouses with chimneys or glass boxes on stilts" were superseded with less monotonous structures. Even Philip Johnson, Mies' most ardent disciple and imitator, finally forsook the minimalist curtain wall in favor of a less incongenial architecture.

NOTES

1. United Nations Fact Sheet No. 23, January 2006, www.un.org/geninfo/faq/factsheets/FS23.HTM
2. Lane, Anthony, "In Translation." *The New Yorker* (April 25, 2005).
3. Reprinted from Robert C. Byrd, *The Senate, 1789–1989: Classic Speeches, 1830-1993*. Washington, D.C.: Government Printing Office, 1994.

4. "The United Nations at Geneva." www.unog.ch/80256EDD006AC19C/
5. "History of the United Nations Charter." www.un.org/aboutun/charter/history/dumbarton.shtml
6. "United Nations Photo Archive." www.un.org/av/photo/un60/chapter2.htm
7. "United Nations Photo Archive." www.un.org/av/photo/un60/chapter1.htm. For Truman's full speech see www.presidency.ucsb.edu/ws/print.php?pid=12188
8. "In the U.S. Tradition," *Time* (December 10, 1945).
9. Rosenthal, A. M., "The U.N. at 50: The History; the Early Days: Threadbare Furniture, Wonton Soup and the I.R.T." *New York Times* (October 22, 1995).
10. Model, F. Peter, "The United Nations at 50: The Zeckendorf Connection," *Real Estate Weekly* (November 1, 1995).
11. Normandin K. and M. Petermann, "The International Power Style of the Modern Movement: Part One." www.unesco.org/archi2000/pdf/normandin.pdf
12. Mumford, Eric Paul, *The CIAM Discourse on Urbanism, 1928–1960*. Cambridge, MA: MIT Press, 2000, 160.
13. Mumford, Lewis, "Picture Book Skyscraper." www.time.com/time/printout/0,8816,821740,00.html
14. United Nations Fact Sheet No. 23. www.un.org/geninfo/faq/factsheets/FS23.HTM
15. Wren, Christopher S., "International Symbol of Neglect; U.N. Building, Unimproved in 50 Years, Shows Its Age," *New York Times* (October 24, 1999).

FURTHER READING

- Betsky, Aaron, and Ben Murphy. *The UN Building*. New York: Thames and Hudson, 2005.
- Bleeker, Samuel, and Ezra Stoller. *The Politics of Architecture: A Perspective on Nelson A. Rockefeller*. New York: Rutledge Press, 1981.
- Dudley, George. *A Workshop for Peace: Designing the United Nations Headquarters*. New York: Architectural History Foundation; Cambridge, MA: MIT Press, 1994.
- Frampton, Kenneth, and Yukio Futagawa. *Modern Architecture 1851–1945*. New York: Rizzoli, 1983.
- Harrison, Wallace K. "The United Nations Building in New York." *Royal Institute of British Architects Journal*, 58(March 1951), 171–175.
- Hunt, William Dudley. *The Contemporary Curtain Wall*. New York: F.W. Dodge, 1958.
- Irace, Fulvio. "ONU: The United Nations Building." *Abitare* (April 1998), 186–197.
- Le Corbusier. *UN Headquarters*. New York: Reinhold, 1947.

- Mills, E. D. "The Curtain Wall: Practical and Aesthetic Aspects." *Building Materials* (March 1960), 77–82.
- Model, F. Peter. "The United Nations at 50: The Zeckendorf Connection." *Real Estate Weekly* (November 1, 1995).
- Mumford, Lewis. "United Nations Conference Building, East River Bank. . . ." *New Yorker* (January 17, 1953), 70–74. See also "United Nations General Assembly Building. . . ." *New Yorker* (March 14, 1953), 66–73.
- Newhouse, Victoria. *Wallace K. Harrison, Architect*. New York: Rizzoli, 1989.
- Olivarez, Jennifer Komar. "The United Nations: True International Style." *Echoes*, 7(Spring 1999), 52–57.
- Schlesinger, Stephen C. *Act of Creation: The Founding of the United Nations*. Boulder, CO: Westview, 2003.
- Volger, Helmut, ed. *A Concise Encyclopedia of the United Nations*. The Hague; London; New York: Kluwer Law International, 2002.
- Wright, Sylvia Hart. *Sourcebook of Contemporary North American Architecture: from Postwar to Postmodern*. New York: Van Nostrand Reinhold, 1989.
- Yeomans, David. "The Pre-History of the Curtain Wall." *Construction History*, 14(1998), 59–82.

INTERNET SOURCES

United Nations Organization official site. www.un.org/ (accessed March 2008).



Courtesy Library of Congress

United States Capitol, Washington, D.C.

*“The Cathedral of Our
National Faith”*

Across the world, there are a few seats of government whose buildings, mostly modern, that architects admire. Examples include Oscar Niemeyer's National Congress complex in Brasilia, of the late 1950s, Louis Kahn's National Assembly in Dhaka, Bangladesh (1962–1974), considered one of the great monuments of International Modernism, and the Australian Parliament House in Canberra, Australia (20 years old, and still known as “new” Parliament House), designed by the American Romaldo Giurgola. But they are held as iconic by an elite, and we would be hard-pressed to find—at least, outside those countries—many people who could recognize them. There are other seats of government whose very names, much less their appearance, strike a chord with the person in the street: the Kremlin in Moscow; the Houses of Parliament in London; and of course the United States Capitol in Washington, D.C. All are known by millions at home and abroad, buildings that evoke the institutions they represent—in short, they are icons.

According to the University of Virginia's American Studies Project, “The National Capitol [is] an American icon—the cathedral of our national faith, the map of our public memory, and the monument to our *official* culture. . . . The Building itself, at once an icon and a remarkable collection of icons—paintings, frescoes, sculpture, reliefs, architecture, and a miscellany of material objects.”¹ The U.S. government justifiably claims a place for the Capitol among the most symbolically important and architecturally impressive buildings in the world. The Complex includes the Capitol itself, the House and Senate Office Buildings, the U.S. Botanic Garden, the Capitol Grounds, the three Library of Congress buildings, the Supreme Court Building, the Capitol Power Plant, and support facilities. As focal point of the government's Legislative Branch, the Capitol is the centerpiece, having housed the meeting chambers of the Senate and the House of Representatives for almost 200 years. Here, space permits neither a discussion of the whole Complex nor a description of the Capitol itself; this essay, then, is about the genesis of the building.

The Capitol building has five levels. The first is occupied mostly by committee rooms and spaces for various congressional functionaries. The second houses (in the south wing) the House of Representatives chamber and (in the north wing) the Senate chamber, as well as the congressional leaders' offices. There are also three main public areas on this level: the 100-foot diameter domed ceremonial Rotunda linking the wings; the semicircular Hall of the House (since 1857, the National Statuary Hall); and the Old Senate Chamber (used until 1859). The third level provides access to the public galleries of the House and the Senate; the remainder houses press galleries, offices, and committee rooms. The fourth floor and the basement/terrace level contain more offices, plant rooms, workshops, and other auxiliary spaces. In all, the 540 rooms have a floor area of more than 16 acres; the building's “footprint,” to use modern jargon, is about 4 acres.

The capitol welcomes an estimated three million visitors each year (some sources give a figure of five million). In fall 2001 work began on a three-level

underground Visitor Center on the west side of the Capitol; originally planned for completion in July 2007, it remains unfinished at the time of writing (February 2008). It will house a Great Hall, a large exhibition gallery, two orientation theaters, a six-hundred-seat restaurant, two gift shops, and accommodation for the legislature, including a four-hundred-fifty-seat auditorium, additional office space, and more meeting rooms. During peak periods as many as two hundred guides will be available; permanent staff—administrators, curators, and technicians—will number about thirty. *USA Today* reported in May 2007 that government auditors had estimated the cost at close to \$600 million, increased from a 1999 figure of \$265 million.

THE CAPITOL IN POPULAR CULTURE

Almost daily, images of the Capitol—especially the west front, seen from the National Mall—appear on TV screens as the proceedings of the U.S. Congress are reported internationally. In an age when it seems that every spoken word is assigned an image, *Capitol* is visually synonymous with “U.S. government,” just as *White House* is with “the presidency.” *Broadcasting and Cable* magazine reported in September 2003 that CNN’s Washington news studio was “the latest . . . to literally tear down walls and let viewers see the outside world,” explaining that “the goal [was] to provide a backdrop (the Capitol) that is more dramatic than the back wall of a studio.” The bureau chief added, “It’s a great view of the Capitol and . . . it makes more sense if we share it with the viewers.”

In the light of such constant international exposure, there seems little need to discuss the building as a popular icon. It has appeared in many fictional movies “throughout cinematic history.” In 2007 the Washington, D.C. Convention and Tourism Corporation published convenient alphabetical lists:

The North Front was used in *Being There*, *Eraser*, and *Live Wire*. The East Front is featured in *Clear and Present Danger*, *Contact*, *The Contender*, *The Distinguished Gentleman*, *Eye of the Beholder*, *G.I. Jane*, *In the Line of Fire*, *Protocol*, *Quiz Show*, *Random Hearts*, and *Strangers on a Train*. The West Front can be seen in *Along Came a Spider*, *Chain Reaction*, *Clear and Present Danger*, *Contact*, *The Contender*, *DC Cab*, *The Day the Earth Stood Still*, *Deep Impact*, . . . *Enemy of the State*, *Hannibal*, *A Few Good Men*, *In Country*, *Independence Day*, *JFK*, *Live Wire*, *Mars Attacks!*, *National Lampoon’s Senior Trip*, *The Net*, *Nixon*, *Protocol*, *Quiz Show*, *Random Hearts*, *Rules of Engagement*, *Shadow Conspiracy*, *Starman*, *Timecop*, and *Wild Wild West*.

There are probably others; in many movies the building has a “bit part.” The earliest film (1914), now lost, in which it is germane to the plot seems to have been *The Lion and the Mouse*; adapted from Charles Klein’s “well-worn” stage play of 1905, it was shot on location, remade in 1919 and again by Warner Brothers in 1928. A couple of others deserve mention.

Frank Capra's 1939 classic *Mr. Smith Goes to Washington*, based on Lewis R. Foster's unpublished novel, *The Gentleman from Montana*, is about an idealistic man appointed to the Senate. The studio constructed a perfect replica of the Senate chamber. Capra later alleged that a number of senators had attempted to buy the film to prevent its release. Needless to say *Mr. Smith* was an immediate hit. In 1962 and 1963 ABC broadcast a 24-episode TV series based on the movie. And in 1977 Tom Laughlin remade it as *Billy Jack Goes to Washington*; it was a flop and never theatrically released. For it, the chamber again had to be re-created because the producers' application to film in the real space was refused. A second remake of sorts, *The Distinguished Gentleman*, of 1992, was critically panned.

Advise and Consent (1962), Otto Preminger's "Kennedy-era look at the post-McCarthy Senate" based on the Pulitzer Prize-winning novel by Alan Drury created "more than passing interest" among members of the Senate, after "for several months in the fall of 1961 film crews had swarmed over public and private spaces within the Russell Senate Office Building, turning its corridors, offices, and especially its Caucus Room into stage sets." The official Senate website recounts that

A patient host, the Senate drew the line at using its chamber [so] Preminger updated the [*Mr. Smith Goes to Washington*] Hollywood set. . . . Senators offered predictably mixed reviews. Ohio Democrat Stephen Young, mindful of ongoing cold war crises, considered this "a bad time in world history to downgrade the U.S. Senate" and introduced legislation to prohibit the film's distribution outside the United States . . . , South Dakota Republican Karl Mundt . . . pronounced the film "fictionalized entertainment with a touch of reality, while the U.S. Senate is a lot of reality with a touch of entertainment."²

Movies about politics, or rather about politicians, usually touch a nerve, so cooperation with the studios could hardly be expected. A July 2007 *Washington Post* article noted that though the Capitol's "towering structure" looms large in movies, no filming is allowed on the grounds. It continued,

Two particular favorite shots: the "bustling city" shot down Pennsylvania Avenue from the U.S. Treasury steps . . . and a closer-in shot in front of the Senate Garage Fountain and smaller Capitol Reflecting Pool, [are] as close as filmmakers are allowed. Filming there was already rare, but after major problems with *Billy Jack Goes to Washington*, Congress barred the filming there of all fictional movies to maintain "the aura of dignity that appropriately surrounds the Capitol as a worldwide symbol of freedom and democracy."

So Hollywood had to find architectural stand-ins. *Dave* (1993) and *The Contender* (2000) both used the Virginia Capitol. Samantha Stainburn revealed in *Government Executive* that in *Contact* (released in 1997), the Treasury Building was the capitol's understudy, because the "filmmakers needed

a location that provided the same stately backdrop as the real Capitol, but was smaller, so it took fewer people to fill the screen.” *Legally Blonde 2: Red, Hot and Blonde* (2003) chose to film “on location” at the Utah and Illinois state capitols.

The opportunity to sell souvenirs and memorabilia to upwards of three million visitors a year is not to be ignored. With appropriate dignity, the U.S. Capitol Historical Society’s online gift shop caters to the higher end of the market, offering cut crystal bowls, bookends, a range of paperweights, gold jewelry, “sculptured” (read, “cast”) jewel boxes, scarves, ties, and cufflinks (no tatty T-shirts and baseball caps here!). There is also a “Hologram Dome Capitol Block,” Christmas tree ornaments, and a “Capitol Fresco Inspired Wall Plaque,” with the blurb, “featuring an image of the . . . Capitol inspired by the Kiplinger Washington Collection, this classic wall hanging has the look and feel of a classical fresco treasure.” The most expensive strictly relevant souvenir costs just under \$400; among the least expensive are books with the riveting titles, *Outstanding African American Members of Congress* and *Outstanding Environmentalists of Congress*, slim volumes at under \$2.

At the other end of the spectrum from the Society’s merchandise is the usual range of lesser quality stuff—what the English call “tat.” One vendor’s description of a “United States Capitol Building” memento paints a telling picture: it “sits on a attractive brown lacquered base with ‘U.S. Capitol’ on the sculpture and ‘Washington, D.C.’ [as if we didn’t know] on a metal sign on the base. . . . Shrubbery is added to give it just the right amount of color.” A companion value-for-money piece is described as “The perfect souvenir gift—a musical snow globe with the US Capitol inside [it], with the White House, Lincoln Memorial, Iwo Jima Memorial, Washington Monument, and Jefferson Memorial featured on the landscaped base. The tune?—the Star Spangled Banner, of course.” The dazzling list goes on, but we need not.

WHAT’S IN A NAME?

In a June 1791 report to President Washington, Pierre Charles L’Enfant, planner of the nation’s capital, described the site of the “Congress House” as “a pedestal waiting for a monument.” By mid-March 1792 “Congress House” had become “Capitol.” Architectural historian James D. Kornwolf has pointed out that in correspondence between L’Enfant and Thomas Jefferson the planner consistently used “Congress House,” while the secretary of state always called the building “Capitol.” In fact, Jefferson painstakingly changed the wording of the notes on the Frenchman’s plan. Former architect of the Capitol William C. Allen notes,

This seemingly minor clarification was significant, for it spoke volumes of the administration’s aspirations for the Capitol and the nation it would serve. Instead

of a mere house for Congress, the nation would have a capitol, a place of national purposes, a place with symbolic roots in the Roman Republic and steeped in its virtues of citizenship and ancient examples of self-government.³

Historian Charles M. Harris agrees that “in determining to construct a national Capitol, rather than a ‘Congress Hall’ or ‘Federal Hall,’ Washington and Jefferson had made it clear that they had in mind a national temple” and points out that “the model they had in mind was an idealized conception of the Temple of Jupiter Optimus Maximus . . . on the Capitoline Hill in ancient Rome. The principal building of the new republic was to be an emblem of the nation’s republican experiment.”⁴ The most sacred site in ancient Rome was the highest of the city’s seven hills between the Forum and the Campus Martius. The great Temple of Jupiter Optimus Maximus—the Capitol—on its southern summit was the historic and religious center of the city and the symbolic centre of the Roman world. English art historian Harry Mount writes, “The American love of Rome—or, more specifically, Roman Republican virtues—intensified with the birth of the American Republic. . . . The [Founding Fathers] sought a virtuous model of government that could be separated from the monarchy they had just overthrown; the Roman Republic was ideal—pure, but not too dangerously democratic.” Because of that, the Founding Fathers “even went as far as placing their principal government building on a raised piece of ground, like the Romans.”⁵

In his recent disturbing book, *Are We Rome?: The Fall of an Empire and the Fate of America*, Cullen Murphy observes that from Washington’s Capitol Hill,

The view to the west takes in a vast expanse of classical porticoes and marble monuments. . . . Washington rose out of a malarial marsh on a river upstream from the coast, as Rome did. . . . The Romans cherished their myth of origin . . . and on the Palatine Hill you could be shown a thatched hut said to be the hut of Romulus . . . , but on Capitol Hill you can find sacred national touchstones of other kinds. . . . Washington resembles Rome in many ways.

Noting that the physical similarities are clearly visible, he goes on to say, “The similarities of spirit are more salient. . . . Washington, too, has been animated by a special outlook. Long ago it was a notion of republican virtue that Romans of an early era would immediately have recognized. Today it’s a strutting sense of self and mission that Romans of a later era would have recognized just as readily.”⁶

BEGINNINGS

Before 1788 Congresses gathered in eight different cities: New York; Philadelphia; Baltimore; Lancaster, Pennsylvania (for just one day); York, Pennsylvania;

Princeton, New Jersey; Annapolis, Maryland; and Trenton, New Jersey. The subject of a permanent national capital was broached first in 1783, and 4 years later the U.S. Constitution gave Congress legislative authority over “such District (not exceeding ten Miles square) as may, by Cession of Particular States, and the Acceptance of Congress, become the Seat of the Government.” Maryland ceded two-thirds of the specified area and Virginia the remainder. The *Residence Act*, establishing the seat of federal government, was passed on July 16, 1790. A few months later, after a less-than-meticulous review of other locations, President Washington—a former surveyor—chose the site between the Anacostia and the Potomac rivers that is now the District of Columbia, on land formerly belonging to Maryland; Virginia’s land was returned to it in 1846. Washington appointed three commissioners—the jurist Thomas Johnson, representing Maryland; Dr. David Stuart, representing Virginia; and Daniel Carroll, a “framer of the Constitution”—to survey the site and oversee the design and construction of the capital city and its government buildings. All were the president’s business associates. As noted, the planning of the city was put into the hands of Pierre Charles L’Enfant.

Paris-born L’Enfant, who had studied urban design, architecture, and engineering at France’s Royal Academy of Painting and Sculpture, had moved to America in 1776 and volunteered for the Continental Army during the War of Independence. He attained the rank of major in the Corps of Engineers. In 1789, just 5 months after Washington became president and 10 before the *Residence Act* was passed, the Frenchman lobbied for the commission to design a federal capital. When in early 1791 his war-time friend Alexander Hamilton, now secretary of the Treasury, recommended him as the best qualified person for the task, L’Enfant was duly commissioned, and in June he presented a sketch proposal to Washington. The president—as was his wont—had suggestions of his own, and by late August a resolved city plan was “projected agreeable to the direction of the President of the United States.”

L’Enfant and Washington collaborated closely for several months. Then the *prima donna* Frenchman caused “more than a little trouble and vexation” for the commissioners, whose ideas he continually discounted; he made himself answerable only to Washington. Part of the conflict had to do with the Capitol. Infuriated that someone was building a mansion close to the proposed site, L’Enfant ordered it removed; when the owner—Daniel Carroll of Duddington (not the commissioner, but his relative)—refused, L’Enfant unilaterally authorized its demolition. The outraged citizen complained directly to the president. Washington and Thomas Jefferson acted to mollify the three commissioners, who threatened to resign—and after several attempts to retain his services Washington grudgingly gave up trying to control the Frenchman. With a little nudge, L’Enfant quit in February 1792.

Washington then engaged Andrew Ellicott, who had surveyed the federal district boundaries, to develop the “L’Enfant-Washington” proposal. Despite L’Enfant’s unwillingness to cooperate, Ellicott, working from memory,

completed it within a month. There were some changes but it was the same essential plan: diagonal avenues with circular plazas at their intersections were overlaid with a grid pattern of streets—a “functional and aesthetic whole in which government buildings (were) balanced against public lawns, gardens, squares, and paths.” The scheme reflected the baroque opulence of Europe: central Dresden, Wren’s and Evelyn’s rebuilding proposals for London, and especially Le Nôtre’s setting for Versailles. Jefferson had wanted to locate the Capitol west of the Executive Mansion (White House), but L’Enfant and Washington preferred the east end of what is now the National Mall, on “Jenkins’ Hill,” 88 feet above the level of the Potomac. It was to be Jefferson’s “Capitol” on L’Enfant’s “pedestal waiting for a monument.”

“THE MOST APPROVED PLAN”

When L’Enfant was eased out, the promised Capitol design was already 5 months behind schedule. Jefferson suggested that the commissioners invite plans, and Commissioner Johnson submitted, for Washington’s approval, a draft advertisement, which Jefferson amended. Dated March 14, 1792, it was sent to newspapers in Boston, Baltimore, Charleston, New York, Richmond, and Philadelphia:

A premium of a lot in the city, to be designated by impartial judges, and \$500, or a medal of that value, at the option of the party, will be given by the Commissioners of Federal Buildings to persons who, before the 15th day of July, 1792, shall produce them the most approved plan, if adopted by them, for a Capitol to be erected in the city, and \$250 or a medal for the plan deemed next in merit to the one they shall adopt; the building to be of brick and to contain the following compartments to wit:

A conference room. A room for Representatives. (To contain 300 persons each). A lobby or antechamber to the latter.

A Senate room of 1,200 square feet of area. An antechamber and lobby to the latter. (These rooms to be of full elevation [that is, two stories high])

Twelve rooms of 600 square feet area each for committee rooms and clerks to be of half the elevation of the former.

Drawings will be expected of the ground plats [plans], elevations of each front, and sections through the building in such directions as may be necessary to explain the material, structure, and an estimate of the cubic feet of the brick work composing the whole mass of the wall.

The minimalist brief contained no indication of architectural style. But it was generally known that Jefferson, for one, favored a building based on “one of the models of antiquity, which have had the approbation of thousands of

years.” The reference to brick seems to be in conflict with that vision. And there also appears to have been confusion about republican Rome and imperial Rome. The first emperor Augustus Caesar is said to have boasted, “I found Rome a city of brick and left it a city of marble.” Brick was the material of the republic, stone and “the models of antiquity” the trappings of empire.

As to accommodation provided in the Capitol . . . It has been the experience of many architects that clients project their requirements on the basis of what they already have, despite its inadequacy and taking no account of future needs. In 1789 and 1790 Congress had met in Federal Hall—the century-old City Hall, albeit rebadged, remodelled, and enlarged—overlooking Wall Street in New York. It contained “two legislative chambers, ten committee rooms, three offices, a two-story vestibule, a caretaker’s apartment, a machinery room, an audience room, and a room for the New York Society library.” The commissioners probably had Federal Hall in mind when the program for the Capitol was written. The only additional space they asked for was the large conference room. Even before the new building was finished, its functions would call for more space than it provided.

It is still unclear exactly how many Capitol designs were submitted. The competitors included Étienne Sulpice (Stephen) Hallet—the only professional architect—Judge George Turner, Samuel Blodget, John Collins, James Diamond, Samuel Dobie, Abram Farris, Philip Hart, Leonard Hasborough, Robert Goin Lanphiere, Samuel McIntire, Jacob Small, and Charles Wintersmith; there may have been others, including Thomas Carstairs, Andrew Mayo (possibly Andrew Mayfield Carshore), and Collen Williamson. Allen argues that the surviving drawings expose “the state of architectural draftsmanship and design ability in America at the close of the eighteenth century . . . when most design services were provided by carpenters or master masons.” He explains,

Two [entrants] were veterans of General Burgoyne’s army, one was a school teacher from upstate New York, one was a prominent builder and furniture maker from New England, one would later become mayor of Baltimore, another was a builder and politician, two were carpenters, three were master builders, one was a territorial judge, and one was a businessman. . . . Despite their diverse backgrounds and training, each would have called himself an architect. To some of their contemporaries, being an architect was a learned hobby or skill. . . . To others, [it] was synonymous with being a master builder.⁷

Jefferson, for one, must have had low expectations. In the letter suggesting the competition, he had anticipated difficulty in obtaining craftsmen—how much more, capable designers? Washington, disappointed with the entries, remarked, “If none more elegant [schemes] than these should appear . . . the exhibition of architecture will be a very dull one indeed.” Architect Glenn Brown wrote in 1900, “The plans submitted were, with few exceptions, peculiarly indifferent. The larger number . . . were made by amateurs or contractors

who did not have the first idea as to what constituted either good draftsmanship or design. . . .”

At first, only Lanphiere’s, Hallet’s, and Turner’s plans were seriously considered. Months before the competition was announced, Hallet, who had briefly worked for L’Enfant, had shown Jefferson and others what he called his “fancy piece”—a domed central pavilion flanked by wings expressing the Congress’ bicameral legislature. But his competition entry, “a peripteral temple derived from . . . Roman architecture,” was totally different. In August 1792 he and Turner were invited to present their schemes to the Commissioners. The brief had changed. Each was then encouraged to submit a revised design. Each was subjected to political pressure. Washington told Turner of his “best hopes for the building” and was regaled with gratuitous advice from the president, Jefferson, and the commissioners. Turner’s new designs were rejected at the beginning of November; the commissioners, in what they saw as an urgent situation, engaged Hallet.

A JEALOUSY OF ARCHITECTS

No collective noun for architects can be found, although one wit has perceptively suggested “a jealousy of architects.” In the context of the Capitol building, at least until 1830, that seems quite appropriate. The source, by the way, may have been a distortion of the English landscaper Humphrey Repton’s complaint that he often had to “contend with . . . the jealousy of architects and builders.”

In October 1792 the commissioners received a letter from Dr. William Thornton. Then living in the British Virgin Islands, the Philadelphia-based physician was a naturalized American. An amateur architect, he successfully applied to submit a late entry for the Capitol competition. His first plans, presented later in the month, had been made before he was aware of the site details. In December Thornton told the commissioners that because his original proposal had been “calculated upon a five hundred feet front” he was revising it to make it “more suited to the situation.” Perhaps he had learned more about the site and the client’s preferences from Turner, after returning to Philadelphia. Turner’s drawings had been returned to him, so Thornton may have had the advantage of studying a design that the commissioners had almost accepted. In essence, Thornton’s Capitol was like Hallet’s “fancy piece.”

Meanwhile, through fall and into the winter Hallet worked on changes to his earlier proposals. His first revision, a less expensive version of the “fancy piece,” was finished by October; a second revision, made by late January 1793 and after consultation with Washington, “restored [its] iconographical and architectural richness.” But on February 1 Jefferson told the commissioners that he and Washington preferred Thornton’s scheme. For the republican secretary of state, it was “simple, noble, beautiful, excellently arranged and

[importantly] moderate in size”; the president praised its “grandeur, simplicity and convenience.” Two months later the commissioners accepted it, and Washington formally approved it on July 25.

Its passage was not without incident. Hallet and James Hoban, architect of the White House, attacked it, the former’s sour grapes being pressed into five manuscript folio volumes. It was “too expensive and unbuildable.” Samuel Blodget, superintendent of Public Buildings, also considered it “impracticable.” It must be remembered that Thornton was a doctor, not a builder, and a major problem was that it “restricted light and air to the wings and contained structural faults in supporting the House of Representatives’ dome.” Desperate to resolve the quarrel, Washington had Jefferson convene a conference with Hallet, Hoban, and Thornton, who brought as his “advisors” Philadelphia builders William Williams and Thomas Carstairs; Washington himself attended for at least part of the time. Both the shortlisted designs were reviewed, and a “conference” design was evolved by hybridizing Hallet’s revised plan and Thornton’s elevations—a recipe for trouble. Anyway, Jefferson reported to the president:

This alteration has . . . been made by Mr. Hallet in the plan drawn by him wherein he has preserved the most valuable ideas of the original, & rendered them susceptible of execution, so that it is considered as Dr. Thornton’s plan, rendered into practicable form. The persons consulted agreed that in this reformed plan, the objections before stated were entirely remedied, and that it is on the whole a work of great merit.”

But while Thornton, and his prospective clients viewed the conference—a better word would be *compromise*—design as an altered form of Thornton’s winning proposal, Hallet considered it to be an adaptation of his own modified plan. He was given a similar prize to Thornton and charged with supervising the construction of the good doctor’s design. The location of the Senate and Representatives chambers would be reversed, and their forms altered from Thornton’s rectangles to Hallet’s “hippodrome-shaped” rooms. According to Harris, those changes, though made “ostensibly to correct engineering problems and to admit more light to the interiors,” were politically motivated by “differences within the Washington administration.” The foundations, based on the conference plan, were started in August. But that did not end the squabbling. For the next 10 years Thornton would defend his design that “proved in the execution to be difficult and controversial.”

BUILDING THE CAPITOL

On September 18, 1793, at a Masonic ceremony preceded by a parade and followed by a party, President Washington laid the cornerstone in the building’s

southeast corner. Five days later, the commissioners formally approved his suggestion, mooted more than a year earlier, that the Capitol's facings should be dressed stone, not brick as specified in the newspaper advertisement. Stone construction was uncommon in that part of America, and suitable material was not close at hand. Although it yielded sandstone unsuited for wall construction, the Aquia Creek quarry in Stafford County, Virginia, was acquired by the government in 1791. Slaves were trained to rough-cut huge blocks that were taken on schooners 40 miles up the Potomac and hauled to the building site, where they were dressed and set by immigrant stonemasons. The change from brick to stone exacerbated the difficulty of finding skilled labor; indeed, the availability of *any* labor was problematical.

William Reed points out an irony about the construction of the Capitol: "slaves [would toil] from dawn to dusk building the temples to represent a country were 'all men are created equal.' [They would clear] the trees and brush for the Mall and boulevards that led to the seat of a government 'with liberty and justice for all.'"⁸ The commissioners insisted that they preferred to employ white workers, whether skilled and unskilled, but paid labor was difficult to obtain because wages were depressed by the abundance of African American slaves—about half the nation's slaves lived in Virginia and Maryland. Efforts to bring indentured workers from Europe also failed, so slaves provided most of the labor on the Capitol building. Historian Bob Arnebeck estimates that in a workforce that peaked at two hundred, the number of slaves increased from about sixty in 1793 to about 120 in 1798. They were employed in haulage, excavation, brick-making and laying, carpentry, nail making, and as masons' laborers. Thornton—an avowed abolitionist but paradoxically a slaveowner—put two proposals to the commissioners: he wanted to allow fifty "intelligent negroes" to earn their freedom by earning wages while working for 6 years on the Capitol project; and he wanted to purchase these enslaved men, train them to be stone cutters, and free them after 6 years of work. There is no record of the board's response.

Defying his clients' instructions to restore Thornton's east portico (which Hallet had eliminated in his final design), the Frenchman changed his rival's proposal and created a square court that projected from the center, with flanking wings to house the respective legislative chambers. He set out the foundations accordingly. Whether Hallet misconstrued his instructions is unknown, but 2 months earlier the president had appointed Thornton as one of three commissioners of the Federal District, with instructions to "restore the central rotunda and other features of the premiated plan." Whatever the case, Jefferson dismissed Hallet on November 15, 1794.

George Hadfield, feted as a "young English architect of great promise," succeeded Hallet 11 months later and no sooner had taken the reins before he recommended several alterations, including the addition of an attic story and major changes to the façade. Hoban and Thornton rejected his proposals and referred them to the president, who disapproved of them. Hadfield quit. When

he withdrew his resignation, he was reappointed on condition that he would “superintend the execution of the plan without alteration.” As might be expected, Thornton “did not become increasingly cordial toward his employee-critic.” At the end of June 1796 Hadfield gave 3 months’ notice of his resignation, only to be told by the commissioners that he could go whenever he chose. He again had second thoughts and agreed to toe the line. The commissioners tolerated him until May 1798, when *they* gave *him* 3 months’ notice. But it seems that he left immediately, and at the end of the month Hoban was given the superintendence of the Capitol. Hadfield was dismissed in June, having proved inefficient as a superintendent. Among Thornton’s archives is a statement that Hadfield admitted “that he had never superintended a building before his employment on the Capitol.”

By August 1796 the commissioners were anxious to complete the north wing, intended for the Senate, so that it could be occupied by the scheduled date of 1800. Although some third-floor rooms were unfinished, the first session of Congress held in the Capitol was on November 17, 1800. Some historians suggest that President John Adams insisted upon the premature move—the White House was not finished, either—to secure enough Southern votes to ensure his reelection.

In 1802 the commission was abolished, and Thomas Monrow was made superintendent of the City of Washington. The following year, Congress appropriated funds for the House of Representatives wing. The Philadelphia architect Benjamin Henry Latrobe was appointed architect and began work in 1804. He modified Thornton’s plan to provide committee rooms and offices and introduced practical alterations to simplify the construction. His changes incurred Thornton’s wrath, but that was hardly difficult. Although the blame was not entirely Thornton’s, his plans and interiors had serious faults and overall, his design was not buildable. Moreover, he deeply resented Latrobe telling him that changes were needed. So Thornton did all he could to “frustrate and discredit” Latrobe.

By 1807 the south (Representatives’) wing was ready for occupation. While it was being finished Latrobe began rebuilding the north wing, which already had fallen into disrepair. He redesigned the interior and added a basement space for the Supreme Court. By 1811 he had completed the south wing and the eastern half of the Senate wing. But Congress needed money to fund an impending war with Britain, and construction of the Capitol was deferred.

The United States declared war on Britain on June 18, 1812; among more complicated reasons, the conflict was about the press-ganging thousands of (allegedly) British sailors from U.S. vessels, to fight in the Napoleonic wars. In April 1813 an American force burned the parliament buildings in what is now Toronto, Canada, and in August 1814 a British reprisal mission landed at Chesapeake Bay. Washington, D.C. was its ultimate target; the British believed that for symbolic reasons, sacking of the embryonic capital would demoralize the Americans and even, they hoped, bring about the demise of the United States.

On August 24 they torched the White House, the Treasury, the War Department, and of course the Capitol. Historian Anthony S. Pitch graphically writes,

The central part of the Capitol was not built; the two wings were linked by a covered 100-foot-long wooden walk-way. . . . When the British entered the halls of the House and Senate, they passed through monumental interiors of stone adorned with fluted columns and arched entrances below domed vestibules. They raced up grand staircases into ornate rooms with vaulted ceilings. One young officer, expecting to find “republican simplicity,” was astonished by evidence all around him of “monarchical splendor.” The foreigners were so awed by the grandeur of the buildings that a number of junior officers were dismayed by the order to set it all on fire.

[Latrobe] had supervised with a perfectionist’s rigor as he created a national capitol that, in its formidable beauty, could compare with many of its counterparts across the sea. There were no sculptors of note in the young republic, so Latrobe had [hired] two worthy Tuscans . . . Giovanni Andrei had worked too slowly for the impatient Latrobe, but when he finished the first of his columns the architect had rejoiced at this “artist of first rate excellence.” Latrobe had commissioned from . . . Giuseppe Franzoni, a grand American eagle, with a wingspan of more than twelve feet. . . . It hung high above the Speaker’s chair, facing the British invaders when they entered the . . . House of Representatives. The colossal eagle suffered the same fate as the Capitol’s other glorious works of art when the vandals lit bonfires made from piles of furniture spread with the combustible content of the Congreve rockets. The heat was so fierce that glass oil-burning lamps and one hundred panes of English plate glass skylights melted into the sizzling debris. Sheets of flame created such heat that the outer stone of the columns expanded and fell off, leaving the deformed shafts wobbly and grotesque. The heavily timbered Library of Congress, stacked with about three thousand volumes of rare books, burned to oblivion.⁹

The building was gutted, and only a sudden torrential rainstorm prevented its complete destruction. One account, relayed by Pitch, reports, “The inferno was so great that the glow in the night sky was seen from fifty miles away by British crewmen aboard warships in the Patuxent River and by anxious Americans in Baltimore and in Leesburg, Virginia.” The occupation lasted about 26 hours; within a week the invading force was dispatched to Baltimore. Immediately after the fire, Congress met for one session in Blodgett’s Hotel in northwestern Washington, and until the end of 1819 it occupied what became known as the “Old Brick Capitol” on the site of the present Supreme Court Building.

In January 1815 about a third of the Congressmen, rather than rebuild on the mosquito-infested Potomac, wanted to relocate seat of government in Cincinnati, Ohio, deep inland. But a victory over the British in New Orleans, Louisiana, restored national pride and the idea of rebuilding in Washington, D.C., became “symbolic of triumph.” Congress voted funds to reconstruct public buildings on their original sites. Peace with Britain was secured through

the Treaty of Ghent, ratified in February. Nobody won the war that had cost over seven thousand lives.

Latrobe was recalled to Washington in 1815 to restore the Capitol. Historians Paul F. Norton and E. M. Halliday write that his “brave wife Mary . . . without her husband’s knowledge . . . wrote eloquent and persuasive letters to the James Madisons and to her other important Washington friends, urging that Latrobe’s talents be used in rebuilding the ruined United States Capitol.” The president agreed, and by July 1815 Latrobe was back in Washington, already producing drawings for the reconstruction. He redesigned the Representative’s chamber as a semicircle and made other “imaginative improvements.” But Colonel Samuel Lane, who was the official liaison between President James Monroe and Latrobe, convinced the president that the architect was “extravagant with public money” and “slow to achieve results” because of his commitment to his private practice. Latrobe was driven to resign in November 1817. It is widely believed that the interior design of the Capitol is his major contribution to American architecture.

In January 1818, the Boston architect Charles Bulfinch succeeded Latrobe as architect of the Capitol. One historian writes of Bulfinch:

In all his previous work there had been no fundamental change in his style of architecture, and he remained essentially what he had always been, the gentleman amateur designing in a tasteful variant of the classical mode. That is how he approached the U.S. Capitol. But there . . . he was forced to meet a new concept of architecture, and it frustrated him. On first studying the [Latrobe’s] drawings . . . he wrote: “My courage almost failed me . . . the design is in the boldest stile”¹⁰

Modifying Thornton’s and Latrobe’s proposals, Bulfinch completed the wings. Construction of the central pavilion, crowned with a low copper-covered wooden dome—until then, the wings had been joined by a wooden link—was started in 1818; the design was much more traditional than his predecessors had suggested, and he was criticized for making the dome higher than they had envisaged. According to Allen, it was taller than Bulfinch himself wanted it to be (he said) “at the request of James Monroe’s administration.” Bulfinch completed chambers for the House, the Senate, and the Supreme Court by 1819 and built the dome in 1822 and 1823; 3 years later the whole building was finished, including the western approach, rotunda, and portico. Bulfinch spent 3 more years on landscaping and decoration. At least one writer believes that his changes made the design “all the more acceptable generally. As far as the contemporary public was concerned, Bulfinch was the ‘designer of the Capitol’; and, though little is left of his work because of later alterations, he still enjoys that reputation.”

There was no architect of the Capitol between 1829 and 1851, and minor architectural services were provided by Robert Mills and other Washington

architects, working under the aegis of the commissioner of Public Buildings. Even by 1829 the Capitol was already too small to accommodate the growing number of congressmen as states were added to the Union. The next 20 years saw several proposals to enlarge it, and in 1850 and 1851 a second design competition was held, with a \$500 premium. The submissions offered alternatives: extending the eastern side; building directly on the ends of the wings, or creating new north and south wings by corridors linked to the “old” building. Faced with several options, the Senate Committee on Public Buildings decided not to adopt any design as a whole but selected the four sets of drawings that they considered “the most meritorious.” Five architects—Charles F. Anderson, William P. Elliot, Philip Harry, F. McClelland, and Robert Mills—shared the prize. The committee “passed the buck” and left President Millard Fillmore to decide on a plan and select a supervisor. He chose the Philadelphia architect Thomas Ustick Walter.

On July 4, 1851, Fillmore laid the cornerstone of the extensions. For the next 14 years, Walter superintended new wings to the north and south of the Capitol, designed in context with the existing architecture. The original sandstone, as should have been foreseen, was badly weathered, so the architect faced his additions with marble from Lee, Massachusetts; for the columns he used marble from Cockeysville, Maryland. His first problem arose in 1853 when the arrogant 36-year-old Montgomery C. Meigs, captain of Engineers and a protégé of the then Secretary of War Jefferson Davis, was appointed project manager. Prompted by Meigs, in 1853 President Franklin Pierce instructed Walter to reverse the legislative chambers, wing for wing. Worse was to come.

The extensions more than doubled the length of the Capitol, making Bulfinch’s dome disproportionately small. Plans were put in hand in May 1854 to remedy the problem, and Walter designed a 288-foot high fire-resisting, cast-iron structure; within a year Congress passed enabling legislation. The old dome was removed in 1856, and the existing Rotunda walls were reinforced to carry its 4,500-ton replacement. Not everyone was happy with Walter’s cast-iron proposal. Engineer Robert O. Woods writes that the “iron painted to look like marble” was perceived as “a counterfeiting that provoked controversy before the dome was built.” One Maryland congressman was concerned because there was no precedent for such a use of iron (in fact, there was, and had been in Britain since 1779). Nevertheless, for the next 11 years—with one significant interruption—the dome rose over Washington, D.C. Its elegant structure consisted of cast iron modules, some weighing 10 tons, each with flanges for fixing to its neighbor with massive bolts, forming ribs; integrally cast cross-members stiffened it.

Meigs claimed the credit for this “product of inspired design combined with hard-headed engineering.” According to Woods, he even signed his name to Walter’s drawings, claiming that Walter had simply put Meigs’ ideas on paper. Nothing short of open warfare existed between the two men, and the

conflict was carried as far as President Buchanan before it was temporarily settled. In 1859 Meigs was posted to the Dry Tortugas, “the closest thing the United States had to Siberia.” Architect Vernon Reed asserts that Meigs’ claim to the dome “was a phony one, for those who knew Walter knew that he was probably the most competent architect of his day, even in the engineering disciplines.”

Notwithstanding the soldier’s “persistent interference,” the project progressed rapidly: the Representatives convened in their new chamber in mid-December 1857 and the Senators in theirs early in January 1859. Yet it must be said that Meigs made a valuable contribution to the Capitol. As Scott explains,

Until 1859 he chose the painters and sculptors who decorated [the extension], suggesting themes to them that expressed Euro-American dominance of the continent. Italian-born fresco painter Constantino Brumidi spent twenty-five years decorating walls and ceilings of committee rooms, offices and corridors, as well as the rotunda’s frieze and canopy painting. His subjects ranged from a visual dictionary of American flora and fauna to American history primarily told through classical allegories.¹¹

The abrasive soldier returned from the Tortugas in 1861, asserting that it was “God’s will” that he complete the Capitol. The outbreak of the Civil War in April ended an acrimonious correspondence between him and Walter. Meigs went on to a distinguished career as Quartermaster General of the Union Army. Official documents later said of him, “the Army has rarely possessed an officer who combined within himself so many valuable attainments and who was entrusted by the Government with a greater variety of weighty responsibilities, or who has proved himself more worthy of confidence.”

Construction of the Capitol was deferred in 1861, and the building was temporarily used as a barracks, hospital, and bakery. But despite the war, work resumed the following year because Lincoln believed that the Capitol “must go on, just as the Union must.” At the beginning of December 1863, Walter oversaw the final placing of Thomas Crawford’s 20-foot high allegorical bronze figure of “Freedom triumphant in War and Peace” to crown his dome. In 1866 Brumidi finished *The Apotheosis of Washington*, the vast fresco in the oculus.

In August 1865 Walter resigned over a minor contract dispute and retired to Philadelphia. It has been asserted that his work on the Capitol firmly established his place in American architecture and “shaped the image and iconography of American governmental building for a century to come.” His student and assistant Edward Clark, whom President Andrew Johnson appointed following Walter’s resignation, completed the extensions in 1868. A year earlier, the office of Commissioner of Public Buildings had been abolished, and the entire Capitol was put in Clark’s control. He introduced technical innovations—steam heating, electricity, and elevators—and between 1874 and 1892, the

landscape architect Frederick Law Olmstead was commissioned to design the expansion of the Capitol grounds: lawns, planted areas, walkways, streets and the north, west, and south marble terraces, altogether covering about 274 acres.

The Capitol building “had been transformed from a sedate and self-contained building on a rather small scale to an exuberant and complex one of much greater size,” spreading 750 feet across Capitol Hill. The visual weight of the new dome overpowered the proportions of the east portico, which the architects Carrère and Hastings were engaged to rebuild in 1904. Apart from that building, with the exception of the east front extension of 1958 to 1962 (which added 102 rooms), and courtyard infill areas of 1991 to 1993, had reached its present size and appearance by 1892. Clark died in office in January 1902.

Much of the twentieth-century work involved relocating offices to other buildings, reshuffling of spaces to accommodate growing demand, and the conservation and maintenance of the exterior and interior. And as the architect of the Capitol recently reported, “As the twenty-first century opens . . . the Capitol dome is being rehabilitated in a project that will abate lead-based paint, repair cracks in the cast-iron skin, apply new paint inside and outside, and effect other related work.”

Reflecting on Benjamin Franklin’s remark—“in a Government like ours the Belief creates the Thing”—made to Robert Morris, a fellow-signatory to U.S. Constitution, Pamela Scott writes,

Certainly the belief in what the Capitol could convey about that government sustained the many statesmen and architects who created the building. Conceived in the spirit of ancient republics, slowly built to embody the political and social values of the Constitution, and nurtured by the continuous unfolding of national events, the Capitol’s art and architecture presents the broad sweep of American aspirations and history. Today the Capitol is a distillation of two hundred years of what Henry James, writing in *The American Scene* in 1907, called the “whole American spectacle.”¹²

“A Jealousy of Architects”

William Thornton (1759–1828)

Thornton, the son of a sugar planter, was born on the island of Jost Van Dyke in the West Indies. He was raised by his father’s relatives—strict Quakers—in Lancashire, England. Although independently wealthy, William “was to be trained for a useful life,” and after a 4-year apprenticeship to a physician-apothecary in northwest England, in 1781 he enrolled to study medicine at Edinburgh University. Two years later he moved to London to continue his studies. Always interested in the fine arts, he also attended lectures at the

Royal Academy. In 1784, having received his degree from the University of Aberdeen and bearing a letter of introduction to Benjamin Franklin, then America's ambassador to France, he undertook a the grand tour of Europe. In May 1785 he returned to his birthplace, for the first time since he left. Influenced by combination of "Quaker humanitarianism and Enlightenment rationalism," Thornton had become a fervent republican and intended to deal with the troubling issue of his ownership of about seventy slaves.

He set up a medical practice in Philadelphia in fall 1786. It failed; the city had its own medical school, and fierce professional competition led him to complain, "The fees are small, the attendance required is great; and the different branches of the profession are not divided. . . . It is thus not only laborious, but disgusting." At the beginning of 1788 he became an American citizen in Delaware, where he courted (sadly, in vain) the governor's daughter. Eighteen months later, back in Philadelphia, he indulged his "hobby"—architecture—by entering a design competition for the Library Company's new hall. Despite his inexperience, he won the commission for the city's first building in the Modern (Classical) style, and it was completed in 1790.

In that same year he married Anna Maria Brodeau, and in October they moved to the West Indies for 2 years. While there he learnt of the Capitol design competition; it had closed by the time he returned to Philadelphia, but he submitted a design anyway and won. Relocating in the incipient capital, he would work with (and against) a succession of experienced professionals—a "jealousy of architects"—to realize the building. In September 1794 George Washington made him a commissioner of the Federal District; when that commission was abolished 8 years later President Jefferson appointed him superintendent of the Patent Office, a post he held for the rest of his life.

Although trained in medicine, Thornton's interests were wide ranging: he attempted to found a settlement in Puerto Rico for freed slaves; he advocated U.S. intervention in liberating Greece from the Ottoman Turks and South American countries from Spanish rule; he published a discourse on the teaching of the deaf; and he planned a national university. In December 1799, when Washington lay critically ill at Mount Vernon, Thornton wanted to transfuse blood into him from a lamb. Before it could be done, the president died. Supported by Representative John Marshall, the doctor/architect then proposed a mausoleum "of American granite and marble, in pyramidal form 100 feet square at the base and of proportionate height" under the dome of his capitol building. Fortunately, it was never realized. Thornton died in 1828, and his body was interred in the congressional cemetery.

Étienne Sulpice (Stephen) Hallet (1755–1825)

Étienne Sulpice Hallet (aka Stephen Hallet) was born in France. Little is known of his training—except that was *not* at the Royal Academy, where

most architects studied—or of his early career. In the mid-1780s he was a licensed architect in Paris, specializing in “middle-class buildings,” whatever that meant. He emigrated to the United States around 1789: some historians believe that he was engaged to teach in Quesnay de Beaurepaire’s failed *Académie des Sciences et Beaux-Arts* in Richmond, Virginia; others suggest that he has been confused with the Hallett family of New York, who supported that abortive scheme. Alternatively, Pamela Scott suggests, he “may have come to America to work for the Holland Land Company”; he was employed by them in Washington in 1795 after his dismissal as the Capitol architect.

Around the beginning of 1790 Hallet moved to Philadelphia. As well as scratching out a meager living in his own practice, he worked as a drafter for L’Enfant. Possibly because his neighbors found his French name difficult to pronounce, he took the name *Stephen Hallet*. He entered the White House and Capitol design competitions in 1792, and when Thornton’s submission for the Capitol was accepted, Washington asked Hallet to work out the practical details and to oversee construction. The Frenchman moved to the capital in 1792, but a “misunderstanding” about how much Thornton’s design could be altered led to Hallet’s dismissal in 1794.

Finding financial survival difficult in the Federal District, he returned to Philadelphia in 1796 and established an evening school of architecture, which seems to have enjoyed only sporadic success. His life, post-Washington, D.C., is obscure. In 1800 he moved to Havana, Cuba, and designed the Neo-Classical *Cementerio General* (aka Espada Cemetery), returning to America when it was completed in February 1806. He was in New York in 1809, where he possibly remained until his death at New Rochelle in February 1825.

Benjamin Henry Latrobe (1764–1820)

Latrobe is widely (but not universally) considered to be the first professional architect in America. He was born near Leeds in England; his father was a Moravian church minister and his mother a third-generation Pennsylvanian of Moravian parentage. His early education in the liberal arts and classical and modern languages was gained first in England, then in Germany, and rounded off in 1783 by a grand tour of Germany and France.

The following year, he began work at the Stamp Office in London. By around 1787 (by his own account) he had started his professional training under the engineer John Smeaton. He soon developed an interest in architecture and (again by his own account) was articulated to the Greek revivalist Samuel Pepys Cockerell, whose office he claimed to have managed in 1791 and 1792. One historian notes that “Latrobe was . . . drawn into the orbit of England’s three most advanced architects: Cockerell . . . , George Dance the Younger . . . and Sir John Soane.” But recent scholarship has cast the shadow of doubt over those claims. Paul F. Norton observes, “As to his own architectural work in

England, it was scanty indeed. The sum total is two country houses and repairs or renovations to a few other houses and some London public offices. Yet when Latrobe arrived in [America] he would have his adopted countrymen believe that he was a seasoned professional."

Latrobe arrived in Norfolk, Virginia, in March 1796. The Virginia State Penitentiary in Richmond (1797–1798) was his first public building in the United States and in 1798 he moved to Philadelphia, with a commission for the Bank of Pennsylvania (1798–1801). The following year he designed "Sedgeley" a Gothic Revival country house and began the Philadelphia Waterworks (also completed in 1801). He asserted, "I have changed the taste of a whole city" and later boasted, "I am the only successful architect and engineer [in Philadelphia]. I have had to break the ice for my successors." Beyond Philadelphia, his designs included a canal linking the Chesapeake River and Delaware bays (1801–1802), Princeton's Nassau Hall (1802), and a few domestic works.

For all his self-promotion, it seems that his practice was hardly profitable, and when in 1803 President Jefferson offered him the appointment as surveyor of public buildings, he seized the chance. Like his predecessors, and because of his arrogant unfavorable criticisms, he soon offended Thornton, who uncovered Latrobe's lack of experience, greatly embarrassing him. By 1813 Congress was preoccupied with the war with Britain; without work in Washington, Latrobe left. He returned in 1815, engaged to restore the fire-ravaged Capitol—in his own words, "a most magnificent ruin." But under the increasing pressure of construction delays (mostly beyond his control) and budget overruns, he resigned in November 1817.

He designed buildings in other U.S. cities, among them Lexington, Kentucky, Philadelphia, Pennsylvania, New Orleans, Louisiana, and St. Louis, Missouri, where he died of yellow fever in September 1820. His influence on American architecture and architects is considerable. Although the U.S. Capitol and the Baltimore Roman Catholic Cathedral (1804–1820) are his best-known works, others, especially those in Philadelphia, "profoundly altered the look of American architecture in the first decades of the nineteenth century." Another critic agrees: "He was the most clever, the best educated, and the one whose influence spread the farthest by introducing the revival of Greek architecture to this country."

Charles Bulfinch (1763–1844)

Bulfinch was born in Boston, the son of a prominent physician. He was educated at the Boston Latin school and at Harvard, graduating in 1781 with a degree in mathematics and perspective. A few years later he toured Europe, seeing at firsthand the architecture of France and Italy. In Britain he was impressed by the work of the Scots Neo-Classical architect-city planner Robert Adam and on returning to Boston in 1787, he set up a practice to translate

English town planning and European architecture into an American setting. Although self-taught, he is held to be Boston's first professional architect.

His "dignified Adamesque Federal style" output was prolific and ubiquitous. A few of his projects will demonstrate: the Massachusetts State House (1787–1798); the first monument to the American Revolution on Boston's Beacon Hill (1789); the sixteen-house Franklin Crescent and the Federal Street, (both in Boston, 1793); and the Connecticut State House, Hartford (1792–1796). In the first decades of the nineteenth century Bulfinch built several residences, expanded Faneuil Hall (1804–1805), and built the India Wharf (1807), all in Boston. He also designed, among other churches, the Church of the Holy Cross (1800–1803); New North Church (1802–1804) and the First Church of Christ in Lancaster, Massachusetts (1815–1817). He also built the Massachusetts State Prison (1803) and a number of courthouses; University Hall at Harvard (1813–1814); and Massachusetts General Hospital (1818–1820).

Besides all this, from 1797 until 1818 Bulfinch was (unpaid) permanent chairman of Boston's Board of Selectmen. In that role he oversaw the modernization of the city—drainage, street lighting, rationalized and widened streets—and reorganization of the police and fire departments.

In January 1818 President James Monroe appointed Bulfinch as architect of the Capitol. While in Washington, he also designed the State House in Augusta, Maine (1829–1832). In 1830 he returned to Boston, where he died on April 15, 1844. One critic writes, "Bulfinch's work was marked by sincerity, simplicity, refinement of taste and an entire freedom from affectation, and it greatly influenced American architecture in the early formative period." Another observes that his works "bear a distinctive stamp of his own. Their elegance, repose, and refinement of detail rank them among the best products of the nation's early years."

Thomas Ustick Walter

Philadelphia-born Thomas Ustick Walter was apprenticed to his father as a bricklayer and stonemason from 1819 to 1824. After briefly working in William Strickland's architectural office, he returned between 1828 and 1831, also studying under John Haviland and the landscape artist William Mason at the Franklin Institute's School of Mechanic Arts. By 1829, he was a member of the Institute and would become its professor of architecture in 1841.

In the 1830s Walter achieved prominence with designs for buildings in and around Philadelphia: Portico Row (1830), a row of sixteen up-market houses on Spruce Street; the Gothic-style Philadelphia County Prison at Moyamensing (1831–1835); Founder's Hall, the original classroom building for Girard

College (1833–1848)—the “last word in American Greek Revivalism and unquestionably its grandest monument”; and the south wing of Nicholas Biddle’s house “Andalusia,” on the Delaware River (1834). By 1843 he had designed more than two hundred projects, including a breakwater for the port of LaGuayra, Venezuela, and a church in Shanghai, China.

Walter entered the competition for the Capitol extension in December 1850 and 6 months later moved to Washington, D.C. While there he also designed and constructed extensions to the Patent Office, Treasury and Post Office buildings, built the Marine barracks in Pensacola and Brooklyn, and made additions to the Library of Congress. Resigning in 1865, he returned to Germantown, Pennsylvania, where because of financial straits he reopened his practice in the early 1870s; few commissions came his way. When his associate John McArthur Jr. won the Philadelphia City Hall competition in 1871, he made Walter consulting architect, a role he fulfilled for the rest of his life.

Walter was “concerned about the place of architecture in society and the development of the architectural profession.” In 1836 he helped found a short-lived “American Institute of Architects” (later changed to American “Institution” of Architects), which “paved the way for the formation of the present American Institute of Architects (AIA). In 1857 Walter was elected first vice-president of the AIA and served as president from 1876 until his death in Philadelphia in 1887.

NOTES

1. University of Virginia, “The Capitol Project.” Available at http://xroads.virginia.edu/~cap/cap_home.html
2. U.S. Senate, “Historical Minute Essays, March 20, 1962. Hollywood on the Hill.” www.senate.gov/artandhistory/history/minute/Hollywood_on_the_Hill.htm
3. Allen, William C., *History of the United States Capitol*. . . Washington, DC: U.S. Government Printing Office, 2001, 10.
4. Hill, Charles M., “William Thornton.” www.loc.gov/rr/print/adecenter/essays/B-Thornton.html
5. “Conversation with Harry Mount, author of Carpe diem,” 3. www.hyperionbooks.com/pdfs/carpediemQA.pdf
6. Murphy, Cullen, *Are We Rome?: The Fall of an Empire and the Fate of America*. Boston: Houghton Mifflin, 2007.
7. Allen, 16.
8. Reed, William, “Slaves Helped Build White House and Capitol.” www.finalcall.com/perspectives/slaves08-13-2002.htm
9. Pitch, Anthony S., “The Burning of Washington.” www.whitehousehistory.org/08/subs/08_b04.html

10. "Charles Bulfinch," *Encyclopedia of World Biography*. www.encyclopedia.com/doc/1G2-3404700981.html
11. Scott, Pamela, "Freedom Triumphant in War and Peace. . . ." www.loc.gov/exhibits/us.capitol/s5.html
12. Scott, "Temple of Liberty: Building the Capitol for a New Nation." www.loc.gov/exhibits/us.capitol/s8.html

FURTHER READING

- Allen, William C. *The Dome of the United States Capitol: An Architectural History*. Washington, D.C.: U.S. Government Printing Office, 1992.
- Allen, William C. *History of the United States Capitol: A Chronicle of Design, Construction, and Politics*. Washington, D.C.: U.S. Government Printing Office, 2001.
- Bushong, William B., ed. *Glenn Brown's History of the United States Capitol*. Washington, D.C.: U.S. Government Printing Office, 1998. Annotated edition of Glenn Brown, *History of the United States Capitol*, 2 vols. Washington, DC: U.S. Government Printing Office, 1900-1903. Text and illustrations available at www.gpoaccess.gov/serialset/cdocuments/hd108-240/index.html
- Butler, Jeanne Folley, and George M. White. "Competition 1792: Designing a Nation's Capitol." *Capitol Studies*, 4(no. 1, 1976), the issue.
- Ennis, Robert B. "Nineteenth-Century Profile: Thomas U. Walter." *Nineteenth Century*, 5(Autumn 1979), 59-60.
- Gereau, Gerald R. *The Capitol, a Pictorial History of the Capitol and of the Congress*. Washington, D.C.: U.S. Government Printing Office, 1981.
- Kapsch, Robert J. "Building Liberty's Capital: Black Labor and the New Federal City." *American Visions* (February-March 1995).
- Kennon, Donald, and Thomas P. Somma. *American Pantheon: Sculpture and Artistic Decoration of the United States Capitol*. Athens: Ohio University; New York: Norton, 2005.
- Kimball, Fiske, and Wells Bennett. "William Thornton and the Design of the United States Capitol." *Art Studies* (1923), 76-92.
- Kirker, Harold. *The Architecture of Charles Bulfinch: Enlarged Edition*. Cambridge, MA: Harvard University Press, 1998.
- Letson, Neil. "Thomas U. Walter: Designer of the Capitol Dome." *Victorian Society in America. Newsletter*, 5(no. 2, 1972), 3-5.
- Preston, D. "William Thornton." In J.A. Garraty and M.C. Carnes, eds., *American National Biography*, New York: Oxford University Press, 1999.
- Scott, Pamela. "Stephen Hallet's Designs for the United States Capitol." *Winterthur Portfolio*, 27(Summer- Autumn 1992), 145-170.
- Scott, Pamela. *Temple of Liberty: Building the Capitol for a New Nation*. New York: Oxford University Press, 1995. See also www.loc.gov/exhibits/us.capitol/s0.html (accessed February 2008).
- Stearns, Elinor and David Yerkes. *William Thornton: A Renaissance Man in the Federal City*. Washington, D.C.: American Institute of Architects Foundation, 1976.

“Thomas U. Walter, Edward Clark and the United States Capitol.” *American Society of Architectural Historians. Journal*, 23(1964), 210–213.

Wolanin, Barbara Ann. *Constantino Brumidi: Artist of the Capitol*. Washington, D.C.: U.S. Government Printing Office, 1998.

INTERNET RESOURCES

Architect of the Capitol official website. www.aoc.gov/

Library of Congress. Temple of Liberty: Building the Capitol for a New Nation. February 24–July 4, 1994. www.loc.gov/exhibits/us.capitol/s0.html

Thomas Ustick Walter: Historic Architecture for a Modern World. www.philaathenaeum.org/tuw/index.html



Courtesy Associated Press

USS Arizona Memorial, Pearl Harbor, Honolulu, Hawaii

The View from Space

Most people are familiar with those computer-generated images used in television advertising that simulate a zooming lens, drawing away from a product, through a room, a house, a city, and a continent to finally become a view from space. An analogy may be drawn with the symbolic significance of the USS *Arizona* Memorial. The perforated white cuboid—extremely competent but not brilliant architecture—is about twice the floor area of the average modern house and in spatial organization much simpler than it. Yet it has become an icon, not only of the destroyed battleship, but also of the December 1941 attack on Pearl Harbor, the U.S. World War II involvement in the Pacific and further afield, and by extension the genesis of the nuclear age with its incalculable effect upon the entire planet.

The wreck of the USS *Arizona* was declared a National Historic Landmark in May 1989. The memorial, although it had been added to the National Register of Historic Places 23 years earlier, does not share that status. Nevertheless, its status as an American icon was argued well (as though it needed to be argued at all) by National Park Service (NPS) historian James P. Delgado in the Historic Places nomination of the battleship:

[The remains of the] USS *Arizona* (BB-39) are the focal point of a shrine erected by the people of the United States to honor and commemorate all American servicemen killed on December 7, 1941, particularly *Arizona*'s crew, many of whom lost their lives during the Japanese attack on the United States Pacific Fleet at Pearl Harbor. . . . *Arizona*'s burning bridge and listing masts and superstructure, photographed in the aftermath of the attack . . . and emblazoned on the front pages of newspapers across the land, epitomized to the nation the words "Pearl Harbor" and form one of the best known images of the Second World War in the Pacific. *Arizona* and the *Arizona* Memorial have become the major shrine and point of remembrance not only for the lost battleship but also for the entire attack.

Indelibly impressed into the national memory, *Arizona* is visited by millions who quietly file through, toss flower wreaths and leis into the water, watch the iridescent slick of oil that [still] leaks . . . from *Arizona*'s ruptured bunkers . . . , and read the names of [her] dead carved in marble on the Memorial's walls. Just as important as the shrine, as embodied in the form of the modern memorial . . . is the battleship herself. Intact, unsalvaged, and resting in the silt of Pearl Harbor, USS *Arizona* is a partially frozen moment of time, her death wounds visible and . . . her intact hulk holding most of the battleship's crew [is], the greatest victim of the Pearl Harbor attack and the nation's focal point for remembering a day of infamy, [and] is of exceptional national significance.

According to the *Arizona* Memorial Museum Association (AMMA), the Memorial is "an icon of America's past. It [embodies] the tragedy and grief of the nation within an edifice of dignity and grace . . . a place where the world comes to remember Pearl Harbor and Americans still come to mourn." Every year, it is visited by 1.6 million people. NPS historians assert that Pearl Harbor has an almost religious significance, being "one of the most emotion-laden

and important war sites in the world for two generations of Americans and Japanese.”

The ultimate symbolism of USS *Arizona* and the memorial, however, is the basic perception of war and its conduct. To many Americans of an older generation, *Arizona* . . . also symbolizes the need for preparedness, for military strength, and for alertness. It is also an object lesson for those who vow “never again.” To a later generation that fought in Vietnam or protested the war, USS *Arizona* has been seen as a memorial to the futility of war and the inevitability and finality of death brought by the use of force between nations.¹

They continue, “Whatever the perception, however, *Arizona* is a symbol, and the ultimate significance of the vessel and its memorial lies in the ability to be all things to all people.” To reiterate an observation made elsewhere in this book, meanings are in people.

PEARL HARBOR IN POPULAR CULTURE

Souvenirs of a visit to the Memorial are almost mandatory, because the AMMA’s functions are supported in part by sales to the many visitors. The merchandise offered in the museum shop, although including all the usual memorabilia—clothing, coffee mugs, collectors’ cards, coins and medallions, DVDs, jigsaw puzzles, key chains, lapel pins, patches, posters, and even decks of cards—is dignified and appropriate.

In 2008 there were in print thirty-five nonfiction books and six children’s books specifically about Pearl Harbor; about ten more were due for release in the course of the year. The Library of Congress holds almost one thousand titles, including film, photographs, recordings, and pamphlets. About 80 percent of the material is post–World War II; about one-fourth is post–2001. There are fewer than a dozen publications about the USS *Arizona* Memorial.

The movies have always provided an effective populist vehicle for propaganda, and Hollywood responded urgently to the attack on Pearl Harbor. The very next day Twentieth Century Fox studios suspended work on *Pearl Harbor Pearl* to begin production of what has been called a “slapdash melodrama,” *The Secret Agent of Japan*. Released only 4 months later with the tag line, “Now! The first, inside story behind the ‘stab in the back’!,” the critical flop became what the movie industry calls a “box office smash.” *The New York Times* reviewer dismissed it as “third-rate drama,” noting that “despite the rather hair-raising implications of a lobby display showing goggle-eyed ladies helplessly caught at bay by squat and unmistakable little men, the movie turns out to be a very mild hate-brew after all. To be sure, . . . [at one point the hero] mutters at a Japanese secret agent, ‘You son of a rising son.’”²

Three months later Fox also released the quasi-documentary style *Little Tokyo, USA*, “sixty-three minutes’ worth of speculation about pre-war

Japanese espionage activities.” Set in late 1941, the story concerns a series of crimes that cover up a Japanese-American group’s plot to facilitate Japan’s bombing of Pearl Harbor. Its racist message is that even U.S.-born Japanese Americans were untrustworthy, and it lobbies for their internment. (In fact, not one charge of espionage was ever brought against a Japanese American during wartime.) *Little Tokyo, U.S.A.* reflected the views of Texas Democrat Martin Dies, chairman of the Special Committee of the House on Un-American Activities, who asserted that fifteen thousand Japanese nationals were guilty of spying against the United States. The Office of War Information (OWI) condemned the hate film as an “invitation to the Witch Hunt” and as a result “took a much more active role in the regulation of Hollywood propaganda [and] stepped up its demands that the studios submit screenplays to it before shooting began.”

Released in September 1942, Warner Brothers’ “fine, noir-ish thriller,” *Across the Pacific*, directed by John Huston (and after Huston signed up, by Vincent Sherman)—like the Fox productions—was not about the bombing of Pearl Harbor, but about an imminent Japanese plot to do so. At least, that was to start with: while the film was in production, the attack actually happened, so the fictional target was changed to the strategically important Panama Canal—a not altogether implausible scenario.

Republic Pictures’ *Remember Pearl Harbor*, produced in less than a month and released in May 1942, was claimed to be the “first fictional film dealing with the attack on Pearl Harbor.” That is, some of the action was set during and after the bombing. Its wordy tag line was, “America’s stirring war cry! . . . ringing across the oceans . . . striking fear into the heart of a sneaking foe who dared to stab Uncle Sam in the back!” Republic Pictures registered the title for copyright. The “small budget quickie” was a paragon of recycling: the movie was a rehash of the 1940’s *Girl from Havana*, itself a remake of the 1939 Roy Rogers western *Rough Riders’ Roundup*, in turn a remake of another 1939 effort, *Forged Passport*, first filmed in 1936 as *The Leathernecks Have Landed!*

Columbia Pictures’ “really insignificant” melodrama *Submarine Raider* also was released in 1942. Set immediately before and after the attack, it was (like *Remember Pearl Harbor*), largely speculative. But, as Jeanine Basinger and Jeremy Arnold comment, “it initiates a ritual event, re-enacting Pearl Harbor in narrative form, a phenomenon that would continue to occur long after the war was over. It unites narrative with reality by using newsreel footage, but this accident of poverty cannot claim too much significance without cheating the truth.”³

Hollywood director John Ford joined the Navy at the age of 47, and as chief of the Field Photographic Branch of the Office of Strategic Services he filmed and supervised several wartime documentaries. He won an Academy Award for his 1943 “bizarre Pearl Harbor docu-drama,” *December 7th*. Cut to 30 minutes on the Navy’s instructions because it criticized the military’s

lack of preparation, it used clips of the actual attack to re-create the bombing and its aftermath. The 84-minute full version, eventually released in 1991, amalgamated fact and fantasy. The opening sequence shows Uncle Sam on vacation in Hawaii on December 6th, when the “Voice of Responsibility” warns him of the danger of ignoring Japanese immigrant Fifth Columnists; at the end, the ghost of a serviceman killed in the attack discusses with the ghost of a Revolutionary War soldier in Arlington National Cemetery how the U.S. will prevail over Japan. Bizarre, indeed! After *December 7th* war movies merged events at Pearl Harbor into the broader canvas of the war in the Pacific.

There is another more recent movie—also B-grade and also bizarre—worth mentioning. In United Artists’ *The Final Countdown*, released in 1980 and described by one reviewer as “a ‘Twilight Zone’ episode produced as a Navy recruiting film,” the nuclear aircraft carrier USS *Nimitz* is sucked through a time warp to December 6, 1941, presenting her crew with the time-travel chestnut: do they risk changing the course of history by launching a preemptive strike against the Japanese fleet?

It was inevitable that the Japanese, too, would make films about Pearl Harbor. All were produced by the Toho Company, now best-known for *Godzilla* and other monster movies. *Hawaii mare oki kaisen* (very loosely translated, *Battle of Pearl Harbor and the Malay Coast*) was made as propaganda in 1942. One writer notes that its special effects—touted in Japan as actual footage—were “so convincing that General Douglas MacArthur’s film unit confiscated the film and sold the footage to Frank Capra and Movietone News.” (For those who have seen the original *Godzilla*, that may come as a surprise.) Capra subsequently used it for a historically accurate reconstruction in *December 7, 1941*, part of his *Why We Fight* series. In 1961 Director Shue Matsubayashi made *Hawaii Middouei daikaikusen: Taiheiyo no Arashi*, a drama about a young Japanese pilot; a dubbed version was released in the U.S. as *I Bombed Pearl Harbor* and a subtitled version appeared as *Storm over the Pacific*. In 1968 Toho produced *Rengo kantai shirei chōkan: Yamamoto Isoroku*, a biography of the supreme commander of the Japanese fleet.

Of course, Pearl Harbor has been the theme of television documentaries, sometimes as “stand-alone,” but mostly within a series. The following list is indicative but not exhaustive: *You Are There* (1953); *Air Power* (1956); *The Twentieth Century* (1961); *Pearl* (1978-1979); *The Winds of War* (1983); *War and Remembrance* (1988); *The American Experience* (1991); *Encounters with the Unexplained* (2001); *Deep Sea Detectives* (2003); *Conspiracy* and *Days that Shook the World* (both 2004). There have been a few foreign language productions.

The few major (read, big budget) movies specifically about Pearl Harbor have been savaged by the critics. The notable exception was Fred Zinnemann’s *From Here to Eternity*, released by Columbia Pictures in 1953, that stands at number fifty-two on the American Film Institute’s list of best movies. Based on the novel by James Jones, who was stationed in Hawaii during the attack,

the film won eight Academy Awards, including best picture, out of thirteen nominations. Although not the major theme, the Pearl Harbor attack is impending throughout the film, and the climax used “stock shots from John Ford’s Navy films of WW2, which featured a few re-creations” of the bombing. According to one critic, “Packed with implicit criticism of the military milieu, [the movie] would have been even more controversial if . . . Zinnemann had been allowed to retain the original ending.” In February 1954 the *Honolulu Star Bulletin* reported that “the Army, which didn’t like the book, applauded the movie . . . General [Kendall J.] Fielder said, ‘military authorities were most concerned over the possibility of a picture that the Communists could use as propaganda.’” And a few days later the *Bulletin* noted that a “high-level” Navy conference in Washington decided not to show *From Here to Eternity* to its personnel for “moral” reasons and because it was “derogatory of a sister service” and a “discredit to the armed services.” It was remade as a television miniseries in 1979.

Of Twentieth Century-Fox’s Japanese-U.S. coproduction *Tora! Tora! Tora!* (jointly directed by Richard Fleischer, Toshio Masuda, and Kinji Fukasaku) of 1970, *Newsweek* wrote that it was “put together like a Fourth of July celebration—a long procession of predictable speeches leading to a spectacular fireworks display.” Faint praise enough to condemn it, echoed by a *Time* review: “The first half of the film is devoted to apple-pie softness and bamboo resilience. . . . Three directors . . . have managed to move crowds and planes, but not the viewer.” Indeed, many critics thought the movie was too long and boring but a few hailed it as the “greatest and most accurate war movie ever made.” *The New York Times* struck a balance: though acknowledging that “as history, it seems a fairly accurate account of what happened,” the reviewer went on, “as film art it is nothing less than a \$25-million irrelevancy.” Nominated in seven categories, it won an Academy Award for best visual effects. It also used clips from Ford’s 1943 film.

With a deafening fanfare of media hype, in 2001 Disney’s Touchstone Pictures released its \$135 million plus blockbuster *Pearl Harbor*. In that sixtieth anniversary year of America’s entry into World War II, television viewers were bombarded with such programs as *Pearl Harbor: Legacy of Attack*; *Unsung Heroes of Pearl Harbor*; *Pearl Harbor: Death of the Arizona* and *History Undercover: Road Map to Pearl Harbor*. Of course, all were good publicity for the movie, quite apart from the overtly promotional *Journey to the Screen: The Making of “Pearl Harbor”* and *Beyond the Movie: Pearl Harbor*. The most remarkable television offering was the absurd *Pearl Harbor II: Pearl-mageddon* in which (as if the Japanese attack were not bad enough) Pearl Harbor was threatened on December 7, 1941, by splinters of a giant meteor headed for Earth. Two new video-only releases also appeared in 2001: *Pearl Harbor: Day of Infamy* and *Pearl Harbor: Dawn of Death*, and there was an absolute storm of DVD rereleases of old war movies of mixed quality.

Anyway, the premiere of *Pearl Harbor*, held aboard the aircraft carrier USS *John Stennis* at Pearl Harbor (where else?), was attended by survivors of the bombing and the press. Some critics accused the moviemakers of exploiting the attack as mere backdrop for what one of them called “a *Titanic*-meets-Pearl Harbor love story.”

Most critics were scathing. Los Angeles’ *New Times* declared, “*Pearl Harbor* has no interest in the hows and whys that led to the Japanese attack, only in the booms” and added “*Tora! Tora! Tora!*—told from the Japanese and American perspectives with all the passion of a 3-hour classroom lecture—was about the details, peace talks, and betrayals. But *Pearl Harbor* can’t be bothered with history. It’s war porn, a movie that revels in the carnage.” Roger Ebert’s derisive review in the *Chicago Sun-Times* called *Pearl Harbor* “a two-hour movie squeezed into three hours, about how . . . the Japanese staged a surprise attack on an American love triangle. Its centerpiece is forty minutes of redundant special effects, surrounded by a love story of stunning banality. [It] has been directed without grace, vision, or originality.” And across the Pacific, the BBC dismissed it as “a great, bloated mess of a picture with a weak script and bland performances.” It seems that only the *Los Angeles Times* offered fulsome praise. Some others commended the “sheer eye-popping spectacle” of the special effects, but the film received only one Oscar—best sound editing—of the four for which it was nominated.

Sociologist Patricia Leavy remarks that “the commodity-based phenomenon associated with the release of *Pearl Harbor* is a direct and traceable aspect of corporate commercial culture. During the marketing campaign before the movie’s release bookstores began to display Pearl Harbor books, most of which had been first published years earlier; that had not happened on past anniversaries of the attacks—even the tenth, twenty-fifth and fiftieth—indicating that the film prompted the re-emergence of the older books.” Several new Pearl Harbor histories were published in 2000 and 2001, all written or released during the making and marketing of the film. Noting that after the events of September 11, 2001, almost all Pearl Harbor books were removed from display, Leavy suggests that Pearl Harbor and the attacks on the World Trade Center and the Pentagon “have been constructed as interrelated iconic events,” and American collective memory regarding Pearl Harbor implicitly changed.⁴

Changed perhaps—even eclipsed—by a new “day of infamy,” that memory persists. Despite the fact that “living memory” belongs to people now in their seventies, events at Pearl Harbor linger in America’s collective consciousness. An Ebay search made early in 2008 yielded over 660 items—vintage newspapers, magazines (and replicas of them), photographs, books, posters, caps, pins, pressed pennies bearing an image of the USS *Arizona* Memorial and the legend “Remember Pearl Harbor,” postage stamps, CDs, DVDs, computer games, mouse pads, and even commemorative bourbon bottles.

THE RISE OF THE RISING SUN

Following its industrial modernization in the late nineteenth century, and emulating European strategies, the *Dai Nippon Teikoku* (Empire of Greater Japan) sought to extend its territories. By 1874 its military had grown strong enough to annex Ryuku, Ogasawara, and the Kurile Islands surrounding the mainland; using the conquered peoples for labor, the Japanese built supply ports for the Imperial Navy. Next, modeling his approach on the unequal treaties imposed on Japan by the U.S. and other western powers, Emperor Mutsuhito (reigned 1867–1912) applied gunboat diplomacy to open Korea to exploitative trade. Japanese insurgencies into the poorly defended Korean peninsula provide a beachhead into eastern Russia and China. By 1895 the defeat of China in several wars and the annexation of Formosa (now Taiwan) resulted in Japan's political recognition from many European countries, freeing the emergent Meiji empire from some of the treaties earlier forced upon it by the West.

Japan formed an alliance with Britain in 1902, which was renewed in 1905 and 1911. In 1904 the Japanese went to war with Russia over dominance in Korea and Manchuria, and in May 1905 Japan destroyed the Russian Baltic Fleet at the Battle of Tsushima. Four months later a peace treaty mediated by President Theodore Roosevelt at Portsmouth, New Hampshire, gave Japan control of the Liaotung Peninsula in Manchuria, the southern half of Sakhalin Island and the South Manchurian railroad, and as well as Korea. Japan annexed the whole Korean peninsula in 1910 and planned for further conquest in mainland Asia. During World War I the empire joined the Allied powers to displace Germany's "spheres of influence," and after the Treaty of Versailles, that collaboration was rewarded with membership of the League of Nations and control of the Shandong peninsula. But the United States and Britain—not without their own mutual tension—aware that Japan's growing naval strength threatened their own maritime dominance, sought ways to limit it. The 1921–1922 Washington Conference, convened by President Warren Harding, generated a number of treaties that would remain in force until the beginning of 1937. They included the Five-Power Treaty establishing an acceptable ratio of aircraft carriers and heavy warships for Great Britain, the United States, Japan, France, and Italy. In the Four-Power Treaty, France, Japan, Great Britain, and the United States agreed to respect each other's possessions in the Pacific. The *status quo* of naval fortifications in the (West) Pacific was to be maintained. Japan was to return Shandong to China, which was assured of territorial integrity.

Nevertheless, by 1930 Japan's Imperial Army and Navy were strengthening their hold on national politics, and military expansion became the country's principal goal. Nationalism was increasing, and Japan was unwilling to be subjugated by outside forces again. Moreover, the island nation was already feeling the economic impact of the Great Depression, and its increasing

population was making territorial expansion imperative. More potently, there was a deep belief that Japan's divinely ordained destiny was to rule Southeast Asia. According to British historian Chris Trueman,

The civilian government found that it had no solutions to the problems . . . and to the army the civilian government looked weak. Many people admired the more robust response of the army. The unemployed of Japan looked to the strength of the army to assist their plight rather than to what weak politicians were doing. The voices of senior army generals were heard and they argued for a campaign to win new colonies abroad so that the industries there could be exploited for Japan. The most obvious target was a full-scale invasion of Manchuria.⁵

Acting upon a complaint from China, in 1933 the League of Nations—a toothless tiger—decreed that Japan should withdraw from Manchuria; Japan responded by withdrawing from the League, instead. More germane to this essay, in the wake of the invasion of Manchuria diplomatic relations between Japan and the United States (which was not a member of the League), would deteriorate through the 1930s. Japan ignored America's protests and in summer 1937 launched an all-out invasion of China. But neither the United States nor any other nation was willing to use military force to halt Japanese expansion in the Far East.

In September 1940, a year after the outbreak of World War II in Europe, Japan signed the Tripartite Pact, linking it with Nazi Germany and Fascist Italy. Although the United States remained isolationist, the alliance heightened tensions with Japan, which now initiated the invasion of European and American territories in Southeast Asia. That inevitably meant war with America, Britain, and The Netherlands. When, with the approval of Vichy France, Japan occupied French Indochina in July 1941, President Franklin D. Roosevelt immediately applied diplomatic pressure and economic sanctions to show that the United States would oppose Japanese expansion into the Pacific. America discontinued exports to Japan of scrap steel, other raw materials, oil, and high-octane gasoline—all needed by Japan's military machine—and it also seized Japanese assets in America. The Japanese government viewed these measures, especially the oil embargo, as threats to its national security. By summer 1941, the two countries had reached an impasse; to step back then would be to lose face.

At a meeting of the paramilitary, ultra-nationalist right-wing *Kokury kai* (Black Dragon) Society in Tokyo on August 26, 1941, Hideki Tojo, then Japan's war minister, ordered that preparation be made for total war against the United States, and that by November 1941 Japanese military assets be concentrated in the Marshall and Caroline Islands, which had been Japanese mandates since World War I.

By the late 1930s America had strengthened its defenses at Guam, Midway, the Philippines, and Wake Island in the North Pacific and stationed the U.S.

Pacific Fleet at Pearl Harbor. Admiral Isoruko Yamamoto, commander-in-chief of the Japanese Combined Fleet, recognized that the Pacific Fleet “posed a formidable obstacle to Japanese conquest of Southeast Asia.” He and the Japanese high command knew that, should there be a protracted war, America’s greater wealth and industrial power would give it a great advantage. Yamamoto believed that Japan should do its best “to decide the fate of the war on the very first day” by a surprise attack on the Pacific Fleet while it lay at anchor. In spring 1940 he and Rear Admiral Shigeru Fukudome had evaluated aerial torpedo exercises; although the strategy was not novel, neither Japan nor the United States believed that an aerial torpedo attack on Pearl Harbor could succeed, and only after months of argument were the Japanese Naval commanders convinced of its practicability. Tojo approved the operation on September 6, 1941.

On the same day, a deadline was fixed in Imperial conference for concluding negotiations with the United States. On October 14 the deadline passed without progress having been made. Two days later, Prime Minister Konoé resigned. Tojo was appointed in his place. On November 2 Tojo and Chiefs of Staff Hajime Sugiyama and Osami Nagano reported to Hirohito that the negotiations had been futile; the emperor then consented to war. The following day Nagano explained details of the planned Pearl Harbor attack to him, and on November 5 Hirohito formally approved the operations plan for a war against the West. On December 1 another imperial conference finally sanctioned action against the United States, Britain, and The Netherlands.

TORA! TORA! TORA!

Under the command of Vice Admiral Chuichi Nagumo the First Air Fleet’s *kido butai* (strike force), including the aircraft carriers *Akagi*, *Hiryu*, *Soryu*, *Kaga*, *Zuikaku*, and *Shokaku*, secretly rendezvoused in Hittokapu Bay in the remote Kurile Islands in northern Japan. There were also two battle cruisers, two heavy cruisers, one light cruiser, and ten destroyers. Radio operators from the carriers remained in Sasebo and Kure to “bat out imaginary traffic” to deceive Western radio eavesdroppers. Sailors from other ships were given public bus tours of national shrines to give the impression that the fleet was staying in home waters.

Early on November 26, 1941, the strike force weighed anchor for Hawaii, following a course far to the north of the normal shipping lanes; a screening submarine flotilla traveled 200 miles ahead. As it approached Hawaii, the fleet received reports from the submarines and Japanese agents on Oahu. At six in the morning of Sunday December 7 it hove to 230 miles north of its target. The previous night five two-man submarines, each carrying two torpedoes, were launched from “mother” submarines 10 miles outside Pearl Harbor; they had orders to enter the harbor, remaining submerged until the air

strike began, then surface and “cause as much damage as possible”—clearly a suicide mission. Yamamoto had ordered that, should the negotiations with America—still proceeding—succeed, the Japanese fleet would immediately return to Japan.

At 6:20 A.M. the first wave of aircraft left the carriers, the second following about 25 minutes later. Altogether there were 324 planes—torpedo bombers, high-level bombers, dive bombers, and fighters.

Hawaii had two warnings of the impending attack. At around 6:40 A.M. the destroyer USS *Ward* depth-charged and sank one of the midget submarines. Bureaucratic delay meant that an hour passed before the incident was reported to Admiral Husband Kimmel, commander-in-chief of the U.S. Pacific Fleet. Less than a half-hour after the sinking of the minisub, Army radar operators on Oahu’s north shore detected a large formation of planes approaching the island. The operators notified the watch officer at Fort Shafter, but, believing the aircraft to be a flight of B-17s arriving from the USS *Enterprise* or from California, he took no action.

Because of thick cloud cover, Commander Mitsuo Fuchida, leading the first wave, thought at first that he had overflowed Oahu, but he soon saw its north coast. Realizing that his force was undetected, he ordered his flight leaders to attack. Certain that they had caught the American fleet by surprise, he ordered his radio operator, Petty Officer Tokunobu Mizuki, to transmit the now famous *Tora! Tora! Tora!* code word to Tokyo.

Ninety-six of the Pacific Fleet vessels were in port; seven of its nine battleships were moored in “Battleship Row” on the southeast shore of Ford Island. American aircraft were lined up at Ford Island and Kaneohe Bay Naval Air Stations, at Ewa Marine Corps Air Station, and at the Army’s Hickam, Wheeler, and Bellows airfields. But the carriers USS *Lexington* and USS *Enterprise*—intended to be prime targets of the attack—were at sea. The first Japanese wave hit at 7:55 A.M., quickly crippling the fleet’s main battle line. Hit by several torpedoes, the *Oklahoma* listed severely, trapping over four hundred men inside. The *California* and the *West Virginia* sank at their moorings, while the *Utah*, then being used as a training ship, capsized with the loss of fifty lives. The *Maryland*, the *Pennsylvania*, and the *Tennessee* all suffered significant damage. The *Nevada*, attempting to escape to sea, was hit several times and had to be run aground to avoid sinking and blocking the harbor entrance. Japanese dive bombers and fighters struck Schofield Barracks and the airfields. Within 2 hours, three-fourths of America’s air power in Hawaii was lost; 164 aircraft were destroyed and another 159 damaged. The first assault wave ended at about 8:45 A.M.

The second wave—dive bombers and high-altitude bombers—arrived about 5 minutes later, destroying the USS *Shaw* and a dry dock and wreaking havoc inside the harbor. As it withdrew, Fuchida ordered his pilots to return to their carriers, their mission of destruction accomplished. They left behind the corpses of 2,340 American servicemen and forty-eight civilians; another 1,143

servicemen and thirty-five civilians were wounded. From the Japanese perspective the attack had been a great, although not complete, success. Although America's Pacific Fleet was devastated, its aircraft carriers were still afloat and the base at Pearl Harbor was relatively undamaged; the shipyards, fuel storage areas, and the submarine pens suffered only slight harm. More significantly, the Japanese action had served to unite the American people, hitherto divided over the question of U.S. involvement in World War II, in a commitment to victory over Japan and its Axis allies.

It was almost ten o'clock when the first returning aircraft reached the Japanese carriers. The aggressors had lost the midget submarines with their crews, and twenty-nine planes with fifty-five men. Aware that many targets were still intact, Fuchida expected that a third wave would be launched, but aboard the flagship *Akagi*, Admiral Nagumo asserted that the mission was accomplished. NPS chief historian Daniel A. Martinez writes, "Furthermore, the fleet's fuel was running low. More important, American carriers and other ships not in port were now searching for him. At one o'clock the task force altered course and began its journey back to Japan . . . a major blunder that greatly minimized the long-term effects of the attack on the American war machine."

THE LIFE AND DEATH OF USS ARIZONA

USS *Arizona* was the most seriously damaged target of the raid.

The keel of the USS *Arizona* (with the hull designation BB-39) was laid on March 16, 1914; the ship was launched on June 19, 1915. The second of two Pennsylvania class battleships, she was 608 feet long, with a 97-foot beam and an average draft of almost 29 feet; her displacement was 31,400 tons. Four screws (propellers), driven by paired turbines, generated a top speed of 21 knots. She was well armed: originally she had three 14-inch 45-caliber guns in each of four turrets; twenty-two 5-inch 51-caliber guns; four 3-inch 50-caliber guns; and two 21-inch submerged torpedo tubes. She was protected by 18 inches of armor at its maximum thickness. Her intended complement was fifty-five officers and 860 seamen.

A month after being commissioned under the command of Captain John D. McDonald, the *Arizona* sailed in November 1916 for 2 months' training in the Atlantic before returning to Norfolk, Virginia, to test-fire her guns. A "postshakedown" overhaul was completed in the New York Naval Shipyard by early April 1917. During World War I she served as a gunnery training vessel with Battleship Division 8 at Norfolk and also patrolled America's East Coast waters; at war's end, she sailed for Portsmouth, England, to operate with the British Grand Fleet.

In summer 1920 the *Arizona* became the flagship in the Caribbean for Battleship Division 7 and in July 1921 she took on the same role in the Atlantic Fleet Battle Force for McDonald, now a vice admiral. In September she was

transferred to the Pacific and for a decade served as flagship for Battleship Divisions 2, 3, and 4. From May 1929 through March 1931 she underwent extensive modernization at Norfolk. Tripod masts replaced her traditional cage masts fore and aft. New 5-inch anti-aircraft guns replaced the outdated 3-inch mounts. New armor was added below the upper decks, and “blisters” were added to the outer hull to defend her against torpedo attack. Modern boilers and turbines were installed. Like much of the Pacific Fleet, she had a two-tone gray color scheme, designed to obscure her profile at a distance; however, it “had no value to vessels in port.” In August the *Arizona* left Norfolk to be stationed again in the Pacific for 10 years. She made her last voyage to the West Coast in June, returning to Hawaii in early July; for the rest of the year her crew undertook battle-readiness drills. Her exact movements in November are unknown, but on Saturday December 6 she entered Pearl Harbor and moored at berth F-7 in “Battleship Row,” with the repair ship *Vestal* alongside.

The *Arizona* was destroyed and sunk about 15 minutes into the first wave of the attack on Pearl Harbor. Some of the crew had received weekend passes, and about forty were ashore; most had returned to the ship. An 800-kilogram, specially converted projectile penetrated her deck armor near turret two and detonated in the forward magazine; the terrific explosion of ammunition and 1.5 million gallons of fuel oil instantly separated most of forward section of the ship and actually lifted the 33,000-ton vessel out of the water. She was hit by several bombs and strafing. Martinez writes that “about 8:10 A.M. the battleship took a death blow. Petty Officer Noburo Kanai, in a high-altitude bomber . . . was credited with dropping the bomb that blew up the *Arizona*.” He adds graphically,

In an instant, most of the men aboard were killed, including Rear Admiral I.C. Kidd and Capt. F. van Valkenburgh . . . The blast from the *Arizona* blew men off the decks of surrounding ships and threw tons of debris, including parts of bodies, all over the harbor. . . . The fury of the attack continued unabated, with the *Arizona* reportedly receiving eight bomb hits as it sank. Abandoned at 10:32 A.M., the ship’s burning superstructure and canted masts loomed through the smoke that blanketed the harbor.⁶

Within just 9 minutes the mighty *Arizona* sank in 40 feet of water with 1,177 of her complement of sailors and marines. She continued to burn for 2½ days, cremating every man left on board; there were fewer than 340 survivors. Most bodies could not be reached, and only 107 were recovered and identified. The Navy had to give priority to raising the ships that could be salvaged. The *Arizona* was not among them; on December 13, 1941, it was officially reported that she was “a total loss, except the following is believed salvageable: fifty-caliber machine guns in maintop, searchlights on after searchlight platform, the low catapult on quarterdeck and the guns of numbers 3 and 4 turrets.” Even after the war requests for the recovery of the bodies of the lost men were refused. The Navy regarded them as being “buried at sea.”

THE USS ARIZONA MEMORIAL

Soon after the attack the Navy raised and repaired all the sunken vessels except the *Arizona* and the *Utah*. Of the others, only the *Oklahoma* did not return to duty. When the limited salvage work on the *Arizona* was done, she was left as a memorial to her crew, and in 1942 a new battleship berth was constructed on the hulk. In 1950, Admiral Arthur Radford, commander in chief of the Pacific Fleet, ordered that a timber platform and flagpole be constructed on *Arizona*'s boat deck, beginning a daily tradition began of hoisting the U.S. flag on a pole welded to what remained of her main mast.

Proposals for a memorial to those lost at Pearl Harbor had begun as early as 1943: Navy personnel preferred a tribute to the sailors who died; other groups wanted to commemorate wider aspects of the event. In 1946 H. Tucker Gratz, an Oahu businessman, organized civilian efforts to establish a shrine to the *Arizona*, but it was not until 3 years later that the Territory of Hawaii established the Pacific War Memorial Commission (PWMC) to plan and raise funds for war memorials on the island. In 1951 its seven honorary members—civic leaders, businesspeople, and Japanese American veterans, and chaired by Gratz—proposed a system of memorials that included the Marine parade ground, sites, and structures at Red Hill, the main gate of Pearl Harbor Naval Station, the wreckage of the USS *Arizona*, and a boulevard connecting Kamehameha and Nimitz Highways. On the fourteenth anniversary of the attack, the Navy Club erected a 10-foot high piece of basalt on Ford Island, with a plaque to the memory of U.S. servicemen—the first permanent memorial at Pearl Harbor.

President Eisenhower authorized the creation of the *USS Arizona* Memorial on March 15, 1958; it was to be built without federal funding. The PWMC set out to raise \$500,000, and the Territory of Hawaii contributed the first \$50,000. In an episode scheduled to coincide closely with the anniversary of the attack—in fact, on December 3, 1958—NBC's television series *This Is Your Life* featured Lieut.-Commander Samuel G. Fuqua, the *USS Arizona*'s senior surviving officer (by then a rear admiral). This first major national exposure of the fund-raising campaign attracted \$95,000 in private donations, much of it in a little over a month. But 2 years later the planners had reached about only half their goal.

George Chaplin, editor of the *Honolulu Advertiser*, contacted about fifteen hundred daily papers throughout the United States, seeking publicity for the Memorial. Prompted by a *Los Angeles Examiner* editorial, Colonel Tom Parker, Elvis Presley's manager, offered a benefit performance to fit in with location filming for *Blue Hawaii*. Parker stipulated that all proceeds from admissions—ticket prices ranged from \$3 to \$10, with one hundred ringside seats at \$100—must go to the fund. The March 25, 1961, concert at the four-thousand-seat Bloch Arena in the Navy Base sold out, netting almost \$64,700. Moreover, Presley's personal appearance more permanently fixed the Memorial

in the public consciousness. Furthermore, it was a good marketing move for the singer.

The Fleet Reserve Association (FRA), a national organization of active and retired Navy, Coast Guard, and Marine Corps personnel, collaborated with the Revell Model Company to sell plastic model kits of the *Arizona*, originally released in 1958. Each included donation information on the instruction sheet and the project generated \$40,000. Since May 2006 Revell again has been producing 133-piece, 1:426 scale kits that include “a historical book on the [Pearl Harbor] attack written exclusively for Revell.”

Although federal funding for the Memorial initially had been denied, Hawaii Senator Daniel K. Inouye secured \$150,000 from Congress in September 1961. The related legislation stipulated that the Memorial was “to be maintained in honor and commemoration of the members of the Armed Forces of the United States who gave their lives to their country during the attack on Pearl Harbor, Hawaii on December 7, 1941.” The design was already developed.

The brief had called for a “bridge” to span the *Arizona* without touching it that could accommodate two hundred visitors at a time. A collaborative committee of Navy personnel and the PWMC reviewed several proposals from architects before commissioning the Austrian expatriate Alfred Preis of Johnson, Perkins, and Preis Associates of Honolulu. Preis’ earlier ideas included a permanent platform connecting the *Arizona* hulk with Ford Island, where there would be an archives, a museum, and an observation tower. He also suggested incorporating a submerged compartment from which visitors could view the sunken ship through portholes. Historian Edward Tabor Linenthal records Michael Slackman’s imaginative assertion that because

Preis was raised in Vienna [he] had been impressed by the “jewel-encrusted crypts of the Hapsburg emperors and the immanent presence [*sic*] of death they conveyed.” As a result, Preis initially proposed a structure in which visitors would be able to view “the underwater remains of the ship, encrusted with the rust and marine organisms” that reminded the architect of the royal sarcophagi.⁷

Perhaps. Preis also suggested a floating eternal flame. The clients were less than enthusiastic about the “stark confrontation of death” in his original proposal so he submitted an alternative design. The little white building that resulted will never be listed among the world’s greatest architecture, but that is hardly the point of it. Besides, quite apart from the easily understood symbolism underlying its form, the Memorial stands up well under close scrutiny for its integrity and careful detailing. There may be a temptation to dismiss it as a child of its time (although which building isn’t?), but that would be to deny its honesty, dignity, and serenity. Some buildings are monuments to their architects; others must, as this one does, point away from themselves to deeper values.

Preis’ Memorial appears to be suspended above the sunken *Arizona*. It is supported on two huge steel beams that are in turn carried by thirty-six piles

driven into the harbor bed. The subtly configured superstructure of white painted in-situ reinforced concrete is 184 feet long. At each end it is 36 feet wide and 21 feet high, and it is waisted (so to speak) to 27 by 14 feet at the center. Its sloping walls and apparently sagging roof prompted one critic to call it a “squashed milk carton,” a comparison that annoyed Preis—naturally enough—who explained, “Wherein the structure sags in the center but stands strong and vigorous at the ends, expresses initial defeat and ultimate victory. . . . The overall effect is one of serenity. Overtones of sadness have been omitted to permit the individual to contemplate his own personal responses . . . his innermost feelings.”

NPS historians later commented that “the ship itself . . . is not the war memorial. That distinction belongs to the concrete arched structure that spans the sunken hulk but—symbolically—does not touch it. . . . The sunken ship [as the artefact and reminder of 7 December 1941] is a potent symbol that is enhanced and interpreted by the memorial structure.” They reiterate the architect’s design rationale, explaining that it “is less a memorial to the *Arizona* than it is to the great experience of American World War II,” and that Preis

viewed the United States as an essentially pacifistic nation, one that inevitably would sustain the first blow in any war. Once aroused by that shock, the nation could overcome virtually any obstacle to victory. Because of that characteristic, it was unavoidable—even necessary, in Preis’ view—that this nation suffer the initial defeat at Pearl Harbor. He meant his design for the memorial to be a reminder to Americans of the inevitability of sustaining the initial defeat, of the potential for victory, and the sacrifices necessary to make the painful journey from defeat to victory.⁸

The interior, while not completely enclosed, consists of three separate spaces along a single axis. Entered through a plain façade redolent, perhaps consciously, of an Egyptian pylon, the Entry Room, lit from above by a central row of three dome lights, contains the flags of the nine states for whom the eight battleships and the *Utah* were named. Visitors pass one of the *Arizona*’s bells to reach the central Assembly Room, a large area used for ceremonial occasions but more often completely unfurnished. Its side walls and its roof are open to the sea and sky, each through seven lozenge-shaped “windows”; the number is said by some to commemorate the date of the attack. An opening in the floor allows visitors to drop flowers and leis into the sea above the sunken battleship. The final space, farthest from the entrance, is the Shrine Room, whose white marble end wall is engraved with the names of those killed on the USS *Arizona*. Its ends are illuminated by abstract sculptures of the *Tree of Life*, made by perforating the side walls of the Memorial.

The \$532,000 contract was won by Walker-Moody Construction Company, that had been established just months before the Japanese attack, and the Pearl Harbor Public Works Center. The contractors later remarked that

though it was “not a major undertaking in terms of dollars, the Memorial was important [to them] in intangible ways. . . . It was an honor to be able to construct the Arizona Memorial and also a real challenge.”

On completion of the work, the Navy gave the builders a Certificate of Appreciation, noting “cooperation beyond the terms of the contract for the convenience of the Government and the general public; . . . outstanding cooperation in the scheduling of construction work to meet a stringent deadline; . . . the providing of a superior end product to that specified; [and] savings of money to the Government.” The letter also noted that, “The Contractor’s effective and conscientious safety program resulted in a total of 17,587 man-hours of work without a single lost-time accident. This is more significant considering that all work was done over water and was accessible by floating craft only.” A barge was purchased to support the crane, but it soon began to leak. It was careened . . . and the bottom repaired. A surplus LCM (landing craft mechanized) carried all materials to the site including concrete in buckets. It was named the *Cactus* [Arizona’s state flower].”

The “eloquent, yet understated structure” was completed just a few days before Memorial Day 1962, when it was officially dedicated by Congressman Olin E. Teague, chairman of Veteran Affairs, and Hawaii’s Governor John A. Burns. Over two hundred guests attended the ceremonies on the memorial; another eight hundred invited guests watched from Ford Island as Teague declared, “Upon this sacred spot, we honor the specific heroes who surrendered their lives . . . while they were in full bloom, so that we could have our full share of tomorrows.” Journalist Charles Turner reported,

Teague’s audience included military and high civic dignitaries, and relatives of the dead. There were floral tributes to the men of the *Arizona*—red roses, anthuriums, orchids. One was inscribed “Beloved Son, Clyde.” Another, “Mother and Father.” . . . There was no applause after Teague’s speech, in respect for the solemnity of the occasion and in deference to the grieving Gold Star Mothers and others who came to honor the 1,176 men who lost their lives on the USS *Arizona*. . . . Many of the women, and some of the men, shed tears as they read the names of the dead, engraved on the marble plaque.⁹

The gathering heard speeches; prayers were said, hymns were sung, and a bugler sounded “taps.” A rifle salute by a Marine Honor Guard ended the proceedings. Years later, the *Honolulu Advertiser* would accuse enigmatically and unfairly, “When the Arizona Memorial was officially dedicated . . . it was so new, and unfinished, that the general public wasn’t invited.”

The joint administration of the memorial by the Navy and the NPS was established on September 9, 1980, their mission to “preserve the cultural and historic integrity of the USS *Arizona* and to provide a framework for visitors to understand the events that unfolded on December 7, 1941.” Located on U.S. Naval Station, an 11-acre Visitor Center includes a twin movie theaters and book store; curatorial and work spaces for NPS and *Arizona* Memorial

Museum Association (AMMA) staff, and refreshment and rest areas for visitors. The Remembrance Circle, a waterfront memorial to the servicemen, women, and civilians (other than those who were aboard the USS *Arizona*) killed in the Pearl Harbor attack. A museum houses major exhibits, attack memorabilia, and depictions of the battleship “as she was.” Part of the funding is provided by the AMMA.

Built on landfill, the Museum and Visitor Center it has been subjected to greater subsidence than was expected, resulting in water leakages and (more significantly) in threats to the building’s structural integrity. Moreover, designed to accommodate two thousand visitors each day, by early in the twenty-first century the center was straining under 2½ times that number. As noted, the USS *Arizona* Memorial has over 1.6 million visitors annually. On December 7, 2004, the AMMA, the NPS, and Pearl Harbor survivors established the Pearl Harbor Memorial Fund to raise funds from public and private sources for a replacement center. The Seattle-based Portico Group were architects for the project. Revisions to the design added \$20 million to the original estimate of \$32 million, and construction was scheduled to start in 2008.

REMEMBER PEARL HARBOR!

The day after the Pearl Harbor attack President Franklin D. Roosevelt made his famous “Day of Infamy” speech to Congress. He said (in part):

Yesterday, December 7, 1941—a date which will live in infamy—the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan. . . . It will be recorded that the distance of Hawaii from Japan makes it obvious that the attack was deliberately planned many days or even weeks ago.

During the intervening time the Japanese Government had deliberately sought to deceive the United States by false statements and expressions of hope for continued peace. The attack . . . has caused severe damage to American naval and military forces. Very many American lives have been lost. In addition American ships have been reported torpedoed on the high seas between San Francisco and Honolulu.

Yesterday the Japanese Government also launched an attack against Malaya. Last night Japanese forces attacked Hong Kong. Last night Japanese forces attacked Guam. Last night Japanese forces attacked the Philippine Islands. Last night the Japanese attacked Midway Island. Japan has, therefore, undertaken a surprise offensive extending throughout the Pacific area. The facts of yesterday speak for themselves. The people of the United States have already formed their opinions and well understand the implications to the very life and safety of our Nation. . . .

Hostilities exist. There is no blinking at the fact that our people, our territory and our interests are in grave danger. With confidence in our armed forces—with

the unbounded determination of our people—we will gain the inevitable triumph—so help us God. I ask that the Congress declare that since the unprovoked and dastardly attack by Japan . . . a state of war has existed between the United States and the Japanese Empire.

In a polemic titled “From Pearl Harbor to Hiroshima: the Beginning and the End of World War II,” New England academic John Lamperti asks, “Exactly why was Pearl Harbor ‘infamous’?” Noting that the Japanese attacked only military targets and that there were relatively few civilian casualties, he argues that in wartime every military commander would like to attack by surprise if possible. He denies that “the bitter facts of U.S. defeat and heavy losses make the raid criminal,” concluding, “There is just one reason the operation was ‘infamous’: because it was an act of aggression.” Although hostilities were imminent, Pearl Harbor was a crime because the Japanese struck first.

Over the years few Americans have disagreed with that judgment. . . . [But in 2002] “pre-emption” [became] an avowed part of U.S. national policy. . . . The National Security Strategy . . . states that “The greater the threat, the greater is the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the enemy’s attack. To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act pre-emptively.” In other words, if it is to our advantage we will strike first—begin a war—when we see a potential threat.

That is just what Japan did in 1941. Clearly the United States posed a huge threat to what Japanese leaders considered her vital national interests. . . . Since war was coming, a high-risk, high-gain surprise attack, intended to disable U.S. naval power in the Pacific, would give Japan the best chance to achieve its goals. In other words, they decided on pre-emption.¹⁰

That, Lamperti advises, is something to ponder when we remember Pearl Harbor. As the NPS literature points out, The USS *Arizona* Memorial “has different meanings for the millions who visit [it] but to all of them, it speaks silently and eloquently of the distance yet to be traveled before the world lives in peace.”

Alfred Preis (1911–1993)

Alfred Preis, the architect of the USS *Arizona* Memorial, was born in Vienna, Austria, in February 1911. After completing his high school education in 1929, he undertook architectural studies until 1936. Being Jewish, and doubtless aware of growing anti-Semitism in the Third Reich, he converted to Roman

Catholicism. In 1938—the year that the Nazis annexed Austria into “Greater Germany”—he worked for the building contractors Redlich and Berger, while executing freelance interior and furniture design commissions and preparing for the state examination in architecture. But in 1939, assisted by the Catholic Refugee Association, he emigrated to the United States. It is not known exactly when he arrived in Hawaii, but from 1939 he worked as an architect and designer in Dahl and Conrad’s Honolulu office.

The young man thought that he escaped all wars and come to “the most peaceful place in the world.” The Japanese attack on Pearl Harbor changed his mind—at least, temporarily. He was taken to police headquarters almost as soon as the fury of the Japanese raid abated and, because he could speak several languages, he assumed that he was needed as a translator. But the pressure of a bayonet against his back convinced him that he had been arrested as an enemy alien. He was not alone; the former conductor of the Honolulu symphony orchestra was there, and most of the chefs of Hawaii’s tourist hotels. The next day, they were taken to the 500-acre Sand Island at the entrance to Honolulu harbor, that had been converted from a quarantine station into an Army Internment Camp. The camp commander told them that they were prisoners of war.

Within a week the island would hold about three-hundred internees: men and women of Japanese descent, as well as Austrian, Finnish, German, Italian, and Norwegian nationals. The accommodation was primitive. Preis later recalled that there were no floorboards in the tents and that the cots had no mattresses; when the prisoners lay on them they sank into the mud “and kept on sinking.” The camp was divided into sections, one for Japanese men, one for German, Italian, and other European men, and a third for women of all ethnicities—Preis’ new wife, Russian born, was imprisoned there. In total, “about 10,000 people in Hawaii were investigated shortly after the Pearl Harbor attack. Buddhist priests, ministers, Japanese school principals and community leaders were detained.”

To keep intellectually active, prisoners—and many were intellectuals—formed “The University of Sand Island.” One knew by heart nine of Anton Bruckner’s symphonies. There was a violinist from Germany. Some gave talks on city planning and others on anatomy. At night the group studied astronomy. When the camp became too overcrowded some internees were transferred to mainland detention centers, and when others complained that few other Italian Americans or Austrian Americans were being held, they were released, only to be rearrested, sent back to Hawaii and imprisoned again.

The Preises, separated, remained on Sand Island until March 1942. Alfred spent the time “sharing stories with the other internees, teaching them calisthenics and trying to keep everyone in good spirits.” According to his son Jan

Peter Preis, "he believed in the good of the country. He understood that he was considered the enemy, and he understood why he was put there." He could see his house from the camp but because the mortgage was not paid for several months, the bank foreclosed on the property.

Upon his release he returned to architecture, although the war had stopped most building activity. In 1942 he designed only war workers' concrete housing for Clarke-Halawa before finding employment in the Honolulu office of Hart Wood, who was then territorial architect. After a year Preis established his own practice, and for the next 20 years produced buildings characterized by "clean lines and spaces opening to the outdoors." His better-known postwar works include the Laupahoehoe Elementary and High School (1951); the prize-winning First United Methodist Church, Honolulu (1955); the University of Hawaii Library (1956); Honolulu Zoo entrance, Kapiolani Park (1960); the International Longshore and Warehouse Union headquarters, and several residences. Four times Preis received the design award of the American Institute of Architects Hawaii Chapter. When in August 1959 he won the commission for the USS *Arizona* Memorial, he was associated with architects Allen R. Johnson and Thomas D. Perkins, whose partnership continued until 1992.

From 1963 until 1967 Preis was the State of Hawaii's planning coordinator under Governor John Burns, and he had an important role in designing Honolulu's Capitol district, with its "great park" concept. In 1965 he founded the Hawaii Alliance for Arts Education and became the first executive director of the State Foundation on Culture and the Arts (SFCA), to "promote, perpetuate, preserve, and encourage culture and the arts" as "central to the quality of life of the people of Hawaii." Two years later, Hawaii became the first state in the nation to pass a law mandating that 1 percent of the construction cost of every new state government building would be used for purchasing public art. Preis "advocated the purchase of sometimes controversial works of art to grace government offices and community spaces," and had visions of a public museum that could exhibit the state's collection. The Hawaii State Art Museum opened in November 2001.

Preis died in March 1993. His monument is not the USS *Arizona* Memorial; neither is it any of his generally ordinary buildings. Rather, it is his lifetime commitment to the arts and arts education. The Alfred Preis Award, established in 1982, "recognizes an individual who has demonstrated in word and action [such a commitment] for Hawaii's children and their families." He once said, "I do believe deeply that the arts [reside] in the truly human area, where each individual is going to do something he or she does because he or she wants to do something well, and does it better and better and better until he or she is gratified; that this is the essence of a successful life. Because you can do that as a cook, you can do that by making beds."

NOTES

1. USS *Arizona* Preservation Project 2004 (NPS). www.pastfoundation.org/Arizona/MythsandMemorials_3.htm
2. T.S. "Secret Agent of Japan [review]," *New York Times* (March 23, 1942).
3. Basinger, Jeanine Jeremy Arnold, *The World War II Combat Film: Anatomy of a Genre*. Middletown, CT: Wesleyan University Press, 2003, 264.
4. Leavy, Patricia, "The Memory-History-Popular Culture Nexus: Pearl Harbor as a Case Study in Consumer-Driven Collective Memory." *Sociological Research Online*, 10(March 2005). www.socresonline.org.uk/10/1/leavy.html, 6.6.
5. Trueman, Chris, "Manchuria." www.historylearningsite.co.uk/manchuria.htm
6. Martinez, Daniel A., USS *Arizona*." www.library.arizona.edu/exhibits/us-sarizona/nps_survey/az_hist.htm
7. Linenthal, Edward Tabor, *Sacred Ground: Americans and Their Battlefields*. Urbana, IL: University of Illinois Press, 1993, 181.
8. Martinez, Daniel A., *Significance: Memorials, Myths and Symbols*. www.nps.gov/archive/usar/scrs/scrs6b.htm
9. Turner, Charles, Attendants at *Arizona* Rites Hear of U.S. Might." <http://mediaclips.uss-buchanan-ddg14.org/Hawaii.htm>
10. Lamperti, John, Remember Pearl Harbor!" www.math.dartmouth.edu/~lamperti/PearlHarbor.htm

FURTHER READING

- Agawa, Hiroyuki. *The Reluctant Admiral: Yamamoto and the Imperial Navy*. Tokyo: Kodansha International; New York: Harper & Row, 1979.
- Cohen, Stan, and Mary Beth Percival. *East Wind Rain: A Pictorial History of the Pearl Harbor Attack*. Missoula, MT: Pictorial Histories Publishing, 1981.
- Delgado, James P. *USS Arizona Wreck (Honolulu County, Hawaii) National Register of Historic Places Registration Form*. Washington, D.C.: U.S. Department of the Interior, National Park Service, 1988.
- Friedman, Norman, Arthur D. Baker III, Arnold S. Lott and Robert F. Sumrall. *USS Arizona: Ship's Data, a Photographic History*. Honolulu, HI: Fleet Reserve Association, 1978.
- Fuchida, Mitsuo. *From Pearl Harbor to Calvary*. Denver, CO: Sky Pilots Press, 1959. Originally published as *From Pearl Harbor to Golgotha*, 1953.
- Hoyt, Edwin P. *Pearl Harbor Attack*. New York: Sterling, 2008. Originally published as *Pearl Harbor*, 2001.
- Jasper, Joy Waldron, James P. Delgado and Jim Adams. *The USS Arizona: The Ship, the Men, the Pearl Harbor Attack, and the Symbol That Aroused America*. New York: St. Martin's Press, 2001.

- Prange, Gordon William. *At Dawn We Slept: The Untold Story of Pearl Harbor*. New York: Penguin, 2001. Originally published 1981.
- Prange, Gordon William (with Donald M. Goldstein and Katherine V. Dillon). *God's Samurai: Lead Pilot at Pearl Harbor*. Washington, D.C.: Brassey's, 2004.
- Preis, Alfred. "Hawaii and Her Architects." *American Institute of Architects Journal*, 16(December 1951), 249–252.
- Richardson, Kent D. *Reflections of Pearl Harbor: An Oral History of December 7, 1941*. Westport, CT: Praeger, 2005.
- Rosenberg, Emily S. *A Date Which Will Live: Pearl Harbor in American Memory*. Durham, NC: Duke University Press, 2003.
- Sakamaki, Kazuo. *I Attacked Pearl Harbor*. New York: Association Press, 1949.
- Seiden, Allan. *Pearl Harbor: Images of a National Memorial*. Honolulu, HI: Mutual, 2005.
- Slackman, Michael. *Remembering Pearl Harbor: The Story of the USS Arizona Memorial*. Honolulu, HI: Arizona Memorial Museum Association, 1984.
- Slackman, Michael. *Target—Pearl Harbor*. Honolulu: University of Hawaii Press; Arizona Memorial Museum Association, 1990.
- Smith, Carl. *Pearl Harbor 1941: The Day of Infamy*. Westport, CT: Praeger, 2004. Originally published Oxford, UK: Osprey, 1999.
- Victor, George. *The Pearl Harbor Myth: Rethinking the Unthinkable*. Washington, D.C.: Potomac, 2007.
- Wisniewski, Richard A. *Pearl Harbor and the USS Arizona Memorial: A Pictorial History*. Honolulu, HI: Pacific Basin Enterprises, 1986.

INTERNET SOURCES

- Arizona Memorial Museum Association. <http://arizonamemorial.org>
- Leavy, Patricia. "The Memory-History-Popular Culture Nexus: Pearl Harbor as a Case Study in Consumer-Driven Collective Memory." *Sociological Research Online*. www.socresonline.org.uk/10/1/leavy.html
- Pearl Harbor Memorial Fund. www.pearlharbormemorial.com
- USS Arizona Memorial (NPS). www.nps.gov/usar
- USS Arizona Preservation Project 2004 (NPS). www.pastfoundation.org/Arizona/



Courtesy Associated Press

Vietnam Veterans Memorial, Washington, D.C.

"Happy birthday, Grandpa."

Of the inspiration for his 2006 book *Letters on The Wall*, Michael Sofarelli recalls, “In 1996, I went back to visit The Wall. It was not planned, just a spur of the moment walk through D.C. one evening.”

As I walked through the memorial, a strange feeling of tranquility came over me. The sun was fading and it was getting dark. There were only two other people there that night. They were at the opposite end of The Wall from where I was standing. I could see them only from a distance. I stopped and watched what appeared to be a father and his young son. They were pointing at a name. The man touched it. The little boy then put something on the ground. I watched as they walked away. As quickly as I had noticed them, they were gone.

I walked over to see what they had left. . . . As I slowly approached where they had been, I noticed a piece of paper at the base of The Wall. I knelt down to see what it was. On a small piece of paper was the writing of a child. In red crayon, it simply read “Happy Birthday Grandpa.”

I was twenty-two years old then. The same age as many of the soldiers whose names appear on The Wall. The same age as my father when he enlisted. . . . There I stood, alone in front of The Wall that had once evoked so many unanswered questions. And now, all the questions had returned. “Who was that person?” “Why is his name there?” “Why did that name make that man cry when he touched it?”

I walked closer to The Wall, closer than ever before. And for the very first time, I touched The Wall. I touched a name. A name I did not know. For the very first time, I cried at The Wall.¹

There is no need to expound why the National Vietnam Veterans Memorial is an icon of American architecture. It was listed on the National Register of Historic Places the day that it was dedicated. It received the American Institute of Architects (AIA) Honor Award in 1984, the Presidential Design Award in 1988, and the AIA Twenty-Five Year Award in 2007.

The precinct now includes four elements: the Memorial Wall (dedicated in 1982) designed by Maya Ying Lin with architects of record Cooper-Lecky Partnership and landscape architects Arnold Associates; Frederick Hart’s “Three Fighting Men” statue in a plaza designed by EDAW, with a 60-foot flagpole designed by Cooper-Lecky (all dedicated in 1984); the Women’s Vietnam Memorial sculpture by Glenda Goodacre, set in a plaza designed by George Dickie (dedicated in 1993); and the In Memory Plaque, a granite tablet dedicated in 2004 to those who died later as a result of what happened to them in Vietnam. There are more than 4.5 million visitors every year.

As Kurt Andersen commented in *Time Magazine*, it is the Wall above all

that vets approach as if it were a force field. It is at the wall that families of the dead cry and leave flowers and mementos and messages. . . . [Near it], a young Boston father tells his rambunctious son, “Hush, Timmy—this is like a church.” The visitors’ processions do seem to have a ritual, even liturgical quality. Going slowly down toward the vertex, looking at the names, they chat less and

less, then fall silent where the names of the first men killed (July 1959) and the last (May 1975) appear. The talk begins again, softly, as they follow the path up out of the little valley of the shadow of death.²

A DIFFERENT KIND OF WAR

The Vietnam War—also known as the Second Indochina War, and in Vietnam as the American War (or the “War against the Americans to Save the Nation”)—was a protracted conflict in which the South Vietnamese government and the United States fought North Vietnam’s communist government and its southern collaborators. Vietnam now puts its war dead at two million civilians and 1.1 million North Vietnamese and Viet Cong soldiers. Almost fifty-nine thousand American and an estimated two hundred thousand to two hundred fifty thousand South Vietnamese servicemen died; among the South’s allies, over four thousand South Koreans, 520 Australians, 350 Thais, and 35 New Zealanders were lost. The following somewhat simplistic overview is adapted largely from Robert K. Brigham, professor of history and international relations, Vassar College. Of course, other interpretations of the historical data have been widely and passionately debated for five decades.

In the 1940s and 1950s Vietnamese communist Nationalists struggled against colonial rule, first of Japan and later France. The 8-year French Indochina War, in which France was largely funded and supplied by the United States, ended in July 1954 at the Battle of Dien Bien Phu, with the defeat of the colonial powers. They were forced to leave Indochina. In summer the Geneva Peace Accords were signed, in which Vietnam’s delegates agreed to the temporary partition of the country at the seventeenth parallel. So soon after the Korean War, neither Russia nor China wanted another confrontation with the West; they feared that a “provocative peace” would anger the United States and its allies. Although the South Vietnamese government wanted the country to be aligned with the West, North Vietnam (Democratic Republic of Vietnam, DRV) was fixed upon a single regime modeled on the U.S.S.R. and the People’s Republic of China.

Believing the Geneva Accords gave the Communists too much power, U.S. Secretary of State John Foster Dulles and President Eisenhower—through multilateral agreements that established the Southeast Asia Treaty Organization (SEATO)—supported the creation of a counterrevolutionary alternative. With massive American aid, South Vietnam was born in 1955. The following year the staunchly anti-Communist (albeit corrupt) Ngo Dinh Diem was elected president in a questionable election. Grave problems lay beneath the regime’s apparent success: Diem was an ineffective manager, unwilling to delegate authority because of his distrust of anyone from outside his family. His brother Ngo Dinh Nhu directed an “extensive system of extortion, payoffs, and influence peddling.”

Almost immediately, Diem claimed that South Vietnam was under attack from communists in the north. In late 1957, arguing that North Vietnam wanted to take his territory by force, he enlisted American military aid to launch a counteroffensive. The CIA helped identify threats to his government, and he arrested thousands under laws allowing him to detain suspected communists without formally laying charges. There was an immediate reaction to his oppressive policies from Buddhist monks and nuns, students, intellectuals, businesspeople, and peasants. But the more trouble they made, the more he accused the communists of trying to overrun South Vietnam.

As the White House vacillated over its Vietnam policy, the northern communists changed their strategy. Having failed to reunify the country and overthrow Diem solely by exerting political pressure, and provoked by his draconian action against their southern comrades, in January 1959 the Party approved turning to violence to liberate south Vietnam. In May and again in September 1960, it confirmed its “use of revolutionary violence and the combination of the political and armed struggle movements.” In December 1960 the Party’s National Liberation Front (NLF), was created. Anyone who opposed Diem and wanted to unify Vietnam could join. From the NLF’s inception, U.S. government officials claimed that the communists in Hanoi directed its violent response to the Saigon regime. Washington officially denounced the NLF as a puppet of Hanoi and accused its noncommunist elements of being communist dupes. Although the NLF insisted that it was autonomous and independent of Hanoi—indeed, that most of its membership was *not* communists—Washington continued to brand it the “Viet Cong,” a pejorative term meaning Vietnamese communist.

In December 1961 President John F. Kennedy received a report from some of his staff recommending that he provide greater economic and military aid for South Vietnam (including sending helicopters, armored transports, “advisers” and technical experts, as well as a limited number of combat troops). Others in the White House urged him to withdraw from Vietnam. He took a middle path, choosing to escalate military involvement but without extra troops. The number of U.S. military personnel in Vietnam grew from fewer than eight hundred in the 1950s to about nine thousand by mid-1962. When intelligence from Vietnam told of more NLF victories, Washington and Saigon launched the counterinsurgency Strategic Hamlet Program in the rural Vietnam, rounding up and interning villagers—the NLF’s support base. That served to further estrange the rural population from the Saigon regime.

That regime was tottering by summer 1963. Some in the Kennedy administration believed that Diem could not be a “viable leader in the nation-building experiment”; others thought him the best of a bad lot. On the pretext that they had given asylum to the communists responsible for political instability in the South, Ngo Dinh Nhu raided Buddhist monasteries, creating unrest in Saigon. By late September the Buddhist protest, reaching a climax with the self-immolation of several monks and nuns, had caused such an international

furor that the Kennedy administration chose to turn a blind eye to a coup by Diem's own generals. On November 1 Ngo Dinh Diem and Ngo Dinh Nhu were captured and later killed. Just 3 weeks later, Kennedy was assassinated.

There were then sixteen thousand U.S. military advisers in Vietnam. Washington had managed to run the war without large numbers of American combatants. Saigon's continuing political problems convinced incoming President Lyndon Baines Johnson, who had inherited "a legacy of indecision, half-measures, and gradually increasing involvement," to take direct aggressive action. In August 1964, provoked by a North Vietnamese attack on a U.S. ship in the Gulf of Tonkin, Johnson called for expansive war powers. Into the winter the White House considered its strategy. The Joint Chiefs of Staff wanted to expand the air war over North Vietnam quickly, while the Pentagon civilian planners preferred to "apply gradual pressure to the Communist Party with limited and selective bombings."

In early 1965, after the NLF attacked two U.S. army installations in South Vietnam, Johnson ordered the prolonged bombing missions over the North. In March he sent the first combat troops to Vietnam, and by 1969 over a half million U.S. military personnel were stationed there. The communists responded by launching their protracted war tactic, confident of its success because America would tire of the war and seek to negotiate a settlement. They knew that a large part of the country's population had an "ideological commitment to victory."

Washington believed that it could fight a "limited war" without affecting America's domestic culture. On the contrary. As the conflict drew on, there were not enough volunteers to fight, and the U.S. government introduced a draft. As casualties grew, so did antiwar feelings; protests spread from college campuses and through larger cities. By 1967 many Americans were becoming increasingly dissatisfied with the war. Some, especially students, academics, clergymen, and intellectuals criticized America's involvement on ethical grounds, citing that most of the victims on both sides were civilians and that the U.S. was supporting a corrupt dictatorship in Saigon; others opposed the war because of the increasing American casualties in a conflict which America showed no sign of winning. By the summer 1967 fewer than half of polled citizens supported the Johnson administration's conduct of the war. In October 1967 around thirty-five thousand demonstrators attended a protest outside the Pentagon.

At the beginning of 1968 communist forces attacked the major cities in South Vietnam. These assaults—known as the Tet Offensive—were intended to force America to the bargaining table. At the end of March Johnson announced that he was halting the bombing of North Vietnam and that the United States was "prepared to send representatives to any forum to seek a negotiated end to the war." He did not intend to seek reelection. Over the next 8 weeks thirty-seven hundred Americans were killed and eighteen thousand were wounded in the fiercest fighting of the war. Discussions with Hanoi, albeit fruitless, began in Paris on May 13.

The incoming president, Republican Richard Nixon, claimed he had a “secret plan.” He continued a process called “Vietnamization”—handing control of the war to South Vietnam and withdrawing U.S. troops while America intensified bombing in the North. Bombing campaigns intended to destroy communist safe havens and supply routes were extended into neighboring Laos and Cambodia. In 2002, when the National Archives released hundreds of tapes of Nixon’s conversations his other ideas would come to light. *USA Today* reported,

“I’d rather use the nuclear bomb,” Nixon told Kissinger, his national security adviser, a few weeks before he ordered a major escalation of the Vietnam War. “That, I think, would just be too much,” Kissinger replied softly . . . Nixon responded matter-of-factly, “The nuclear bomb. Does that bother you?” Then he closed the subject by telling Kissinger: “I just want you to think big.” He also said, “I don’t give a damn” about civilians killed by U.S. bombing.³

In June 1969 Nixon started to withdraw the first twenty-five thousand troops from Vietnam. Three months later he announced more withdrawals, and within 9 months plans were made public for the phased return to the United States of one hundred fifty thousand over the next year. The decisions were enormously popular, and the White House soon found them “politically indispensable.”

It has been remarked that the withdrawals from Vietnam around 1970 demoralized servicemen by implying that what their comrades were dying for was pointless. The dejection showed itself in drug abuse, racism in the ranks, and even “the murder or deliberate maiming of . . . officers by their own troops.” The public exposure of atrocities such as the infamous 1968 My Lai massacre also cast deep shadows over the morality of America’s presence in Vietnam. In the 8 year period before 1973 over thirty thousand military personnel were dishonorably discharged for desertion; another ten thousand deserters remained at large. Over the same period about half a million young Americans evaded conscription. Draft calls were ended in 1972, and a year later the draft was abolished altogether.

Nixon’s use of mass bombing to provide cover for a retreat angered the American public. In the week bracketing Christmas 1972, “in the approximately 4,000 sorties [some sources give 3,000] flown [over North Vietnam] in . . . Operation Linebacker II, [bombers] concentrated on the major cities of Hanoi and Haiphong. The missions executed so-called area bombing, never precise or pinpoint. Their goal: To kill as many civilians as possible.”⁴ The action drew immediate international condemnation.

Meanwhile the Communist Party had continued to press its claims at the negotiating table and by fall 1972, Kissinger and DRV representatives Xuan Thuy and Le Duc Tho had worked out a preliminary peace draft. But South Vietnamese leaders rejected the document. However, within 11 days of the “shock and awe” bombing, the U.S. and North Vietnam resumed the delayed

negotiations, and within a week a cease-fire agreement under international supervision was forged in terms acceptable to the United States. North Vietnam was allowed to retain control over large areas of the south. The United States had enough time to withdraw its troops and obtain the release of American POWs. The White House convinced the Saigon regime to ratify the peace accord, and Nixon announced the suspension of offensive action against DRV on January 15, 1973. The Paris Peace Accords “ending the war and restoring Peace in Vietnam” were signed 12 days later, officially terminating direct U.S. involvement.

However, the agreement did not stop hostilities. From March 1973 until the fall of Saigon on April 30, 1975, the Army of the Republic of Vietnam fought on, desperately trying to save the South from political and military collapse. On that spring morning North Korean tanks rumbled along National Highway One into the capital and into the courtyard of the presidential palace. The Second Indochina war had ended. Vietnam was in the hands of the Communists, and 2 years later Saigon became Ho Chi Minh City.

“GOD HELP ME, I WAS ONLY NINETEEN.”

In 1983 John Schumann of the Australian rock group Redgum wrote a song, “I Was Only Nineteen,” about serving in Vietnam. Equally relevant for Americans and Australians, the lyric speaks of the horrendous experiences, and the aftermath, of so many draftees—hardly more than boys. Many were “only nineteen,” but in fact the average age of the 2.59 million Americans who served in Vietnam was 22. At any time between 1965 and 1969 there were half a million of them in the country. A third of front-line combatants were conscripts, not professional soldiers, and they represented a broad socioeconomic cross-section. Of those who died, 86 percent were Caucasian, 12½ percent were black, and the remainder were of other ethnicities; their average age was a little over 23. They were trained in conventional warfare, unsuited to the conflict. The Viet Cong, on the other hand, were guerrillas—not wearing uniforms; attacking and then moving away; often indistinguishable from ordinary villagers—and the Americans found it difficult to identify their enemy or to know whom they could trust among the South Vietnamese population. And the undefined battleground was scattered with land mines and other booby traps.

Whether in the Marines or the Army, an infantryman in Vietnam bore the epithet “grunt,” reflecting his lowly status in the scheme of things. One dictionary defines it as an “affectionate name for ‘ground pounders’—‘ground replacement usually not trained.’” After a 12-month tour of duty—usually including 240 days of combat—most grunts were rotated back to the United States, either to complete their commitment to national service or to make the difficult readjustment to civilian life. Whatever their path, they received a

mixed welcome, or none at all. Perhaps because they arrived in small groups or even singly, they were not greeted with parades; but, contrary to widespread belief, neither were most World War II and Korean veterans. Most servicemen returning from Vietnam encountered indifference, but there were also occasional expressions of appreciation for their service—and hostility. Of course, American society had radically changed during the nation's involvement in Vietnam—in a considerable measure, *because* of it—and

some of the young people coming home from Vietnam could not relate to their civilian peers, although others embraced aspects of the counterculture, including its fashions, music, and drugs. For wounded and disabled veterans, the homecoming was even more difficult. Veterans' hospitals did not always provide adequate treatment. Returnees were well aware that Americans were divided over the war, with growing numbers opposing it.⁵

A common, inaccurate stereotype of the Vietnam veteran has been a drug-addicted, psychologically disturbed latent killer, “permanently damaged by [his] experiences in war and further scarred by [an unhappy homecoming].” However, surveys show that only 15 percent of veterans were unable to make a successful transition to civilian life. Many continued to suffer physically and psychologically after the war; about a third, men and women, experienced some form of post-traumatic stress disorder—known as “shell shock” or “battle fatigue” in earlier conflicts. Of about nine million men and women who were in uniform between 1965 and 1975, 1.3 million are thought to have seen combat. Nearly three hundred thousand were wounded; seventy five thousand were significantly disabled by their wounds. But there is no statistic of those who returned with psychological scars, or with lethal poisons in their systems.

The dedication of the Vietnam Veterans Memorial Wall in 1982 was long awaited. Charles L. Grimold remarks that the patriotism expressed on that occasion “was informed by the healthy willingness to question the decisions of the politicians of the day about where and when Americans should die for their country.” He reflects that if the monument “momentarily separates war and politics, it is in order to give us a more secure foundation for understanding both.” He also notes that those who spoke at the dedication made their sentiments clear: “America is worth dying for, but she must not fight a war when there is no popular consensus for doing so, and she must not fight without the intention to win decisively. Correspondingly, she must not fight under conditions where it is impossible to win.”⁶

THE VISION OF JAN SCRUGGS

The Vietnam Veterans Memorial Fund (VVMF) makes it clear that the Memorial was “initially conceived to bring long overdue honor and recognition

to the men and women who served and sacrificed their lives in Vietnam. . . . Because so many veterans met with ridicule and contempt upon returning home, it was hoped that the memorial would be a place where that injustice could at long last be rectified.”

The memorial was the vision of a 31-year-old veteran, Jan Craig Scruggs, who had gone to Vietnam in 1969, straight after graduating from high school in Bowie, Maryland. During a one-year tour of duty as a corporal in the 199th Light Infantry Brigade, he was injured—he had nine shrapnel wounds in his back—and decorated for bravery. On returning home he resumed his studies and eventually earned a bachelor’s and a master’s degree from the American University in Washington, D.C., and a law degree from the University of Maryland. In his own words,

The idea that led to the creation of the . . . Memorial began to develop in my mind while I was studying psychology in graduate school. America needed a memorial to the men and women lost in Vietnam in a war that many Americans preferred to forget. . . . But in 1977 this was just the dream of one Vietnam vet—a college student with no money or political connections. In 1979, after I saw the movie *The Deer Hunter*, the dream became an obsession. No one remembered the names of the people killed in the war. I wanted a memorial engraved with all the names. The nation would see the names and would remember the men and women who went to Vietnam, and who died there.⁷

Director Michael Cimino’s movie that so affected Scruggs has been summarized as a powerful, disturbing and compelling look at the Vietnam War through the lives of three blue-collar, Russian American friends in a small steel-mill town before, during, and after their service. It won five of the nine Academy Awards for which it was nominated in 1978. Scruggs envisioned a memorial that would serve to heal “the [wound] inflicted on the national psyche by the war. By identifying the issues of individuals serving in the military during the Vietnam era and U.S. policy carried out in Vietnam as quite separate, it would begin a process of national reconciliation.”

Early in 1979 Scruggs, then employed by the Department of Labor as a civil-rights investigator, shared his ideas at a meeting of veterans; it held little appeal for them. But in late April, with former Air Force officer Robert Doubek, he initiated the nonprofit VVMF and launched it with \$2,800 of his own money. Most members of the group of Washington-based veterans were lawyers and other professionals; none had any background in the arts and were less interested in producing a “good or bad work of art than simply an appropriate memorial.” On May 28 he announced their plans at a press conference. Fund-raising started slowly; at first the VVMF received touching letters with small donations but by July 4 on the *CBS Evening News* reported that only \$144.50 had been collected.

In the fall, the VVMF adopted a design philosophy suggested by one of its directors, John Wheeler. It called for a landscaped garden, of a “reflective and

contemplative nature” that would harmonize with its surroundings. Scruggs appeared before a Congressional committee seeking a site in Washington, D.C. In January 1980 the VVMF engaged the Virginia landscape architects and planners EDAW, Inc. to evaluate fourteen potential alternatives. It is not surprising that the consultants recommended Constitution Gardens in the northwest corner of the National Mall, “since the Fund already had its mind set on this location.” Republican Senator Charles McC. Mathias, Jr. introduced legislation to authorize three acres in the area, the Senate promptly passed the bill, and President Jimmy Carter signed it into law on July 1.

The first significant contributions to the national fund-raising campaign—a \$5,000 personal donation and help in raising another \$50,000—were made by another Republican senator, John W. Warner, who was then married to actress Elizabeth Taylor. Warner recalls that he was impressed by Scruggs’ “extraordinary humility” and was immediately compelled to work with him. One of the Senator’s first fund-raising events was a breakfast in his Georgetown house; as he was putting the VVMF’s case to potential contributors his wife unexpectedly entered the room and as the attendees were preparing to leave, she asked, “How much are you fellows putting in?” Eventually, \$8.4 million was raised, all from private sources—not only civic institutions, charitable foundations, corporations, trade unions, and veterans groups—but over two hundred seventy-five thousand individual Americans, who donated most of the money.

In July 1980 the VVMF engaged the Washington-based architect Paul Spreiregen as professional architectural adviser for a nationwide design competition. He later wrote, “I had no illusions about the likelihood of achieving anything. At the time the American public wanted to forget Vietnam.” His plan of approach comprised four main phases, to take place over 11 months. Planning and preparation was scheduled from July through September 1980; the second, through December, involved announcing a design competition and clarifying requirements for potential entrants. The third phase, ending in March 1981, was allowed for the competitors to complete their proposals. The fourth entailed “receiving the designs, displaying them, [selecting] a winning design . . . , and announcing the result.” It was to conclude in May 1981.

Spreiregen recommended a jury of eight internationally recognized American artists and designers to judge the entries: architects Pietro Belluschi and Harry Weese; sculptors James Rosati, Costantino Nivola, and Richard H. Hunt; landscape architects Hideo Sasaki and Garrett Eckbo; with the environmental design journalist Grady Clay as chairman. Spreiregen said that he wanted “senior gray eminences on the jury—people of broad and deep knowledge of design.” Later, the fact that none was a Vietnam veteran became a bone of contention that was to be noisily gnawed by opponents of the scheme. And without consulting Spreiregen, the VVMF unsuccessfully attempted to

add a “general humanist” to the jury, inviting (among others) Alistair Cooke, Eric Sevareid, and Walter Cronkite.

In October, with the support of the National Endowment for the Arts and the American Institute of Architects (and a gift of \$160,000 from billionaire H. Ross Perot), the VVMF announced the competition, open to any U.S. citizen older than 17 years and carrying a \$20,000 prize. There were four major design criteria, the first two expressing the VVMF’s broad policy: the memorial should be “reflective and contemplative in character” and it should harmonize with its surroundings, especially the neighboring national memorials. The other two: it should display the names of all who died or were still missing; and it should make no political statement about the Vietnam War. By year’s end there were 2,573 registrants in the competition—the largest of its kind ever held in America. By the March 31, 1981, the deadline for submissions, 1,421 entries were in hand, their authorship identified by only a number. Very few well known architects entered, and it has been suggested that the reason was “because of the long-standing modernist antipathy towards monument building and the limited chance of winning.”

The VVMF arranged to use a hangar at Andrews Air Force Base to display the submissions—over 2,300 yards of them that “required three and a half hours simply to see, walking by slowly.” Judging began on Monday April 27, 1981, and took 5 days to complete. Architecture critic Wolf von Eckardt described some of the entries

They illustrate our time’s bewildering embrace of almost anything: from architectural stunts to sculptural theatrics, from the pompous to the ludicrous, from the innovative to the reactionary. The rejected entries include such kitsch as a house-high steel helmet and a number of handsomely styled columns, pylons, tablets and structures that belong at a world’s fair or amusement park. Other designs accommodate the thousands of names on various layouts of slabs, blocks and other geometric stones and look depressingly like constructivist graveyards.⁸

The first cull produced 232 “could-be’s”; by noon Wednesday just ninety had been short-listed, and that number was reduced to thirty-nine by the following morning. That afternoon the winning design was selected. Spreiregen asserted that the jury’s deliberative process was the most thoughtful and thorough discussion of design that he had ever heard. At noon on Friday he and Clay presented about thirty members of the VVMF with an outline of remarks by the jury members. He recalled that after a brief silence “Jan Scruggs rose, came forward, gestured towards us and proclaimed, ‘I like it!’ Immediately, everyone from the VVMF jumped to their feet in a joyous expression of acceptance, hugging each other in congratulation.” Chosen unanimously, the winner was entry number 1,026 by Maya Ying Lin, a 21-year-old Yale undergraduate.

THE WALL

Each of the two wings of the memorial, known as The Wall, is a little under 247 feet long and comprises seventy-two separate panels of black granite from Bangalore, India, highly polished “to form a surface that reflects the sky and the ground and those who stand before it” and inscribed with the names of the lost and fallen on the Vietnam War. The wings meet at an angle of 125 degrees; at that apex they are just over 10 feet high. They point to the north-east corners of the Washington Monument and Lincoln Memorial respectively. The tallest panels have 137 lines of names; the shortest, at the ends of the wings, are blank. There is an average of five names per line, inscribed in upper-case letters a little over a half inch high in Optima typeface; a symbol associated with each name indicates whether the person’s death was confirmed, or he or she was missing at the end of the war.

The inscription on Panel 1 East reads, “In honor of the men and women of the Armed Forces of the United States who served in the Vietnam War. The names of those who gave their lives and of those who remain missing are inscribed in the order they were taken from us.” The inscription on Panel 1 West reads, “Our nation honors the courage, sacrifice, and devotion to duty and country of its Vietnam veterans. This memorial was built with private contributions from the American people. November 11, 1982.” Those are the cold, hard facts about the Vietnam Veterans Memorial.

But of course there is much more . . .

Lin later wrote of her experimentation with the design, originally presented for a senior-year seminar on funerary architecture, “We had been questioning what a war memorial is, its purpose, its responsibility. I felt a memorial should be honest about the reality of war and be for the people who gave their lives.” She continued:

I didn’t want a static object that people would just look at, but something they could relate to as on a journey, or passage, that would bring each to his own conclusions. . . . I had an impulse to cut open the earth . . . an initial violence that in time would heal. . . . It was as if the black-brown earth were polished and made into an interface between the sunny world and the quiet dark world beyond, that we can’t enter. . . . The names would become the memorial. There was no need to embellish.⁹

It is remarked in the PBS *Art in the Twenty-First Century* program that the memorial “proposes neither winners nor losers, but only the of the dead inscribed in a polished, black granite”:

A corner submerged into the earth, the work is welcoming in its open-ended, book-like form, and yet disconcerting to those who realize that to read the names is to stand below the horizon—six feet under—conversing in the space of the dead. The work is outspoken and angry in the way in which it functions as

a visual scar on the American landscape . . . and yet is dignified for the way in which it carves out a space for a public display of grief and pain. . . . [It] makes no grand statements about politics or American ideals. Its sole proposition is that the cost of war is human life.¹⁰

Lin lucidly explained her concept in a hand-lettered single page rationale that accompanied her abstract pastel renderings of The Wall. Although it is long, it is appropriately cited in full text here:

Walking through this park-like area, the memorial appears as a rift in the earth, a long, polished, black stone wall, emerging from and receding into the earth. Approaching the memorial, the ground slopes gently downward and the low walls emerging on either side, growing out of the earth, extend and converge at a point below and ahead. Walking into this grassy site [paving was added later] contained by the walls of the memorial we can barely make out the carved [names that] convey the sense of overwhelming numbers, while unifying these individuals into a whole.

The memorial is composed not as an unchanging monument, but as a moving composition to be understood as we move into and out of it. The passage itself is gradual; the descent to the origin slow, but it is at the origin that the memorial is to be fully understood. At the intersection of these walls, on the right side, is carved the date of the first death. It is followed by the names of those who died in the war, in chronological order. These names continue on this wall appearing to recede into the earth at the wall's end. The names resume on the left wall as the wall emerges from the earth, continuing back to the origin where the date of the last death is carved at the bottom of this wall. Thus the war's beginning and end meet; the war is 'complete,' coming full-circle, yet broken by the earth that bounds the angle's open side, and continued within the earth itself. As we turn to leave, we see these walls stretching into the distance, directing us to the Washington Monument, to the left, and the Lincoln Memorial, to the right, thus bringing the Vietnam Memorial into an historical context. We the living are brought to a concrete realization of these deaths.

Brought to a sharp awareness of such a loss, it is up to each individual to resolve or come to terms with this loss. For death is in the end a personal and private matter, and the area contained with this memorial is a quiet place, meant for personal reflection and private reckoning. The black granite walls, each two hundred feet long, and ten feet below ground at their lowest point (gradually ascending toward ground level) effectively act as a sound barrier, yet are of such a height and length so as not to appear threatening or enclosing. The actual area is wide and shallow, allowing for a sense of privacy, and the sunlight from the memorial's southern exposure along with the grassy park surrounding and within its walls, contribute to the serenity of the area. Thus this memorial is for those who have died, and for us to remember them.

The memorial's origin is located approximately at the center of the site; its legs each extending two hundred feet towards the Washington Monument and the Lincoln Memorial. The walls, contained on one side by the earth, are ten feet below ground at their point of origin, gradually lessening in height, until

they finally recede totally into the earth, at their ends. The walls are to be made of a hard, polished black granite, with the names to be carved in a simple Trojan letter. The memorial's construction involves recontouring the area within the wall's boundaries, so as to provide for an easily accessible descent, but as much of the site as possible should be left untouched. The area should remain as a park, for all to enjoy.¹¹

ORTHODOXY AND OPPOSITION

Philip Kennicott recently wrote in the *Washington Post* of Maya Lin's "good fight, arguing for a less-is-more monument design, proving herself, fresh out of college, a formidable force against the crass manipulations and demagoguery that so often attend the design and use of public space in the Federal City." He recalled how she "endured a lot of shabby treatment . . . from people who wanted to scuttle her design because it lacked bombast." Others could not—or would not—accept "the ideas and vision of a woman, an Asian American, a young person, a Washington outsider."¹²

Despite the VVMF's enthusiasm—indeed, that of most veterans—for Lin's apolitical, abstract proposal, a few were not convinced. Then, why should there have been agreement about anything concerning a war that so sharply divided a nation? Almost as soon as the winning design was announced, it was vehemently resisted by a small but vocal group of influential veterans in Washington, who denounced it for its color, its below-ground placement, and its repudiation of conventional "heroic" quality. Among the loudest voices was attorney Tom Carhart's, who had formerly served on the VVMF board (and, incidentally, who had been unsuccessful in the design competition); he described Lin's Wall as a negative symbol, accusing it of "pointedly insulting to the sacrifices made for their country by all Vietnam veterans . . . by this we will be remembered: a black gash of shame and sorrow, hacked into the national visage that is the mall."

The dissenters were liberally financed by billionaire H. Ross Perot (who, despite his earlier generosity to VVMF, condemned the design). Attacks also came from conservative politicians, notably James Webb, secretary of the Navy, who dubbed The Wall "a nihilistic slab of stone." He demanded in a *Wall Street Journal* article, "At what point does a piece of architecture cease being a memorial to service and instead become a mockery of that service, a wailing wall for future anti-draft and anti-nuclear demonstrators?" James Watt, secretary of the Interior, added his opposition, significant because his jurisdiction extended to the National Mall, giving him virtual veto power over the project. Representative Henry Hyde also lobbied the president and fellow congressmen about "a political statement of shame and dishonor." He later "marshalled" Watt to issue an ultimatum: "Lin's wall must be redesigned to include the suggested changes, or it will never be built."

Others took occasion to reject the design. Milton R. Copulos of the Heritage Foundation complained, “It [is] just names on the wall. There [is] no mention of what they had done, no flag, none of the things you would associate with a memorial. It was just two long black walls”—a conservative position if ever there was one. Journalists and commentators joined in the denigration: the *National Review* called The Wall “Orwellian glop”—whatever that meant. Other detractors included the *Chicago Tribune*’s Pulitzer prize-winning architecture critic Paul Gapp and the “media personality-turned-presidential-candidate” Pat Buchanan, who even asserted that competition jury member Garrett Eckbo was a communist (he wasn’t). There were also personal and racist attacks on Maya Lin. Hugh Sidey, responding in *Time* magazine, defended Scruggs’ determination,

Lovely irony. Like life. An infantry corporal with nine pieces of shrapnel in his back carried on the fight for three years, pressing, retreating, always recovering and trudging wearily ahead, overcoming protesting generals (Air Force Ace Robinson Risner) and multimillionaires (Ross Perot) and politicians (Congressman Phil Crane) and pundits (Columnist Pat Buchanan) and bureaucrats (Secretary of the Interior James Watt). Stupidity, narrow-mindedness and indifference were even greater enemies, just as Jan Scruggs found they were in Viet Nam.¹³

COMPROMISE

Kristin Ann Hass analyzes the objections in her 1998 book *Carried to the Wall: American Memory and the Vietnam Veterans Memorial*: “the V shape hinted at the peace sign, or a reference to the Vietcong; the black stone was more mournful than heroic. It seemed to many too clear an admission of defeat.” Moreover, the nay-sayers believed Lin’s design to be “too abstract, too intellectual, too reflective. It was, to the minds of many, high art, the art of the class that lost the least in the war. It was not celebratory, heroic, or manly.” They wanted a white marble memorial with a conventional sculpture and a flag.

On March 11, 1982, the Commission of Fine Arts (CFA) and the National Capital Planning Commission approved the design. But Watt blocked the project because of the controversy. Consequently, Senator Warner set up a meeting between VVMF representatives and their politically influential antagonists. At the packed meeting the VVMF was outnumbered five to one. But it had its champions. J. Carter Brown, CFA chairman and director of the National Gallery of Art, said that adding a flag “would be like interrupting the national anthem with some country-western song.” Retired Brigadier-General George Price objected to the repeated “black gash of shame” epithet with, “I’m tired of hearing you talk about black as the color of shame. We’ve gone through a civil-rights movement to prove that’s not so.” After four hours of argument, former General Michael S. Davison offered a solution: “Let us

build this admittedly nonconformist memorial but add to it a statue to symbolize the spirit of the American fighting soldier.”

Carhart insisted that there should also be an American flag “at the intersection of the walls, and the statue would be below that, somewhere within the V made by the walls.” Despite Lin’s objections, the VVMF agreed that a 60-foot flagpole and a “group of three realistically-modeled, seven-foot bronze figures,” standing above ground, would be added (see sidebar). A final compromise was reached when these elements were placed far enough away on the memorial site so that The Wall’s artistic integrity was not affected.

Lin, who was not yet eligible for an architect’s license, needed an architect of record to realize the design, and on the advice of Cesar Pelli, then dean of Yale’s School of Architecture, she recommended the Washington, D.C., firm of Cooper-Lecky to VVMF, who had engaged the architects in August 1981. Site works began on March 16, and the official groundbreaking took place 10 days later. The Gilbane Building Company acted as the general contractor. The Memorial was completed in late October 1982.

“THE VIETNAM VETERANS MEMORIAL IS NOW DEDICATED.”

On Saturday November 13, 1982, the Vietnam Veterans Memorial was officially dedicated as the climax of a 5-day National Salute to Vietnam veterans, organized to give the nation an opportunity to publicly honor all who had served in the Vietnam War. Although the war had been over for nearly 10 years, Vietnam veterans were finally to have positive recognition for answering the call to an unpopular war. Many who came to Washington for the occasion still felt let down by their government and “spoke openly of bitter memories and ungrateful homecomings.”

On the Wednesday evening before the dedication, a candlelight vigil was begun at the National Cathedral, attended by veterans, family members of those lost in Vietnam, as well as congressmen and senators. For 56 hours, more than 230 volunteers read the names that were inscribed on The Wall. The vigil ended at midnight on Friday, November 12.

There were formal and informal social events, too, in a week “filled with open displays of emotion and camaraderie.” Joel Swerdlow writes in *To Heal a Nation* that “Washington’s hotels, restaurants, and streets filled with vets. It was, said one happy ex-GI, ‘one helluva party.’” Swerdlow rehearses some poignant anecdotes:

After many beers, a veteran said he had won the Medal of Honour but was afraid of how people would react. To the cheers of a crowded bar, he opened his suitcase, took out the medal . . . and put it on for the first time. A man in a wheelchair slowly pushed through another bar that was filled to capacity. At first no one noticed him. Slowly, the noise faded, and then people reached out to

touch him. A former medic sat in a corner, crying. He pushed away all who tried to console him. "I should have saved more," he kept saying.

The long-overdue parade in tribute to Vietnam Veterans began at ten the following morning. Over fifteen thousand men—mostly the veterans—marched down Constitution Avenue in separate formations representing the fifty states and three territories, accompanied by high school and military bands. At noon there was a flyover of F4 (Phantom) bombers and UH-1 Iroquois (Huey) helicopters—an iconic tool of U.S. forces in Vietnam. The dedication ceremony began at half past two, watched by one hundred fifty thousand people; ubiquitous live radio and cable TV coverage, including some foreign networks, added millions to the audience. The ceremony lasted an hour and a quarter. Following speeches by dignitaries, the crowd sang *God Bless America* and paused for a moment of silence. "Ladies and gentlemen," Jan Scruggs said, "the Vietnam Veterans Memorial is now dedicated."

Swerdlow writes, "The tightly packed mass surged forward, crushing fences erected for crowd control. As thousands of hands strained to touch names, a lone GI climbed to the top of the wall, put a bugle to his lips and played."

All afternoon, all night, the next day and the next and the next for an unbroken stream of months and years millions of Americans have come and experienced that frozen moment. The names have a power, a life, all of their own. Even on the coldest days, sunlight makes them warm to the touch. . . . Perhaps by touching, people renew their faith in love and in life, or perhaps they better understand sacrifice and sorrow. "We're with you," they say. "We will never forget."

A FINAL WORD

Forrest Brandt refused to go with his Vietnam veterans group to the dedication. To him The Wall was "anything but heroic, it looked like a trench, low, dark, brooding, a seemingly endless list of names. It made me angry to look at it. . . . One more mean-spirited jibe at all of us who had served in Vietnam." But on his buddies' return he was deeply affected by the reports of their experience, each one with a story of how The Wall had *changed things*. "The people of the city opened their arms and their hearts to the vets. They were cheered, they were honored, they were respected; but more importantly everywhere they went common, ordinary Americans of every description came up to them and said, 'Welcome home.' . . ." Then, following several visits to the Memorial over the years, he wrote in 1998,

But my concerns about The Wall have been dispelled. No matter what its artistic merits, or demerits, it works. The genius of Maya Ying Lin; the oriental-Ivy League-non-veteran designer whom I dismissed with anger, and the vision of the committee of veterans I thought had lost touch with the rest of us have created

a space that allows this nation's sons and daughters of Vietnam to find peace in their own hearts, pride in their service and thus begin the long journey to reconciliation with the rest of the nation.

I'm not sure why it works. How can black granite, angled slabs, lists of names, all deliberately below ground level, elevate doubting, confused minds? Pull a generation back together? Heal those who have suffered unimaginable pain? Bring us all to some important understanding of the costs of democracy's decisions?

Perhaps it is because The Wall has compelled us to help each other come home, veteran and non-veteran, soldier and protester, arm-in-arm as Americans on this sacred piece of ground. Perhaps it is because, like me, other veterans have allowed The Wall to open up the doors they have held closed for so long. The reason doesn't matter. The reality of a healing wall does.¹⁴

Maya Ying Lin

Maya Ying Lin was born in 1959 in Athens, Ohio, a small agricultural and manufacturing town 75 miles southeast of Columbus. Her parents, who had emigrated from China just before the 1949 communist coup, were professors at the University of Ohio: Henry Huan Lin was a ceramicist and then dean of the College of Fine Arts; Julia Chang Lin was a poet and professor of Asian and English literature. Maya Lin has an older brother, Tan, also a poet.

Her art was influenced her parents' creativity, and "the Asian aesthetic of grace and simplicity that they nurtured in their home." Although she thought of herself as a typical Midwesterner—she liked the outdoors, worked at McDonald's, and was hardly conscious of her ethnic distinctives—her adolescence was atypical: she didn't date, didn't wear makeup, and took college classes before completing high school. From childhood on, she enjoyed solitude.

At high school Lin excelled in art and mathematics, graduating as valedictorian. She was accepted to Yale, where, obliged to choose between a major in either sculpture or architecture, she decided upon the latter. Although officially enrolled in the architecture school, she used to "sneak over" to the art school for sculpture classes. In 1981 she received her bachelor's of arts, *cum laude*.

In her senior undergraduate year Lin designed a memorial as part of a seminar on funerary architecture; it became her winning entry in the Vietnam Veterans Memorial competition. After the project was completed she enrolled for graduate architectural studies at Harvard but withdrew in 1983 to work in a Boston practice. In fall she returned to Yale, where she was awarded a master's of architecture in 1986. In that year she set up her design office and "a sparsely furnished living area" as the Maya Lin Studio in a loft in New York's Bowery, where she produces small-scale sculpture. After The Wall and beyond the studio several of her projects have been critically acclaimed.

The first, dedicated in November 1989, was the Civil Rights Memorial in the Southern Poverty Law Center, Montgomery, Alabama—a “sculptural genre called a ‘water table,’ in which the interaction between spectator and monument occurs when the former is moved to disturb a thin layer of water flowing over the monument’s horizontal, circular face.” She used a similar device for *The Women’s Table* (1990–1993), a 3-foot-high slab of green granite in front of Yale University’s Sterling Memorial Library, that commemorates women at the university. A third piece, commissioned by Helen Bing, Lin’s *Timetable* (2000), a slowly revolving circular 16-ton granite water table stands in the forecourt of Stanford University’s David Packard Electrical Engineering Building in Palo Alto, California.

In 1992 and 1993, when she was artist-in-residence at the Wexner Center (architect, Peter Eisenman, 1983–1989) at Ohio State University, Lin created an environmental sculpture, *Groundswell*—a garden of recycled crushed automobile safety glass heaped in mounds to create wave-like forms in some of the otherwise inaccessible spaces between the buildings. Her next major landscape work was *Wave Field* (1993–1995)—fifty grassy “waves” in eight rows over a 10,000-square-foot patch beside the University of Michigan’s FXB Aerospace Engineering building in Ann Arbor. She has undertaken similar projects in collaboration with her brother Tan.

In 2000, a group of Native American tribes and civic groups from Washington and Oregon asked Lin to participate in a project to commemorate the bicentennial of the Lewis and Clark Expedition. The Confluence Project comprises seven installations in the Columbia River Basin. Her other recent large-scale environmental artworks include *Eleven Minute Line* (2004), a 1600-foot long, 12-foot high earth wall across a meadow in Kniesling, Sweden, for the Wånas Foundation, and *Flutter* (2005), a 20,000-square-foot sculpted earthwork in Miami, Florida. In all these, writes one critic, “she has made works that merge completely with the terrain, blurring the boundaries between two- and three-dimensional space and setting up a systematic ordering of the land that is tied to history, time and language.”

Lin has also worked as an architect on buildings that “clearly reflect the design issues that have consistently engaged her.” Her first residential work was the Weber Residence (1992–1994) in Williamstown, Massachusetts (with William Bialosky). Other products of their long association include the Rosa Esman Gallery, New York (1990); the Riggio-Lynch chapel for the Children’s Defense Fund in Clinton, Tennessee, (2004), and the Box house, Colorado (2005). She has also worked with David Hotson on New York City’s Museum of African Art (1992–1994); the Norton residence in New York (1996–1998); and the Asia/Pacific/American Studies Department, New York University (1997). A notable solo work is the Langston Hughes Library (1997–1999) on Alex Haley Farm in Clinton—a “marvelous example of adaptive re-use” of a

nineteenth century barn. In 1994 Lin designed the Mock/Sanders residence in Santa Monica, California (Frieda Mock directed the American Film Foundation production *Maya Lin: A Strong Clear Vision* that won the Best Documentary Academy Award in 1995).

Lin's studio artwork has been shown in solo exhibitions New York, Los Angeles, Winston-Salem, North Carolina, Cleveland, Ohio, Des Moines, Iowa, Houston, Texas, Columbus, Ohio, and Italy, Denmark, and Sweden, as well as in group shows. She has received many private and professional awards, including Honorary Doctorates of Fine Arts from Yale, Harvard, Williams College, and Smith College; the 2003 Finn Juhl Prize; the Presidential Design Award; the American Academy of Arts and Letters Award in Architecture; the Industrial Designers Society of America Excellence Award; and the National Endowment for the Arts Visual Artists Fellowship for Sculpture. She is a member of the American Academy of Arts and Letters and the American Academy of Arts and Sciences, as well as the National Women's Hall of Fame. She is on the board of trustees of the Natural Resources Defense Council and is a member of the Yale Corporation. In 2003 she served on the selection jury of the World Trade Center Site Memorial Competition. She is married to Daniel Wolf, a New York photography dealer; they have two daughters: Rachel and India.

Frederick Hart's "Three Fighting Men"

Frederick Hart's "Three fighting men (aka "The Three Soldiers" or "The Three Servicemen") is a bronze statuary group, "figurative in style and humanist in substance," near the Vietnam Veterans Memorial Wall. According to one source, a 21-year-old Marine stationed in Washington, D.C., in 1983 posed for the central figure; the man with the machine gun on his shoulder is "modeled after a Cuban-American," and the third figure is a composite of several African American models. There is an apocryphal story that at the statue's unveiling on Veterans Day 1984, Maya Lin asked Hart "if it hurt the models to pull the molds off of them. It was foreign to her to think that a sculptor could actually sculpt figures so perfect in detail and form." But another writer says that she refused to attend the dedication.

For the design competition for the main Memorial, Hart proposed a sculpture incorporating a wall with the names of all the dead and missing (as specified in the brief) and a medic running to the aid of a wounded soldier. It was placed third. He dismissed Lin's winning minimalist design as "a telephone book listing of dead people." As a result of the controversy that followed the

judges' decision, discussed in the body of this essay, a compromise was reached—a figurative element would be placed near the apex of the The Wall. In the face of Lin's strenuous objections Hart modified the proposal and instead of placing his "Three Servicemen" at the apex, he located them approximately 400 feet from The Wall among trees near the west entrance.

A full-size mock-up was carried around the memorial site trying many locations. Hart's own description: "I see the wall as a kind of ocean, a sea of sacrifice that is overwhelming and nearly incomprehensible in the sweep of names. I place these figures upon the shore of that sea, gazing upon it, . . . reflecting the human face of it." Someone has noted that "despite the earlier controversy, the statue today fittingly complements The Wall." As Kurt Andersen wrote in *Time* in April 1985,

The three U.S. soldiers . . . stand a bit larger than life, carry automatic weapons and wear fatigues, but the pose is not John Wayne-heroic: these American boys are spectral and wary, even slightly bewildered as they gaze southeast toward the wall. . . . Hart now grants that "no modernist monument of its kind has been as successful as that wall. The sculpture and the wall interact beautifully. Everybody won." Nor does Lin . . . still feel that Hart's statue is so awfully trite. "It captures the mood," says Lin. "Their faces have a lost look." Out at the memorial last week, one veteran looked at the new addition and nodded: "That's us."

Nearby, a flag flies day and night, and at the base of the flagstaff are the seals of the five branches of military service, with the following inscription: "This flag represents the service rendered to our country by the veterans of the Vietnam war. The flag affirms the principles of freedom for which they fought and their pride in having served under difficult circumstances." That is a masterpiece of understatement.

After five years of opposition, in April 2000 Congress authorized the In Memory Plaque (aka the Vietnam Veterans Memorial Commemorative Plaque), which honors those Vietnam veterans who died after their service in Vietnam, but as a direct result of it, and whose names (because of Department of Defense policy) are ineligible for inclusion on The Wall. Dedicated in November 2004, the plaque was initiated by a coalition of the VVMF, the Vietnam Women's Memorial Project, and the Vietnam War In Memory Memorial, Inc. The simple 3 foot by 2 foot black granite slab is set in the paving in the northeast corner of the Three Servicemen Statue Plaza; its inscription, in a typeface matching The Wall, reads: "In memory of the men and women who served in the Vietnam War and later died as a result of their service. We honor and remember their sacrifice."

The Vietnam Women's Memorial

The Vietnam Women's Memorial, a short distance south of The Wall, is dedicated to the eleven thousand women who served in the armed forces during the Vietnam War. Placed in a garden designed by landscape architect George Dickie, the bronze sculpture group is the creation of Texas-born sculptor, Glenna Goodacre. It presents three uniformed women, appropriately larger than life, with a wounded soldier. The first memorial in America's history that honors women's patriotic service, it was dedicated on November 11, 1993.

An estimated two hundred sixty-five thousand military women served in various occupations and many places: Guam, Hawaii, Japan, the Philippines, and stateside, on hospital ships and in evacuation aircraft. Nearly all of them were volunteers. Almost 90 percent were nurses in the Army, Navy, and Air Force; others were physicians and physical therapists in the Medical Service Corps; still others were air traffic controllers, communications specialists, intelligence officers, and clerks. Eight were killed—their names are inscribed on The Wall—and many more were wounded. It has been estimated that almost half the women who served in Vietnam are affected by some form of post-traumatic stress disorder, while others have health problems resulting from exposure to the toxic defoliant, Agent Orange. Some have committed suicide. American civilian women were in Vietnam as war correspondents or as workers in humanitarian organizations; many of them, too, were wounded and over fifty died; there is still (2007) no official, accurate record of the total number of women who served in some way.

The Vietnam Women's Memorial Project (now the Vietnam Women's Memorial Foundation) was initiated in 1984 as a nonprofit organization by a former Army nurse, Diane Carlson Evans. In 1998 she wrote that after she had seen Hart's sculpture, "a whole and true portrait of the women who served during the Vietnam War, depicting their professionalism, dedication, service, and sacrifice, had yet to be seen,—their stories yet to be heard." She believed that women, too, needed a healing place and a healing process. Just as Vietnam combatants had not been welcomed home as America tried to put the war behind it, serving women too, most of whom were still in their early twenties when they returned to a country that could not empathize with what they had been through, received the same hostile treatment. They "had disappeared off the landscape of the Vietnam era." Others joined Evans "to promote the healing of Vietnam women veterans . . . ; to identify the military and civilian women who served during the Vietnam war; to educate the public about their role; and to facilitate research on the physiological, psychological, and sociological issues correlated to their service."

Although many veterans' and related groups supported the idea of a women's memorial, others who nourished inaccurate stereotypes about women's roles in Vietnam, denounced it. After all, they argued, only eleven thousand

women served in Vietnam, and only eight gave their lives. Does that merit a memorial? Evans countered that those “few” women helped save the lives of three hundred fifty thousand wounded Americans. In November 1987, J. Carter Brown, chairman of the U.S. Commission on Fine Arts, wrote in the *Washington Times* that any statue of women would “detract from the enormous power of the memorial.” Some conservative commentators, including the *Newsweek* columnist George F. Will, agreed. Moreover, when it came to raising funds and engendering public interest, women lacked the resources and the corporate status of those who moved for the Frederick Hart statue. It was “men’s business.”

The Hart statue had been opposed because of an anticipated negation of The Wall’s impact, but it was installed about 3 years after it was proposed, without separate legislation. The women’s memorial took 10 years to realize, after two Congressional bills. Evans recalled, “The opposition tried to beat us down and throw obstacles in our way and they did it through a variety of methods and activities, some very public some very behind the scenes, but we just really felt that we were doing the right thing,” and added triumphantly, “The reason that we have the memorial . . . is because we would not give up.”

NOTES

1. Sofarelli, Michael, “Letters on the Wall” (2006). www.lettersonthewall.com/letter.htm
2. Andersen, Kurt, “Hush, Timmy—This Is Like a Church,” *Time* (April 15, 1985), 61.
3. “Nixon Had Notion to Use Nuclear Bomb in Vietnam,” *USA Today* (February 28, 2002). www.usatoday.com/news/washington/2002/02/28/nixon-tapes.htm
4. Pulvers, Roger, “Ghosts of Christmas Past: The Christmas Bombing of Vietnam,” *Japan Focus* (January 3, 2007). www.japanfocus.org/products/topdf/2301
5. “Vietnam Veterans: Vietnam War.” www.lycos.com.br/info/vietnam-veterans—vietnam-war.html
6. Griswold, Charles L. and Stephen S. Griswold, “The Vietnam Veterans Memorial and the Washington Mall: Philosophical Thoughts on Political Iconography,” *Critical Inquiry*, 12(Summer 1986), 688–719.
7. Scruggs, Jan, [Introduction] *Reflections on The Wall*. Available at <http://photo2.si.edu/vvm/scruggs.html>
8. Eckardt, Wolf von, “Storm over a Viet Nam Memorial,” *Time* (November 9, 1981).
9. Abbott, Bill, “Names on The Wall: A Closer Look at Those Who Died in Vietnam,” *Vietnam Magazine* (June 1993) and widely elsewhere.

10. Vietnam Veterans Memorial." www.pbs.org/art21/artists/lin/card1.html
11. Statement by Maya Ying Lin, March 1981 (presented as part of her competition submission). www.vvmf.org/index.cfm?SectionID=77. The statement is widely cited elsewhere.
12. Kennicott, Philip, "Why Has Maya Lin Retreated from the Battlefield of Ideas?" *Washington Post* (October 22, 2006), 142–144.
13. Sidey, Hugh, "Tribute to Sacrifice," *Time* (February 22, 1982).
14. Brandt, Forrest, "A Salute to my Fellow Buckeye Vets" (2006). www.buckeyeplanet.com/forum/open-discussion-work-safe/31978-salute-my-fellow-buckeye-vets.html

SUGGESTED READING

- Abramson, Daniel. "Maya Lin and the 1960s: Monuments, Time Lines, and Minimalism." *Critical Inquiry*, 22(Summer 1996), 679–709.
- Branch, Mark Alden. "Maya Lin: After the Wall." *Progressive Architecture*, 75(August 1994), 60–63 ff.
- Capasso, Nicholas J. "Vietnam Veterans Memorial," in Tod Marder, ed., *The Critical Edge: Controversy in Recent American Architecture*. Cambridge, MA: MIT Press, 1985.
- Davidson, Phillip. *Vietnam at War: The History 1946–1975*. New York: Oxford University Press, 1988.
- Eppridge, Bill and Naomi Cutner. *The Wall: A Day at the Vietnam Veterans Memorial*. New York; Avenel, NJ: Wings Books, 1996.
- Evans, Diane Carlson. "Moving a Vision: The Vietnam Women's Memorial." In Diana J. Mason and Judith K. Leavitt, eds., *Policy and Politics in Nursing and Health Care*. Philadelphia: W.B. Saunders, 1998.
- Figley, Charles R. and Seymour Leventman, eds. *Strangers at Home: Vietnam Veterans Since the War*. New York: Brunner/Mazel, 1990. First published New York: Praeger, 1980.
- Finkelpearl, Tom. "The Anti-Monumental Work of Maya Lin." *Public Art Review*, 8(Fall-Winter 1996), 5–9.
- Griswold, Charles L. and Stephen S. Griswold. "The Vietnam Veterans Memorial and the Washington Mall: Philosophical Thoughts on Political Iconography." *Critical Inquiry*, 12(Summer 1986), 688–719.
- Hass, Kristin Ann. *Carried to the Wall: American Memory and the Vietnam Veterans Memorial*. Berkeley, Los Angeles: University of California Press, 1998.
- Hess, E. "A Tale of Two Memorials." *Art in America*, 71(April 1983), 120–127.
- Lin, Maya Ying. *Boundaries*. New York: Simon & Schuster, 2000.
- Lin, Maya Ying. *Maya Lin*. Milan, Electa, Rome, Italy: American Academy in Rome, 1998. Catalogue.
- Marling, Karal Ann and Robert Silberman. "The Statue Near the Wall: The Vietnam Veterans Memorial and the Art of Remembering." *Smithsonian Studies in American Art*, 1(Spring 1987), 4–29.

- Marling, Karal Ann, and J. Wetenhall. "The Sexual Politics of Memory: The Vietnam Women's Memorial Project and 'The Wall.'" In Jack Salzman, ed., *Prospects: An Annual of American Cultural Studies*. New York: Cambridge University Press.
- Marshall, Kathryn. *In the Combat Zone: An Oral History of American Women in Vietnam*. Boston: Little, Brown, and Company, 1987.
- McLeod, Mary. "The Battle for the Monument: The Vietnam Veterans Memorial." In Hélène Lipstadt, ed., *The Experimental Tradition*. New York: Architectural League; Princeton Architectural Press, 1989.
- Morganthau, Tom and Mary Lord. "Honoring Vietnam Veterans—At Last." *Newsweek* (November 22, 1982), 80–81, 86. See also William Broyles, Jr. "Remembering a War We Want to Forget," *Newsweek* (November 22, 1982), 82–83.
- Morrissey Thomas F. *Between the Lines: Photographs from the National Vietnam Veterans Memorial*. Syracuse, NY: Syracuse University Press, 2000.
- Moss, George Donelson. *Vietnam: An American Ordeal*. Upper Saddle River, NJ: Prentice Hall, 2006.
- Platt, Susan. "Maya Lin's Confluence Project." *Sculpture*, 25(November 2006), 54–59.
- Scruggs, Jan Craig, and Joel L. Swerdloe. *To Heal a Nation: The Vietnam Veterans Memorial*. New York: Harper and Row, 1985.
- Sofarelli, Michael. *Letters on the Wall: Offerings and Remembrances from the Vietnam Veterans Memorial*. New York: Smithsonian Books/Collins, 2006.

INTERNET SOURCES

- Brigham, Robert K. *The Viet Nam War: An Overview*. <http://vietnam.vassar.edu/>. For a more detailed analysis, see Ronald H. Spector, "Vietnam War," in *Encyclopædia Britannica Online*: www.britannica.com/eb/article-234639
- Gallagher, Edward J. "The Vietnam Wall Controversy." <http://digital.lib.lehigh.edu/trial/vietnam/about/>
- Vietnam Veterans Memorial Fund. www.vvmf.org/



Courtesy Library of Congress

Washington Monument, Washington, D.C.

"The Thing about Towers"

The monument built to honor George Washington is the largest free-standing masonry structure in the world, a 91,000-ton marble-faced granite obelisk tower standing over 555 feet high in the National Mall at the spiritual epicenter of Washington, D.C.

Such landmark buildings have not been uncommon. To start at the beginning. . . . According to *Genesis*, after the deluge Noah's descendants settled in what is now Iraq. "They said to one another . . . 'Let's build a city for ourselves and a tower with its top in the sky. Let's make a name for ourselves so that we won't become scattered all over the face of the earth.'" God's response to such hubris was to confound their language, resulting in their dispersion—what poetic justice! The practical purpose of the so-called Tower of Babel is not indicated (although some believe it to be a Babylonian ziggurat), but clearly it is *not* the same thing as a city. The resolution to "make a name" for themselves suggests that the tower the people began to build was intended to be a landmark, a civic symbol—an icon of place and national identity.

Even today, travelers across the Netherlands' wide, flat landscape, whether in the mists of winter or the heat haze of summer, will see in the distance cities that can be identified by the distinctive profiles of their towers. Those towers, then new, were drawn accurately on medieval maps to guide people; visitors to the District of Columbia use the Washington Monument in the same way. Like the ancient towers, it is a landmark, a civic symbol, an icon of place and identity. For over 500 years the tallest European towers rose from churches. Completed in 1880, the spire of Cologne Cathedral in Germany was, at 516 feet, the loftiest building in the world—until the Washington Monument. And since then there have been many higher and still higher structures; most have a primary pragmatic commercial or communications function, although all are expressions of a "bigger is better" mentality. Cyberspace is littered by the scribbling of bloggers in Freudian overload who see sexual connotations in these structures; their views, although sometimes amusing, must be discarded.

The Washington Monument was the last great single-purpose symbolic tower. And its permanence *is* a defining quality; even the taller Eiffel Tower, built for the Paris *Exposition Universelle* of 1889, was only a temporary structure, after all. Some American writers identify the Monument as a symbol of the spirit of America. Still others see it symbolizing peace or liberty; one English commentator, with not a little chagrin, calls it an icon of America's birth and power in the world. In a rather fulsome statement the U.S. National Park Service (NPS) fuses the building with the man whom it honors:

Among his fellow countrymen [*sic*], George Washington presented an impressive appearance, was a powerful influence, and yet had a simplistic elegance to his manner. Today, the monument reflects these characteristics in its design: it presents an impressive appearance from a distance, asserts a powerful influence on the National Mall, and has a simplistic elegance in its architecture. Just as Washington's tall frame [he was six feet three] stood above his fellow patriots, the monument towers above the skyline like a mighty watchman.

The monument was listed on the National Register of Historic Places on October 15, 1966, and in 2007 it was given twelfth place in the American Institute of Architects' nation-wide popular survey of America's favorite architecture.

Historian Mary Kay Ricks comments, "Contemporary architectural historians now tout the monument's sleek geometric scale as an ancient paradigm become timelessly modern." But originally it was not *designed* to be "timelessly modern"; it is suggested that that is a modernist interpretation inferred from the absence of any accretions on the essentially simple form. In fact (as will be shown), if the architect Robert Mills had been given his way the great memorial, like many of its contemporaries, would have been stranded somewhere between classical Greece and imperial Rome. Yet stripped of historical add-ons the obelisk evokes the stability of the Egyptian culture that remained virtually immutable for centuries, if not millennia. That gives the Washington Monument its enduring power as an American icon—but only so long as the nation embraces the values defined by the father of his country and his illustrious fellow-founders.

GEORGE WASHINGTON: SURVEYOR, SOLDIER, PLANTER, PRESIDENT

So much has been written about George Washington that even a brief biographical note seems superfluous. But man and monument are indeed inseparable, and the following sketch may help establish the motivation for the tower that has dominated the national capital's skyline since 1885.

George Washington was born on his father's plantation at Popes Creek in Westmoreland County, Virginia, in February 1732. Little is known of his childhood. His father, Augustine, died when the boy was age 11, leaving him a smallish farm at Fredericksburg, which his mother, Mary Ball Washington (he was the eldest of her six children) managed for him.

Seeking a life beyond agriculture, George studied geometry and surveying, and in 1748, despite his lack of practical experience, George William Fairfax and James Genn invited him to go to the Shenandoah Valley on a surveying trip for Lord Thomas Fairfax. That expedition would lead him into the profession of surveying. It also "marked the beginning of a lifelong relationship [with] the powerful and influential Fairfax family," with whose sponsorship he was appointed, in the following year, as surveyor for Culpeper County. About 16 months later he established a lucrative practice in the Northern Neck, which he maintained until November 1752.

Washington's life changed markedly in 1752, when he bought about 1,500 acres in Frederick County, Virginia. From that time he extended his land holdings and eventually acquired numerous rural properties covering more than 52,000 acres in Virginia, Kentucky, Maryland, New York, the Ohio Valley, and Pennsylvania. He also bought urban lots in the Virginia towns of Alexandria, Bath (now Berkeley Springs), and Winchester, as well as in the national

capital. His half-brother Lawrence died in 1752, and George took his place as a soldier in the Virginia Militia.

In fall 1753, when Lieutenant-Governor Robert Dinwiddie learned that French troops from Canada were building forts south of Lake Erie (a region claimed by Virginia), he sent Washington to demand their withdrawal. George's personal account of the expedition, *The Journal of Major George Washington*, published in Williamsburg and London by Dinwiddie, would "catapult him onto the world stage" when he was only age 22. Anyway, the French rejected the ultimatum, and a few months later Washington, by then a lieutenant-colonel, was dispatched to eject them from the Ohio Valley. In a skirmish between his one-hundred-fifty-strong force and the French, ten of the enemy, including their commander, died. The Virginians then retreated to Fort Necessity but were forced to capitulate when the French besieged the flimsy palisade. Washington resigned his commission, but when in 1755 General Edward Braddock arrived from England to drive out the French he returned to the military as a volunteer aide. Braddock's army was routed, but as reward for his bravery Washington was given command of the Virginia Militia—a few hundred men responsible for defending a 350-mile frontier. After two unsuccessful attempts he was elected to Virginia's House of Burgesses and served for 15 years from 1758.

The peace of Virginia was assured when the British took the forks of the Ohio in 1758, and Washington returned to civilian life at Mount Vernon, the 2,000-acre plantation that he had leased from Lawrence's widow, Anne, 4 years earlier. In January 1759 he married Martha Dandridge Custis, a wealthy young widow. Upon Anne's death 2 years later, he inherited the Mount Vernon estate and until 1775 became an innovative gentleman farmer. By the end of the decade he had expanded his holdings there to 8,000 acres, consisting of five farms.

Following the French and Indian War, the British parliament passed legislation to help recoup its cost from the American colonists. But its first attempt to impose a direct tax, the 1765 *Duties in American Colonies Act*, led to civil disobedience. Two years later the so-called *Townshend Acts* followed, a series of laws that (among other things) taxed imported necessities in the colonies. The Americans' refusal to purchase only British-manufactured goods defeated the purpose of those acts; in Boston, some colonists went so far as to dump tea into the harbor to protest the *Tea Act*—the now-famous Tea Party of December 1773. The parliament reacted angrily and to punish Massachusetts expedited four more pieces of legislation—the Coercive Acts—in the middle of 1774.

The American colonists labelled them "the Intolerable Acts," and twelve of the Colonies—Georgia's governor prevented delegates from attending—called the First Continental Congress at Philadelphia in September; Washington was one of Virginia's seven representatives. The Congress set out to define colonial rights, to identify how the parliament had violated them, and to find a way to

have them restored. Although no one spoke of seeking independence from the crown, Britain saw the gathering as treasonable and launched punitive expeditions. On April 19, 1775, the first armed conflict in the American Revolutionary War—in effect, a civil war—took place in Massachusetts. The Second Continental Congress, with sixty-five delegates from *all* the thirteen colonies, met in Philadelphia on May 10 and established the “United Colonies of America.” It reformed, under the banner of the Continental Army, the New England militia which then was besieging the British in Boston. On June 19 George Washington was unanimously elected commander in chief. His background in frontier warfare was hardly appropriate training for the role; he had commanded only small numbers of soldiers and had no experience maneuvering large military formations, directing cavalry or artillery, or providing logistical support for thousands. He would have to learn on the job, so to speak. Washington had no illusions about the task facing him.

In 1789 he reflected that America was “not then organized as a Nation, or known as a people upon the earth—we had no preparation. Money, the nerve of War, was wanting. The Sword was to be forged on the Anvil of necessity: the treasury to be created from nothing.” But he also recognized that the colonists “had a secret resource . . . the unconquerable resolution of [their] Citizens, the conscious rectitude of [their] cause, and a confident trust that [they would] not be forsaken by Heaven.”¹ For those reasons he was able to lead his Continental Army—someone has called it “rag-tag”—successfully against the world’s most powerful nation. Baron Ludvig von Closen, an officer in the French army, commenting upon that leadership, found it incredible that “soldiers composed of men of every age, even children of fifteen, of whites and blacks, almost naked, unpaid, and rather poorly fed, can march so well and stand fire so steadfastly.” He acknowledged that their success was due to the “calm and calculated measures of General Washington, in whom [he daily discovered] some new and eminent qualities.”

On July 4, 1776, the Second Continental Congress published the Declaration of Independence. The colonial rebels had become a nation fighting for freedom from England and King George III, and the civil war had escalated into a War of Independence. For the next 5 years battles raged along the East Coast. Washington won only three of them, but his decisive siege of Yorktown, Virginia, forced Lord Cornwallis’ British force to surrender on October 19, 1781. After much debate the Treaty of Paris was signed in September 1783, and the British fleet departed New York in November. Washington submitted his resignation 2 days before Christmas and returned—at least, for a while—to rebuild Mount Vernon. At that time he also served as president of the Potomac Company, formed to improve the navigation of the river. At the end of the Revolutionary War his name was synonymous with its success; no other American commanded more respect. Frederick Harvey writes that the new nation “celebrated his ability to win the war despite limited supplies and inexperienced men, and they admired his decision to refuse a salary and accept

only reimbursements for his expenses. Their regard increased further when it became known that he had rejected a proposal . . . to make him king.”²

Washington was “appalled by the excesses of the state legislatures and frustrated by the diplomatic, financial, and military impotence” of the Articles of Confederation that had left the new federal government without the power to collect taxes, pay its debts, regulate trade, or control its borders. So in summer 1787 he went again to Philadelphia, representing (with others) Virginia at a convention that would recommend changes to the Articles. He was unanimously elected to preside over the 4-month long deliberations, the outcome of which was the U.S. Constitution. Afterwards, against some opposition, he worked for months to garner support for ratification of the document, after which he hoped to return to private life. Instead, he was made the only president in American history to be elected by the unanimous voice of the people.

President Washington served two terms. The first (1789–1793) was necessarily engaged with ordering the executive branch of the federal government; the second (1793–1797) brought with it more critical issues, as he maintained America’s neutrality in a general European war and dealt with deepening divisions between Federalists and Republicans in his own administration. In the latter years of his presidency the Indian war on the northwest frontier was won, Britain surrendered its northwestern forts, and Spain opened the Mississippi to American trade. Resisting pressure to stand for a third presidential term, Washington turned over the government to John Adams and again retired to Mount Vernon.

In 1798 he was constrained to reenter public life for several months when Adams made him commander of a provisional army that could be raised in the event of an anticipated French invasion. He once more declined a suggestion that he should stand again for the presidency in 1800. On December 12, 1799, Washington developed respiratory problems after being caught in a snowstorm. He died at around ten that night, and 2 days later his body was interred at Mount Vernon. Political historian Matthew Spalding asserts,

Without Washington, America would never have won its war of independence; he was the catalyst of the American founding. Even more significant, he proved that republican government was not only possible but indeed noble. . . . No one did more to put the United States on the path to success than Washington. No one did more to assure a government with sufficient power to function but sufficient limits to allow freedom to flourish. No one walked away from power with more dignity or did more to assure the prosperous society we enjoy today. This is why Washington and Washington alone . . . is the father of this country.³

BLENDING “STUPENDOUSNESS WITH ELEGANCE”

The apotheosis of George Washington began in his lifetime. Peter Joseph wrote in *Lost* magazine in 2006, “Popular adoration ranged from Gilbert

Stuart's . . . portraits to the more overtly worshipful paintings that depicted the ex-President poised to enter heaven guided by peach-cheeked cherubs. Amidst this fervent veneration of the man who was 'first in war, first in peace, and first in the hearts of his countrymen,' a physical memorial seemed inevitable."⁴

Plans for a memorial to Washington had been afoot from as early as 1783. On the recommendation of Major Pierre Charles L'Enfant, planner of the national capital, the Continental Congress resolved that a bronze equestrian statue of Washington "be erected at the place where the residence of Congress shall be established." It was to carry a legend explaining its purpose: to honor "the illustrious Commander-in-Chief of the Armies of the United States of America during the war which vindicated and secured their liberty, sovereignty, and liberty." At first, Washington agreed to the proposal; then, faced with the priority of raising funds to build the city itself, he changed his mind. Besides, the undemocratic—not to say imperial—message conveyed by "a general on horseback in Roman garb" offended influential Republicans and widened what was already a "rancorous" split with the Federalists. The heroic statue never eventuated.

Other schemes followed but disagreements over style, location, and cost doomed them all. A year after Washington's death Representative John Marshall, with the guarded consent of his widow Martha, proposed that a sepulcher—a "mausoleum of American granite and marble, in pyramidal form 100 feet square at the base and of proportionate height"—be built under the dome of the Capitol. In 1801 the House of Representatives voted \$200,000 for the project, but the Senate opposed it. Congress unsuccessfully revived the idea in 1816 and again in 1832, inspired by Washington's birth centennial. But his executors—Martha had died in 1802—decided that his body should remain at Mount Vernon, and the whole idea was shelved.

Instead, Congress provided \$28,000 to pay the Boston sculptor Horatio Greenough to carve a seated marble figure of Washington that would stand in the Capitol Rotunda. He produced a toga-draped, bare-chested, and muscle-bound figure—someone has called it "Schwartzneggerian"—based on descriptions of Phidias' statue of the Olympian Zeus (ca. 470 B.C.), one of the wonders of the ancient world. In his *Visual Shock* historian Michael Kammen writes,

Greenough's *Washington* touched off one of the earliest conflicts in the United States involving aesthetic criteria. . . . A particularly problematic question involved style: how should the Father of His Country be depicted, as an idealized deity or as a revered native statesman? Classical or "American"? Godlike and spiritual or secular yet like-no-other? Greenough's solution turned out to be a hybrid: the head based upon Houdon's life mask certainly resembled Washington, but the body evoked Jupiter and Roman statuary. Hence the work got nicknamed George Jupiter Washington when it wasn't given more insulting designations.⁵

When it arrived from Florence in 1840 the statue was greeted with critical condemnation and almost universal scorn. The scandalous sight of the revered president as a half-naked Zeus in a contrived pose dismayed Americans. Anyway, the 12-ton piece proved far too weighty for the floor of the Capitol, which it cracked. It was removed to the Capitol grounds in 1875 and from there to the Smithsonian Institution Building in 1908. Since 1962 it has been in the National Museum of History and Technology (now the National Museum of American History).

In 1833, frustrated by the government's dithering about an appropriate monument, a group of influential Washingtonians established the Washington National Monument Society (WNMS). Marshall, then chief justice, was its first president; when he died 2 years later former U.S. President James Madison took the role. Other officers included Thomas Carbery, a former mayor of Washington; Chief Justice William Cranch of the District Court; Samuel Harrison Smith, founder of the *National Intelligencer*; and George Watterson, chief librarian of the Library of Congress. There were thirteen other charter members. The Society envisioned a monument "like him in whose honor it is to be constructed, unparalleled in the world, and commensurate with the gratitude, liberality, and patriotism of the people by whom it is to be erected . . . [It] should blend stupendousness with elegance, and be of such magnitude and beauty as to be an object of pride to the American people, and of admiration to all who see it."

Publicizing its goals in the press and making a direct appeal to churches, societies, and individuals, the WNMS set about fundraising. All U.S. citizens were invited to contribute up to a limit of one dollar—that would give everyone a chance to share in the project—for which they received a certificate. The limit, set for altruistic reasons, was hardly prudent, and within 3 years, contributions totaled only \$20,000. Occasionally various groups conducted special fund-raising events.

On August 10, 1836, a subcommittee appointed by the Board of Managers invited American artists to submit designs for the monument. Optimistically and unrealistically, the budget was set at a minimum of a million dollars, and entries were to "harmoniously blend durability, simplicity, and grandeur." The competition opened a stylistic Pandora's box. Peter Force, mayor of Washington and a founding member of the Society, proposed an enlarged out-of-doors version of the 1800 pyramid. Thomas McClelland of Philadelphia submitted a design for a huge castellated monument in the Gothic Revival style then becoming popular; one account says that he "frequently beseeched the society to accept the design that he obsessively continued to modify, but a few years later, he despondently wrote from debtor's prison that his consuming attention to the . . . project had ruined him." Calvin Pollard, a self-styled architect from New York, proposed an even larger Gothic building, and another New Yorker, Representative Zadoc Pratt, collaborated on a neoclassical design with the Philadelphia architect William Strickland.

The winning architect was Robert Mills. His original design, later to be drastically revised, comprised a 500-foot high obelisk, with an almost flat pyramidal peak, rising from the center of a gargantuan 250-foot diameter rotunda, whose thirty Doric columns were interspersed with statues of America's heroes. The colonnade was crowned with a 20-foot high entablature; a 15-foot balustrade brought the total height of the base to 110 feet. It was decorated with friezes emblazoned with the seals of the States and frescoes of Revolutionary War battles. Above a central portico an enormous toga-draped figure of Washington held the reins of a *quadriga*—a Roman four-horse chariot. The base housed a museum and archives, and Mills even hoped that the remains of the general and his peers would be interred in a crypt beneath the building. “Stupendousness with elegance,” indeed! The architect's own description of the “pantheon” went into great detail; he explained the appearance of the obelisk with lots of verbiage but little clarity:

In the centre of the grand terrace . . . rises the lofty obelisk shaft of the monument, seventy feet square at the base, and 500 feet high, diminishing as it rises to its apex, where it is forty feet square; at the foot of this shaft, and on each face, project four massive zocles [short plinths], twenty-five feet high, supporting so many colossal symbolic tripods of victory, twenty feet high, surmounted by facial columns with their symbols of authority. These zocle faces are embellished with inscriptions, which are continued around the entire base of the shaft, and occupy the surface of that part of the shaft between the tripods. On each face of the shaft above this is sculptured the four leading events in General Washington's eventful career, in [deep relief], and above this the shaft is perfectly plain to within 50 feet of its summit, where a simple star is placed, emblematic of the glory which the name of Washington has attained.⁶

To reach the top, Mills proposed a gallery within the shaft that could “be traversed by a railway, terminating in a circular observatory, twenty feet in diameter, around which at the top is a lookout gallery, which opens a prospect all around the horizon.” He estimated the cost of the whole monument at a little over \$1.22 million; the obelisk alone would cost \$552,000. In the event, just an obelisk—not *this* obelisk—would be built, and it would cost a great deal more.

Mill's search for an appropriate symbolic form for a monument had led him to the Egyptian obelisk, a form already for the Battle Monument at Lexington, Massachusetts, of 1799. Mills had joined the Lodge of Freemasons in 1814, and a covering letter with the sketches for a Bunker Hill Monument that he prepared in 1832 for the Massachusetts Grand Lodge asserted that an obelisk was “particularly adapted to commemorate great transactions, for its lofty character, [its] great strength, and furnishing a fine surface for inscriptions—There is a degree of lightness and beauty in it that affords a finer relief to the eye than can be obtained in the regular proportioned column.” And Mills' design was consistent with contemporary Neo-Classical fashion and with his

personal opinion that “solidity, simplicity, and a degree of cheerful gravity [whatever that meant] should characterize all monuments,” “The proposal was not well-received by his professional colleagues”; some critics called an “ill-assorted blend of Greek, Babylonian, and Egyptian architecture.” Then, they had not won the competition. Anyway, that is exactly what it was.

WHO WAS ROBERT MILLS?

Mills claimed to be America’s first native-born professionally trained architect. He is best known for buildings in Washington, D.C., including the Treasury Department, the National Portrait Gallery, the Post Office Headquarters, and of course the Washington Monument. Over a 55-year career he was associated with James Hoban, first architect of the White House, Benjamin Henry Latrobe, designer of the Virginia State Capitol and the Bank of Pennsylvania, and Thomas Jefferson. Someone has said, “With this circle of friends, Mills was instrumental in creating the physical design of the new republic.”

Mills was born in Charleston, South Carolina, in 1781, the son of Scots émigré William Mills and his wife Ann. Little is known of his early life and education; some historians say that he attended the College of Charleston and that he also had tuition in architecture. In the early 1790s his older brothers Henry and Thomas returned from a visit to Scotland with copy of *The Modern Builder’s Assistant*, a pattern book of designs by “architects and carpenters” William and John Halfpenny. Mills’s biographer John Morrill Bryan comments that the book was “the earliest evidence of an architectural interest in the family.” Probably in 1800, Robert began an apprenticeship with James Hoban, designer of the White House and (at that time) supervisor of the Capitol building in Washington, D.C. Soon after arriving in the capital, Mills met Thomas Jefferson, for whom he occasionally would execute drawings and who, for the next 25 years, lent him books from his vast architectural library. Having gained a hands-on education in construction and project management, after 2 years, introduced by Jefferson, he became an assistant in the Philadelphia office of the prominent British-trained architect Benjamin Henry Latrobe; their 10-year relationship had a lasting influence on Mills.

Sidney Fiske Kimball believed that these mentors “represented three phases of architectural progression in style: the Palladian, the Roman, and the Greek; in practice, the builder-architect, the amateur, and the professional.” He explained:

From honest Hoban, who on occasion contracted for buildings as well as designed them, he acquired the rudiments of construction and of draughtsmanship and rendering. From Jefferson, who took him into his family in 1803, he derived a compelling impulse of the classic and a recommendation to Latrobe whom Jefferson had encouraged and placed in a position of authority. It was Latrobe

. . . who placed on Mills the deepest impress. To him Mills owed not only his knowledge of Greek forms but his principles of professional practice and his scientific engineering skill.⁷

To these invaluable inputs Mills, urged by Jefferson (who had done the same thing 20 years earlier), added the experience of extensive travel to survey American architecture on the East Coast. Mills worked for Latrobe first as a draftsman, and then as a work superintendent on several architectural and engineering projects, including the Baltimore Cathedral, the Bank of Philadelphia and the Chesapeake and Delaware Canal. In 1808, while still engaged on the bank, he established—with testimonials from Jefferson—his own practice. The reason? In October he married Eliza Barnwell Smith and needed to more money. For the next 6 years he struggled to establish himself.

His earliest Philadelphia commissions—none has survived—included a speculative row-house development, Franklin Row (1809–1810); he is thought to have designed Carolina Row (ca. 1812–1815) also. He produced nondomestic works in the city, among them the six-thousand-seat auditorium, Washington Hall (1809 and 1814–1816), “designed in the inspirational Greek Revival style” for the Pennsylvania Benevolent Society; the wings of the State House (now known as Independence Hall, 1813–1815); and the tollhouse in the form of triumphal arch entrances and covering for Lewis Wernwag’s “Colossus,” the Upper Ferry Bridge across the Schuylkill River (1813–1814).

Mills built several centrally planned churches that housed “large congregations in a comfortable auditorium with good sight lines and curved pews.” They included the circular Sansom Street Baptist Church (1811–1812) and the Octagon Unitarian Church (1812–1813), both in Philadelphia, and the Monumental Church in Richmond, Virginia (1812). Latrobe also had participated in the design competition for the latter and accused his former employee of stealing his idea: “Mills is a wretched designer. . . . He is a copyist and fit for nothing more!” But architectural historian Charles Brownell believes that with this building Mills “began his ascendancy over Latrobe as a mold of the American civic monument.”

Certainly he was being recognized. One source points out that he was accepted into the St. Andrew’s Society and the Society of Artists of the United States (after 1814, the Columbian Society of Artists), and that his “works were regularly exhibited at the Pennsylvania Academy of the Fine Arts.” Although the Monumental Church had attracted much attention and endorsed Mills’ credibility, no number of honors could feed him and Eliza and their three children. Pursuing work, they moved to Baltimore late in 1814. His arrival led to four “notable” commissions, including a major church and residence, and a row of houses. Also in Baltimore Mills was responsible for several engineering projects: canals, a drainage system, and a waterworks system. As well as being involved with three railroads, he was made president and chief engineer of the Baltimore Company.

In 1815 Mills began to supervise construction of his premiated entry in an 1813 competition for the city's Washington Monument. But an economic slump in 1819 affected the city's building industry—always an early victim of recession. Funding for the monument ran out and the project lapsed. Mills complained, "The state of business in my profession [has] put it entirely out of my power to support my family."

Because South Carolina's state legislature had authorized the expenditure of a million dollars for infrastructure development, in 1820 he returned with his family to his native Charleston. By December he was appointed as acting commissioner of Public Works and within about 2 years became superintendent of Public Buildings, responsible for major public projects: the County Records Office in Charleston, completed in 1827; the South Carolina Asylum in Columbia, then the state's largest building, completed in 1828; and nearly thirty courthouses and jails across the state. In December 1828 his office was discontinued, although he sporadically worked on transportation development until 1830. It has been observed that "his works during this decade reflect the Greek Revival style incorporated with Latrobean and Palladian influences." That was hardly surprising.

Financial security still eluded Mills, so Eliza took to teaching drawing and music. That was hardly enough to make ends meet; on one occasion she almost was forced to sell her piano. Mills augmented their income by publishing *The Atlas of the State of South Carolina* (1825), "the first systematic, state-wide atlas ever in the US." He had earlier published *Treatise on Inland Navigation* (1820), which "demonstrated his competence in the important field of transportation" and *Internal Improvement of South Carolina* (1822) to which he added *Statistics of South Carolina* in 1826. All told, more than fifty projects—buildings, canals, and monuments—came from his hand. In 1829 he returned to Baltimore to complete its Washington Monument.

The following year he went again to Washington, D.C. with an introduction from James Monroe and sought commissions from Andrew Jackson's administration, winning the appointment of "Draftsman of Public Surveys." In 1836 Jackson approved his preliminary design for a fire-resistant Treasury Building to replace the old one that burnt down in 1833; delayed and derailed by controversies, the Greek Revival building was not completed according to his design. He worked on the Patent Office (1836–1840) in an "uneasy relationship" with its architects Alexander J. Davis, William Parker Eliot, and Ithiel Town. Indeed, alterations to public works were symptomatic of the political and economic problems that "plagued the final phase of his career."

Congress abolished his office in 1842, but he continued to work on other government commissions. He designed the Post Office (now the International Trade Commission, 1839–1842) and supervised construction of James Renwick's Smithsonian Institution (1847–1855). In fact, he had a hand in almost all major projects in the national capitol for the next two decades. But his public commissions slowly dwindled until 1851, when Thomas Ustick Walter

replaced him as architect for additions to the Patent Office and the U.S. Capitol. That “precipitated his departure, at age seventy, from federal service.” Mills would write to a friend in 1853, “Twenty years of my life have been spent in the Government service here, and my works there will prove my faithfulness to the interests of the Government.” He died at home in Washington in March 1855 and was buried in the Congressional Cemetery.

As noted, 22 years earlier he had won the national competition for his most famous building, the Washington National Monument, the most recognizable monument in America.

CORNERSTONE, “POPE STONE,” CRUMBLING STONES

Fund-raising for the monument to George Washington was slow, hindered by a depressed economy—the “Panic of 1837”—but also by the \$1 donation limit imposed by the Society. In 1845 that restriction was removed and subscriptions temporarily increased. But 3 more years passed before the government finally decided upon a location; the swampy place proposed by L’Enfant at the cross-axis of the White House and the Capitol was incapable of supporting the intense loads that would be imposed by the huge structure, and Congress assigned 37 acres of firmer ground, about 100 yards to the southwest. By then \$87,000 had been collected, and the Society, believing that the sight of construction activity would stimulate further donations, decided to start building Mills’ obelisk; the “pantheon” could be left until later. Nevertheless, “in the interest of economy” the Board was constrained to reduce the height of the needle from 600 to 500 feet, and the base from 70 to 55 feet square. Excavation for the granite foundation began in spring 1848. The rough-hewn blocks were set to form an 80-foot square stepped, truncated pyramid about 23 feet deep; one-third was below ground.

For the cornerstone, Thomas Symington donated a 12-ton block of white Maryland marble from his quarry, about 11 miles from Baltimore. A ceremony on Sunday July 4, 1848, was marked by masonic pomp and pageantry, the highlight of which was a parade led by President James K. Polk, followed by members of Congress and assorted artillery, cavalry, and infantrymen, the Marine Band, and volunteer fire companies. A crowd estimated at fifteen thousand to twenty thousand assembled for the foundation-laying ceremony. A temporary vault festooned with red, white, and blue bunting had been set up; an American bald eagle was tethered at its apex. Many spectators with foresight or the money to do so had paid for reserved seats in sheltered bleachers that surrounded the site. That had been a good idea: the House Speaker Robert C. Winthrop delivered a 2-hour speech, after which Grand Master Benjamin B. French of the Grand Lodge of Masons of the District of Columbia formally set the cornerstone according to Freemasonic ritual. He wore the same Masonic apron and sash that had belonged to President Washington

and used the same Mason's trowel that had been used by the late president to lay the cornerstone of the Capitol.

Over the next few years the Society actively solicited cash contributions from Freemasons through the Grand Lodges all over America. When the fund-raising appeal was reinvigorated in 1853, it was extended to include other institutions—the Oddfellows, the Sons of Temperance, and other fraternal orders—and the states and territories. But building progress slowed to a crawl as the money was spent; in the first 2 months of 1855, only \$695 was raised. The obelisk had reached a height of 152 feet; its 15-foot thick granite walls were faced with white marble ashlar in two-foot courses, 15 to 18 inches thick.

As an alternative to cash, the State of Alabama offered a “decorative stone” that could be incorporated in the monument. The notion appealed to the Society, who invited other states to donate an inscribed “block of marble or other durable stone, a product of its soil.” A few writers speciously suggest that some Society members believed this would reduce materials costs; in fact, the optimistic appeal attracted just 199 stones of the total 36,500 in the monument. Later, the opportunity was afforded foreign governments, and that caused a problem.

On March 6, 1854, a block of marble from the ancient Temple of Concord in Rome, the gift of Pope Pius IX, was stolen from the site by masked thieves. Whatever its fate—it was either broken into pieces, or dumped into the Potomac River—it was never found and no arrests were made. The incident dramatically reduced the number of commemorative stones being sent to complete the monument; in fact it seriously dampened most kinds of contributions. The chief suspects were members of a white, Protestant, nativist, xenophobic, and secretive political faction known as the American Party that had been formed among New York's middle and working classes 5 years earlier. It resisted Catholic immigration, convinced that Catholics gave greater allegiance to the papacy than to America. Critics nicknamed it “Know-Nothing”—a title that it later adopted—because members hid their political agenda from outsiders. Worse was to come.

On the evening of February 21, 1855, about seven hundred and fifty members of the Know-Nothings, many of whom had infiltrated the WNMS, elected seventeen of their own officers into the Society; next morning they announced that they were “in possession of the Washington Monument.” The following day Congress rescinded a \$200,000 appropriation for the building work. For the rest of the year the Know-Nothing party managed to collect scarcely more than \$50; under its regime, only thirteen courses of masonry were added—poor work in inferior marble, at that, which later needed to be replaced. Shortly after the group disintegrated in 1857, control of the monument reverted to the original Society. In February 1859 Congress legislated “to prevent a repetition of the debacle,” by incorporating the Society “for the purpose of completing the erection now in progress of a great National Monument

to the memory of Washington at the seat of the Federal Government.” Despite that, the monument would stand incomplete and desolate for decades.

Other events contributed to that hiatus, including the death of Robert Mills early in March 1855, and of course the Civil War. During that tragic conflict the monument site was used for the Union Army’s temporary camps, staging posts, and parade grounds; it also became pasture and livestock holding pens for a nearby abattoir and was actually named the “Washington National Monument Cattle Yard.” Following the war, President Andrew Johnson enthused, “Let us restore the Union, and let us proceed with the Monument as its symbol until it shall contain the pledge of all the States of the Union.” Some states offered help on a matching dollar-for-dollar basis to complete the work. But without assistance from Congress, which had other spending priorities, the Society could not seize the opportunity. So nothing was done, and the site bore the epithet “Murderer’s Row” as it became the haunt of “escap-ees, deserters and all other types of flotsam of the war.” Tongue-in-cheek, Mark Twain and Charles Dudley Warner wrote in *The Gilded Age: A Tale of Today* (1873):

The Monument to the Father of his Country towers out of the mud—sacred soil is the customary term. It has the aspect “a factory chimney with the top broken off. The skeleton of a decaying scaffolding lingers about its summit . . . The Monument is to be finished some day and at that time our Washington . . . will be known as the Great-Great-Grandfather of his Country. The Memorial Chimney stands in a quiet pastoral locality that is full of reposeful expression. With a glass you can see the cow sheds about its base . . . contented sheep nibbling pebbles in the desert solitudes . . . and the tired pigs dozing in the holy calm of its protecting shadow.

A LITTLE LATE FOR THE CENTENNIAL!

In 1874 the Society Secretary John Carrol Brent again importuned Masonic groups and others, this time with immediate success. At first Congress was less enthusiastic. Then, representing the original thirteen states and prompted by a popular groundswell of nationalism, a House of Representatives committee explored the feasibility of completing the monument in time for the Centennial on July 4, 1876. But since 1848 many had expressed doubts about the adequacy of the foundations. Now, after nearly 30 years the committee revived the question and appointed an engineering investigation. It was concluded that for safety reasons no extra load should be imposed on the foundation; that is, the shaft of the obelisk should not rise beyond the 176 feet already achieved.

At the beginning of August 1876 President Ulysses S. Grant signed into law a bill that appropriated \$200,000 for the completion of the monument. Unanimously passed by both Houses, it also transferred ownership of the

partly finished structure from the Society to the United States, and created a Joint Commission, responsible to Congress. It was only to be expected that the Joint Commission would create a bureaucratic subset, a Building Commission—the first vice-president of the Society, the Architect of the Capitol, the supervising architect of the Treasury and General Andrew Atkinson Humphreys, chief of Engineers—to handle practical matters. Humphreys in turn appointed Lt. Col. Thomas Lincoln Casey as engineer in charge of the project. Reports in the first half of 1877 concluded that the existing foundation was inadequate, but that the problem could be fixed. The Joint Commission made its first report to Congress on November 8, almost 2 years after it had been established. The inordinate delay had caused yet another waning of public interest.

As noted, the pantheon had been deferred many years earlier for reasons of cost. Mills is alleged to have objected: that would make his monument look like “a stalk of asparagus.” Many others thought a simple obelisk was too stark, offering “little to be proud of.” Now the plan was that the pantheon was to be omitted completely. Even what remained of Mills’ design was again attacked; in July 1877 *The American Architect and Building News* described it as a “monstrous obelisk, so cheap to design but so costly to execute, so poor in thought but so ostentatious in size” and called for it to be discarded.

Once again, plenty of alternatives were rolled out. John Fraser, then architect of the Treasury, proposed a Romanesque tower with an equestrian statue of Washington above its entrance. General Montgomery Meigs wanted to build an Italianate observation tower atop the existing structure, crowned with a seated statue. M. P. Hapgood, a Boston architectural student, suggested embellishing the stump of the existing column with elaborate Gothick detail. Henry Robinson Searle revised his Egyptian Revival entry from the 1830s competition—through a series of modifications it had evolved into a decorated obelisk atop a Mayan-like base. The sculptor William Wetmore Story presented Speaker Winthrop with “an almost cathedral-like design,” considered (by some) to be “vastly superior in artistic taste and beauty.” Winthrop responded that his “first wish was to finish the monument as a simple obelisk” but “if a change was unavoidable . . . [Story’s] idea of turning it into ornamental Lombardy tower” was the best plan he had seen. The nation and the world should be grateful for Casey’s January 1879 report: Story’s design would overload the already reinforced foundation and—this was probably the clincher—it would cost more. Mills’ obelisk was finally settled upon.

Earlier, economy had led to a 100-foot shortening of the original 600-foot proposal. By fall 1878 the intended height was increased to 555 feet $5\frac{1}{8}$ inches, ostensibly to achieve a proportion 10: 1—claimed to be the standard ratio of height to base dimension for Egyptian obelisks. A steeply sloping 55-foot crowning pyramidion would replace Mills’ flattish top. That case was put on the advice of obelisk *aficionado* George Perkins Marsh, then U.S. minister to Italy, who claimed to have studied the best-known ancient

examples. Incidentally, he dismissed Mills' pantheon as "gingerbread." The reasoning was specious and inaccurate, because that ratio would have yielded a height of 550 feet. Anyway, an analysis of the twenty-eight surviving Egyptian obelisks shows that there *was* no standard; proportions varied between 8.9: 1 and 11.85: 1. It must be remembered that the ancient "needles" were monolithic, their slenderness ratios determined by the tensile strength needed to avoid failure as they were raised into position. Few exceeded 100 feet in height; the tallest, abandoned in the course of quarrying at Aswan, would have been just under 137 feet high.

The proportions of the Washington Monument also have provided rich quasi-evidence about numerology for the ill-informed speculations of a lunatic fringe; all that can be asserted here is that the dimensions have no demonstrable historical precedent, and therefore probably no mystical significance.

Construction of the shaft resumed early in 1879. In the preceding months Casey spent almost \$100,000 deepening the foundation and (more important) increasing its area so it could support a structure that would ultimately weigh more than 40,000 tons. The first necessity of the second phase was the demolition of the inferior work carried out during the Know-Nothings' control of the monument. Next followed the construction of two wrought-iron frameworks within the shaft: one set of four hollow circular columns to support the stairs, and another set to carry the steam-powered elevator mechanism for raising the stone blocks. In July 1880 both parts of the iron structure were ready. A month earlier, a greatly augmented team of masons had started dressing the stones in enlarged stonecutting sheds. A new spur line was built from the Baltimore and Potomac railroad tracks to deliver marble directly from the Maryland quarry to the site. Olszewski describes how the obelisk then rose in 20-foot lifts:

The eight columns . . . were built to a height of 30 feet above the masonry shaft and were firmly tied and braced with vertical and horizontal ties and braces. . . . To each of the four outer columns . . . a crane arm was attached so that it swung out over one-quarter of the top of the wall. By means of this arrangement, 20 feet of masonry could be added to the height of the walls of the monument at one time. The process was then repeated and 20 feet was added to the height of the iron frame and the elevator and stone-setting machinery was moved to its top so that another 20 feet of the wall could be built.⁸

Three different kinds of marble were used in the monument. The first 152 feet, completed before 1854, was faced with coarser-grained stone from Texas, Maryland. When work recommenced in 1879, four courses (6 feet) of white marble from Sheffield, Massachusetts, were laid; for a number of reasons that supplier's contract was cancelled in July 1880. The upper part of the shaft was finished with fine-grained marble from Cockeysville, Maryland. The three sections can be distinguished by quite noticeable color differences. Once the shaft was completed, the builders turned to the 200-ton pyramidion that

would crown the monument. It contained 262 pieces of Cockeysville marble and was assembled on the ground. In December 1884 it was lifted into place in one piece.

The pyramidal cast-aluminum apex, engraved on one side with the Latin phrase, *Laus Deo* (Praise be to God), was set December 6, 1884. Its other faces—the piece is about 5½ inches square and 9 inches high—are inscribed with significant dates and the names of the engineers, architects, and commissioners responsible for the monument. Aluminum, then a rare and valuable metal, was not chosen (as the myth asserts) because “Americans wanted only the best to commemorate George Washington” but because of its conductivity, color, and nonstaining qualities. Casey asked William Frishmuth, at that time the only U.S. aluminum producer, if he could make a metal pyramid to serve as the lightning rod. In fact, copper, bronze, or platinum-plated brass were the preferred materials.

The incomplete monument was dedicated on Washington’s birthday, February 22, 1885. Regular servicemen and militia were on parade as invited dignitaries congregated—“executive, legislative, and judicial officers; . . . members of the diplomatic corps representing the entire world; . . . clergymen, jurists, scientists, venerable citizens [*sic*], and members of the Washington National Monument Society.” Senator John Sherman, William W. Corcoran, the current secretary of the Society, and Lt.-Col. Casey each made a short speech (it was a very cold day). President Chester Arthur declared “the monument dedicated from that time forth ‘to the immortal name and memory of George Washington.’” The official party then went in procession to the Capitol to hear two more speeches in the House of Representatives. That evening there was a reception at the White House.

The remaining work was completed by October 1888.

The Washington Monument remains the tallest building in the national capital. There is a popular misconception—indeed, tourists are often told—that its preeminence is established by law, out of deference to the father of his country. Not so. In 1899 the first *Heights of Buildings Act* was the city’s response to a thirteen-story hotel, built in 1894. That law was superseded by another in 1910 that limited the heights of new buildings to 20 feet greater than the width of the adjacent street; under certain conditions it exempted “spires, towers, domes, minarets, pinnacles, penthouses over elevator shafts, ventilation shafts, chimneys, smokestacks, and fire sprinkler tanks.”

The monument drew crowds of visitors even before it was officially opened to the public on October 9, 1888. In the 18 months following the dedication over ten thousand people labored up the steps to the 500-foot level; once the service elevator was converted to passenger use, the number grew rapidly; and it has been claimed that by 1888 the monthly average reached fifty-five thousand. In 2005 the NPS ranked the monument among the most-visited tourist sites in the capital, with about half a million visitors annually.

The NPS assumed responsibility for the monument in 1933; and the following year, as a job-creation project of the Works Progress Administration, it was

cleaned for the first time. A tubular steel scaffolding was erected, and for almost 5 months the faces were hand-scrubbed by steel brushes, using sand and water. The ring of fifty flagpoles—one for each state—was added in 1959.

The next (and much more ambitious) restoration project, jointly paid for by Congress and private corporations, was announced in October 1997; work started the following January. It was necessary to seal a number of exterior and interior cracks, clean and repair external surfaces, repoint 12 miles of external joints (and almost a mile of interior joints), and clean over an acre of interior surfaces. In addition, the commemorative stones were conserved; the heating and air-conditioning systems were upgraded; the lightning conducting system was replaced; the 500-foot observation level and the 490-foot exhibition level were improved; larger viewing windows were provided; and a new elevator cab was installed.

The spectacular scaffolding was itself an architectural achievement. Conceived by the postmodernist architect Michael Graves and jointly designed by engineer Alan Shalders and James Madison Cutts Consulting Structural Engineers, 37 miles of aluminium framework subtly sloped parallel to the monument's tapering faces. Concrete footings under the surrounding pavement carried its weight, and an ingenious bracing system meant that it touched the obelisk only lightly. Graves designed a sheath of transparent fabric whose pattern of blue horizontal and vertical lines reflected the masonry beneath. The Washington National Monument reopened to the public in late spring 2000; the restoration had cost around \$9.4 million.

Changes to the immediate environment were occasioned by the disastrous events of September 11, 2001; a \$15 million "security and landscaping enhancement project" was undertaken. The NPS closed the monument to the public in September 2004 to complete the final phase, reopening it on April 1, 2005. Changes by landscape architect Laurie Olin involved new pedestrian pathways and almost eight hundred new shade and flowering trees, increased external lighting, and granite paving on the plaza; benches of Georgia white marble surround the plaza. The key security element of the well-designed project is a series of interlocking rings of ash rose granite defensive wall, standing just 30 inches above the ground in depressions. They overlap at just the right points to stop an "explosive-laden Humvee." Retractable posts can be lowered for maintenance vehicles.

Robert Mills' Other Washington Monument

Built between 1815 and 1829, the Washington Monument in Baltimore's Mount Vernon neighborhood was the earliest architectural shrine honoring the first president. The statue atop the 178-foot structure could be seen from Baltimore's inner harbor; as Ishmael, the chronicler in Herman Melville's *Moby Dick*, observes, "Great Washington, too, stands high aloft on his towering main-mast in

Baltimore, and like one of Hercules' pillars, his column marks that point of human grandeur beyond which few mortals will go."

In December 1809 a group of prominent Baltimoreans petitioned Maryland's General Assembly for permission to hold a lottery to finance the monument. Passed on January 6, 1810, the legislation approved a sum of \$100,000 and appointed "hand-picked leading Maryland citizens" to a Board of Managers to undertake the project. With only-to-be-expected red tape, the Managers in turn appointed a Lottery Committee, and the first of six lotteries was held in 1811. By 1813 enough money had accrued for the Board to announce a design competition, with a prize of \$500. Of course, a separate Building Committee was needed to supervise construction.

The dates on the entries suggest that the competition was attenuated. They included a design by local dilettante architect Nicholas Rogers—one source hints at a "Masonic edifice"—and two for Neo-Classical triumphal arches, one by the French architect Joseph J. Ramée, and the other by Maximilian Godefroy, also a Frenchman who (imprudently in the circumstances) seems to have based his reputation on the fact that he was *not* American born. Robert Mills' sketches of November 1813 impressed the judges. His grand, expensive proposal envisioned a massive octagonal column resting on a base "with balconies at several levels, inscriptions, and a crowning statue representing Washington, dressed as a Roman warrior, riding in a horse-drawn chariot." Six months later Mills was awarded the prize and appointed architect. Godefroy, full of sour grapes, dismissed the scheme as a "Bob the small" pagoda, whatever he meant by that. As soon as the winner was made public, property owners around the proposed site protested, afraid that such a column—tall buildings were far from common in 1814—would collapse, or at the very least attract lightning. Colonel John Eager Howard donated a low hill on his rural estate at Howard's Woods, a mile north of the Inner Harbor, as an alternative site. About twenty-five thousand people attended the cornerstone-laying ceremony on July 4, 1815.

Construction progressed well enough for 5 years, and by the end of 1820 the column of Baltimore County marble was completed. The last monument lottery was held in 1824, but because the Board's revenues did not cover soaring construction costs, proceeds from the State Lottery met the shortfall. By 1843 the cost would pass \$200,000—twice the estimated figure. Mills was forced to simplify his design. According to Roger Shepherd, it "went through four distinct phases, a process by which a very complex design [was] gradually simplified."

His final presentation drawing showed an unfluted, baseless column of white marble divided into seven levels with six "balustraded balconies set at decreasing intervals toward the top." As built, it alluded to (a term that architects use for "copied") the Austerlitz Column (1810) in Place Vendôme, Paris, which in turned evoked Trajan's Column of 113 A.D. in Rome. It stood on a low base and was crowned with an archeologically accurate Greek Doric

capital supporting a heroic statue of Washington. Mills wanted visitors to climb staircases within the double wall to reach the balconies where they could read historical inscriptions and view the city. The monument's iconography would present Washington as military hero. A stringent budget meant that his intentions were not fulfilled, but the detail is succinctly described by architectural historian Roger Shepherd:

The major sculptural program consisted of a *quadriga*, or triumphal car, driven by George Washington guided by Liberty at the column's summit, a band of relief sculpture at the bottom, and four large groups of trophies of victory marking each corner of the monument's base. The progress of the Revolution could be followed, starting at the top with 1776 and descending year by year to 1781 at the base of the column. The names of heroes and battles were inscribed on the next top levels; a relief sculpture of Lord Cornwall's surrender at Yorktown encircled the column base, beginning 20 feet above ground level.

In the event, only a few elements of Mills' November 1813 design were used. As noted, the shaft was completely devoid of ornament, and he had to content himself with "the simplest of inscriptions in bronze letters" on the marble base, setting out Washington's Revolutionary War successes. He also designed an ornate cast-iron fence that evolved as design and construction progressed.

By 1824 the column and the capital were complete, but it was not until 1826 that the Board held another competition, this time for the crowning sculpture. The winner was the Italian Enrico Causici, who seems to have arrived in the United States in 1922 and had executed work in the Capitol in Washington, D.C. Prohibitive cost put paid to Mills' original vision of a toga-draped George Washington at the reins of a *quadriga* and flanked by Liberty. Instead Causici carved a 16-foot standing Washington—albeit toga-draped—"in the act of handing over his commission as Commander-in-Chief." To raise the three-section, 16-ton statue to its lofty perch, Mills enlisted the help of Captain James D. Woodside, a rigging specialist from the Washington Navy Yard. The final block was placed during the dedication ceremony on November 25, 1829. Frances Dean Whittemore wrote in 1933, "When the statue finally settled in position, it is said, a shooting star dashed across the sky and an eagle alighted on the head of Washington."

NOTES

1. Washington, George, "Undelivered First Inaugural Address." <http://gwpapers.virginia.edu/documents/inaugural/fragments.html>. Cited widely elsewhere.

2. "Washington and the Early Republic." www.nps.gov/history/NR/twhp/wwwlps/lessons/62wash/62facts1.htm
3. Spalding, Matthew, "By George. It's Not Presidents' Day. It's Washington's Birthday." *National Review Online* (February 17, 2003). www.nationalreview.com/flashback/spalding200402160805.asp
4. Joseph, Peter, "Public Works." *Lost Magazine* (October 2006), 1.
5. Kammen, Michael, *Visual Shock: A History of Art Controversies in American Culture*. New York: Knopf, 2006, 4.
6. Harvey, Frederick L., *History of the Washington Monument and Washington National Monument Society*. Washington, D.C.: Government Printing Office, 1903, 26–28.
7. Kimball, Sidney Fiske, "Robert Mills, Architect," in Frances Archer Christian and Susanne Massie, eds., *Homes and Gardens in Old Virginia*. Richmond: Garrett and Massie, 1931.
8. Olszewski, George J., *A History of the Washington Monument, 1844–1968*. Washington, D.C.: Office of History and Historic Architecture, 1971.

FURTHER READING

- Allen, Thomas B. *The Washington Monument: It Stands for All*. New York: Discovery Books, 2000.
- Binczewski, George J. "The Point of a Monument: A History of the Aluminum Cap of the Washington Monument." *JOM*, 47(no. 11, 1995), 20–25.
- Bryan, John Morrill. *Robert Mills: America's First Architect*. New York: Princeton Architectural Press, 2001.
- Crosbie, Michael J. "The Monument and the Mall; Architect of Monument (1848–1884): Robert Mills, Modern Landscaping by: Dennis Piper. . . ." *Architecture (AIA)*, 73(December 1984), 74–79.
- Freidel, Frank Burt, and Lonnelle Aikman. *George Washington: Man and Monument*. Washington, D.C.: Washington National Monument Association, 1988.
- Jacob, Judith M. *The Washington Monument: A Technical History and Catalog of the Commemorative Stones*. Lowell, MA: NPS, 2005.
- Liscombe, Rhodri Windsor. *Altogether American: Robert Mills, Architect and Engineer, 1781–1855*. New York: Oxford University Press, 1994.
- Olszewski, George J. *A History of the Washington Monument, 1844–1968*. Washington, D.C.: Office of History and Historic Architecture, 1971.
- Savage, Kirk. "The Self-Made Monument: George Washington and the Fight to erect a National Memorial." *Winterthur Portfolio*, 22(Winter 1987), 225–242.
- Torres, Louis. "To the Immortal Name and Memory of George Washington": *The United States Army Corps of Engineers and the Construction of the Washington Monument*. Honolulu, HI: University Press of the Pacific, 2001.



Courtesy Library of Congress

White House, Washington, D.C.

Always the same?

Even as far away as Australia, boys of past generations were encouraged always to tell the truth by the following cautionary tale. Mason Locke Weems included it—but not until the fifth edition, published around 1800—in *A History of the Life and Death, Virtues and Exploits of General George Washington*. When a boy, George used a new hatchet to chop down his father's cherry tree. Confronted by his angry parent, he was about to deny the crime; but then, "looking at his father with the sweet face of youth brightened with the inexpressible charm of all-conquering truth, he bravely cried out, 'I cannot tell a lie. I did cut it with my hatchet.'" His father forgave him, and the little axe passed into folklore. Later it would figure in another story, no less apocryphal: a traveler saw a sign in front of a Virginia farmhouse: "For Sale. The original hatchet used by Washington to chop down the cherry tree." When he asked the farmer if it was *really* the famous hatchet, he was told, "Well, it's had only six new handles and seven new heads, but it's still the original hatchet!"

In the same way the White House, built for George Washington, has been demolished and rebuilt, gutted and refurbished, altered and realtered but is still regarded as the "original" house. Historian William Seale believes that it is "perhaps the most remarkable artefact of the American nation" and claims despite the changes, "it is always the same. Its idea has become its essence." As will be shown, though the White House today *looks* substantially as it has for two centuries, it certainly is *not* the same. However, it is a national icon that is internationally associated with—even synonymous with—the American presidency.

Presently, what is known as the "White House Complex" is constituted by four main structures with a total floor area of 67,000 square feet—a little over 1½ acres. The Executive Mansion is the home of the U.S. president and his family; the East Wing serves as the formal entrance to the State Rooms in the Mansion; the Old Executive Office Building houses the presidential and vice-presidential executive offices; and the West Wing is the location of the "Oval Office," the hub of government made familiar to world-wide audiences through NBC's seven-season television series.

Bradley Patterson, a former staffer, wrote that in 2000 White House personnel extended far beyond the seventy-five people employed in the West Wing and the ninety-six in the Executive Mansion. Besides those in the Executive Office, there were 125 "separately identifiable offices in the total . . . staff community . . . employing nearly fifty-seven hundred men and women"—"cooks and ushers, security personnel, secret service, military officers, the people who fly and maintain Air Force One, and most important, a growing number . . . who make and execute government policy." The latter group, he added, "shrouded in anonymity, protected by executive privilege, and lacking legal or constitutional authority of their own, . . . shape, focus, and amplify the Presidential power."¹ A "White House *Complex*" indeed!

This essay is limited to a discussion of the origins and architecture of the Executive Mansion, and the succession of major changes made to it. In an

American Institute of Architects survey of eighteen hundred citizens published in February 2007 it was voted the people's second-favorite building. The residence has been known as the "President's Palace," the "Presidential Mansion," or simply the "President's House." Dolley Madison, wife of the fourth president, called it the "President's *Castle*." It seems that (because of its white-painted exterior) by 1811 the public knew it *de facto* as the "White House." However, "Executive Mansion" was its formal title until 1901; then President Theodore Roosevelt had "White House—Washington" engraved on his stationery. About 30 years later another Roosevelt, Franklin, changed the letterhead to "The White House" with "Washington" centered beneath it.

A "STYLE PROPER FOR THE CHIEF MAGISTRATE"

During the establishment of the federal capital of the United States, it seems that George Washington poked a finger into every pie. He personally chose the location of the federal district, and although he had appointed three commissioners to oversee its development, he engaged the city planner and worked on the layout with him. He selected the quarry from which stone for the public buildings would come; and (in a less than transparent process) he manipulated the outcome of the design competition for the president's house. Having placed his permanent stamp on the city which bore his name, in March 1797 he declined to run for a third term of office and retired to Mount Vernon. During his administration the seat of government was never in Washington, D.C. He never lived in the White House.

The Residence Act, that established the seat of federal government, was passed on July 16, 1790. A few months later, after a quite perfunctory assessment of alternative locations, the president chose the rather swampy site on the banks of the Potomac River. The State of Maryland willingly ceded two-thirds of the specified 100 square miles of the federal district, and the State of Virginia the remainder.

In 1776 Paris-born Pierre Charles L'Enfant, after training at the French Royal Academy of Painting and Sculpture as an urban designer, architect, and engineer, moved to America and volunteered for the Continental Army. During the War of Independence he served with distinction in the Corps of Engineers, reaching the rank of major. In September 1789, 5 months after Washington was elected president, L'Enfant petitioned him for "the favor of being employed in the business" of designing a federal capital, which (the Frenchman believed) should be "on such a scale as to leave room for that aggrandizement and embellishment which the increase of the wealth of the nation will permit it to pursue at any period."

Early in 1791 Alexander Hamilton, the secretary of the Treasury, recommended L'Enfant, his war-time friend, as the person best qualified to design the capital. L'Enfant was duly commissioned, and by the middle of the year

he had presented Washington with a sketch proposal. Kenneth Bowling asserts that the “exacting and uncompromising design” would be more aptly named the L'Enfant-Washington plan, because planner and president collaborated. Late August saw a resolved city plan, “projected agreeable to the direction of the President of the United States.”² Within months, to use a modern phrase, everything went pear-shaped.

The conventional wisdom has it that L'Enfant was fired for insubordination. But according to Bowling, he “quit, but only after making Washington grovel, as the President desperately sought to retain his services.” Fellow-historian Christopher Sterling agrees:

The designer worked closely with Washington for several months, but then [he] ran afoul of the Presidentially appointed commissioners in charge of the city's development. After several attempts to keep L'Enfant employed on a project that he clearly loved, Washington reluctantly gave up trying to rein in his designer, and L'Enfant resigned. . . . [In early 1792] Washington and Thomas Jefferson both moved quickly to defuse the growing political crisis—the three commissioners had threatened to resign—and planning went ahead without L'Enfant's participation.³

The circumstances were these. The commissioners complained that the “capricious and malicious” L'Enfant, quite the *prima donna*, caused them “more than a little trouble and vexation” because although they had few ideas of their own “they could never bring [him] to take into account either their persons or their ideas; he would acknowledge no chief except Washington.”⁴ A couple of examples should suffice. In October 1791, to expedite land sales, they asked L'Enfant for a printed copy of the city plan. He provided only sketches because he believed that the sales were precipitate. Later, enraged to learn that someone was building a mansion near the Capitol site, L'Enfant ordered it removed; when the owner refused, L'Enfant unilaterally authorized its demolition. The influential owner was outraged and complained to the president, who reproved L'Enfant (but only publicly). Elise Hartman Ford has observed that “a more personable man might have won over the reluctant landowners and commissioners, inspiring them with his dreams and his passion, but L'Enfant exhibited only a peevish and condescending secretiveness that alienated one and all.”

With his protégé gone, Washington hired the surveyor Andrew Ellicott, who earlier had set out the District of Columbia's boundaries, to complete a town plan based on L'Enfant's proposal. When L'Enfant refused to pass on his documents Ellicott, working from memory, had a plan “ready for the engravers” within a month. He made some changes, but the design remained essentially the same. Crossed by diagonal avenues with circular plazas at their intersections, and overlaid with a grid pattern of streets, the plan borrowed the baroque grandeur—actual and proposed—of Europe: central Dresden, Wren's and Evelyn's rebuilding plans for London, and André Le Nôtre's setting

for the Palace of Versailles. It had three main foci. The “Congress House” (now the Capitol) stood on high ground then known as Jennin’s Heights; from it an axial “Grand Avenue” (the National Mall) extended westward to the Potomac, terminated by an equestrian statue of George Washington (where the Washington Monument now stands).

The “President’s Palace”—Washington himself selected the spot—was at the end of a minor axis to the north, and linked to the Capitol via a mile-long diagonal thoroughfare (Pennsylvania Avenue). Although little detail of L’Enfant’s notional palace is discernable on the early small-scale maps, it was grand and pompous—four times the ground area of the White House as eventually built, and 20 feet higher. Like the entire city plan, the house conveyed the Federalist Party’s “exalted, monarchical notion of the Presidency.” It seems that Washington himself, who at least as early as 1784 had referred to the United States as an “empire,” was not averse to that idea. According to Seale, the Federalists argued that

Americans wanted their President to establish a high tone, essentially as an elected king set apart from the people. Washington himself thought that, as President, it was his responsibility “to conform to the public desire and expectation with respect to the style proper for the Chief Magistrate to live in.” This logic required that the Chief Magistrate live in a palace.⁵

Eighty-two acres had been reserved for a park around the house, with “reflecting pools, water cascades, groves and meadows” and a vista southward to the equestrian statue. Such unseemly pretentiousness in the city and the house stuck in the craws of the Republicans (not the same as modern Republicans), who believed that the center of government should “evoke simplicity rather than the aristocratic airs [of] the kingdoms of Europe.” Their response to what they anticipated to be the potential abuse of presidential authority was to systematically undermine L’Enfant’s plan as inappropriately grandiose for a democracy. They felt much the same way about the incipient proposal for the president’s house.

JAMES HOBAN: “WASHINGTON’S MAN”

In March 1792 the commissioners told Jefferson, then secretary of State, that Washington had mentioned an architect whom he had met in Charleston, South Carolina, during his presidential tour in summer 1791, and who had had been “highly recommended” to him. They assured Jefferson, “If [the President] still approves of him . . . we will endeavor to engage him.” When Washington said that he was unable to recall the man’s name, Jefferson suggested that there should be two national design competitions, open to all—one for the house and another for the Capitol building. A newspaper advertisement of March 14, 1792, offered “a premium of 500 dollars or a

medal of that value [to the] person who before the 15 July next shall produce . . . the most approved plan . . . for a Presidents [*sic*] house." The format and content of the entries was prescribed: "Drawings . . . of the ground plats [*sic*], elevations of each front and sections through the building in such directions as may be necessary to explain the internal structure, and an estimate of the cubic feet of brickwork composing the whole mass of the walls." That was all. Interested parties were urged to seek a full briefing from the commissioners.

Nine proposals for the house were submitted. Jefferson anticipated "in view of the dearth of talent," that not all would meet the artistic standards required for such an important building. So although he was on the judging panel, he went to the "astonishing length" of making two designs of his own, one of which he anonymously entered. Among the other contenders were the recently-immigrated French architect Étienne-Sulpice (aka Stephen) Hallet; the Maryland inventor James Diamond; and one "A.Z." (probably John Collins, a Richmond, Virginia, builder whose design, without prize, was the runner-up). Jefferson had been right. One commentator has noted, "Although they represented a great effort to surpass the ordinary buildings of the colonies, few [submissions] conformed even to Jefferson's grammatical standards of detail." Another describes most of the designs as "awkward and naïve." Anyway, perhaps the competition was no competition at all.

Washington traveled to the federal capital site on July 16, 1792, the day after the competition deadline. The next day, after what must have been a very superficial review by him and two of the commissioners (Jefferson was absent), James Hoban of Charleston was awarded the premium. He was the man whose name Washington had claimed to have forgotten. Over the preceding 2 months, Washington had given him what seems to have been a private briefing about the type of design envisioned for the residence. The exact circumstances remain obscure, but one writer cryptically notes that "Hoban was making his own representations"; another calls him "Washington's man." It may be significant that the architect, although a devout Roman Catholic, was (like his presidential patron) a Freemason. At that time, Pope Clement XII's 1738 prohibition against lodge membership was not being enforced by American church leaders.

Hoban was born in 1762 on the Earl of Desart's estate in Co. Kilkenny, Ireland. There he was trained as a carpenter and wheelwright before studying architecture and drawing at the Royal Dublin Society. From 1780 he was a draftsman in the architectural office of Thomas Cooley, and he later worked for James Gandon. He also may have conducted—albeit briefly—an independent practice in Dublin before emigrating with his wife and children in 1783. Little is known of his American career before he won the competition for the president's house, except that he was employed as an architect in Philadelphia in May 1785. Two years later he moved to Charleston, South Carolina, where he designed domestic and commercial buildings.

Architectural ideas have been transmitted in many ways: traveling architects, craftsmen, or clients; images; and of course books. Besides those architects familiar with Palladianism—an aesthetic based on the writings of the Italian Andrea Palladio and “made English” in the early 1600s by the sole effort of Inigo Jones—lesser British designers, by-passing the theory, depended largely upon “pattern books,” collections of standard designs for all kinds of buildings. After about 1780 over sixty such volumes were published and carried to British colonies throughout the world by dilettantes, architects, builders, and craftsmen. It is difficult to link specific buildings with specific patterns; because provenance of the books is often obscure it is hard to discover who owned what, and—whether to mask banality or celebrate creativity—many builders hybridized assorted sources, rather than copy entire designs.

Following a suggestion made by a German historian in 1826, many popular sources still insist that Hoban’s “somewhat conservative” White House was modelled on Leinster House in Dublin, designed in 1745 by Richard Cassels for James FitzGerald. One writer even claims that “the projecting bow on the northern side of [Leinster house] is said to be the prototype for the bow-fronted White House.” In fact, although they were common in Irish Palladian great houses, neither facade of Leinster House *had* a bow. Anyway, quite apart from major differences in the buildings, it is difficult to believe that Hoban could have remembered for almost 10 years anything more than a general impression of the Dublin mansion.

The architectural historian Sidney Fiske Kimball pointed out as early as 1916 that there are as many differences as commonalities between the two buildings: there were no similarities in their plans; while both had long façades with eleven bays and a similar central pavilion—common in contemporary great houses—Leinster House employed the Corinthian order, while Hoban used the Ionic; Leinster House’s lowest level was above the ground, whereas Hoban’s original design seems to have included a half-basement. It seems much more likely that Hoban’s design was a composite, based on the pattern books—a plan from here, an elevation from there, a detail from somewhere else. Some scholars, including Kimball, believe that he was alluding to (an architect’s expression for “copying”) a plan and elevation in *A Book of Architecture, Containing Designs of Buildings and Ornaments*, self-published in 1728 by the Scots Palladianist James Gibbs. That design coincidentally may have been tempered with recollections of Leinster House. The Library Societies in Charleston, South Carolina, and Philadelphia, Pennsylvania, owned a copy in 1792; so did Thomas Jefferson.

Hoban’s successful design suggests that Washington’s aspirations had descended somewhat from the palace proposed by L’Enfant. Yet despite their earlier consultations, in which the architect almost certainly “tested” precompetition ideas with Washington, the president was not completely satisfied with the original proposal, for a three-story building. He thought it was too small and, although it was palatial by contemporary American standards, he

believed that it was not imposing enough for the first citizen and wanted to increase its size. On the other hand, and for the ideological reasons already outlined, the commissioners thought just the opposite; Jefferson would later complain that it was “big enough for two emperors, one Pope, and the grand Lama.” He also contended that it should be built of brick—as the sloppily-drafted competition rules had specified—rather than of stone.

Perhaps because funds were limited, or perhaps because of a lack of skilled artisans, a compromise was reached. When the commissioners “protested the scale” Washington agreed to omit “the raised rustic base story and increased the volume of the house by twenty percent.” But he insisted upon a *stone* house, “elaborately rendered in the grand Anglo-Palladian manner.” And he would later claim, attempting to justify the extravagance, “It was always my idea . . . that the building should be so arranged that only a part of it should be erected at present; but upon such a plan as to make the part so erected an entire building.” Seale writes,

The White House broke with all American precedents not only because of its great scale, but also because of the richness of the stone carving. President Washington overrode the opinions of Thomas Jefferson and the city commissioners to make [the] house stone instead of brick. The elegant swags of oak leaves and flowers, the window hoods, the lofty pilasters, and the charming motif of cabbages roses were all executed to suit Washington’s taste.⁶

FROM REVERIE TO REALITY

The choice of a remote, sparsely settled location for the national capital on land that had been ceded by the two states with the highest level of slave ownership—about half the country’s slaves lived in Virginia and Maryland—inevitably had a bearing on the availability of labor to construct its public buildings. The federal commissioners conscientiously sought white artisans and unskilled workers, but the predominance of slave labor in the area depressed local wages, making it difficult to hire paid labor. When urged by Washington himself, the commissioners’ attempts to import indentured workers from Europe also failed; they had to rely on African Americans to provide the bulk of labor on the White House and the Capitol Building. In April 1792, when the commissioners were “bragging” that more than two thousand mechanics and laborers were prepared to work in Washington, they were also advertising for hiring slaves on an annual basis. The number they employed as common laborers increased from about sixty in 1793 to perhaps as many as 120 five years later, among a total workforce of two hundred or so, when building operations reached their peak.

Each slave cost \$60 a year; of course, all the money went to his master. Working beside paid white workers and free blacks, often every day during

the high-activity summer months, slaves were engaged in site excavation, haulage, brick-making and laying, carpentry, nail-making, and as masons' laborers. They lived in huts on the White House building site; beef, pork, mutton, Indian meal, and bread was provided, and a dispensary was set up for them. The commissioners rented only "slaves they described as 'laborers' and never trained [them] to do skilled labor." Their involvement limited the wage demands of white workers. However, records suggest that Hoban's own slaves and another belonging to one Peirce Purcell, who were already qualified as carpenters—the trade in highest demand—undertook skilled work, probably from 1794 until late 1797.

The remoteness of the capital site gave rise to another problem: apart from brick clay, building materials were unavailable close at hand. In 1791 the government acquired a privately operated sandstone quarry on Wigginton's Island—later known as Government Island—along Aquia Creek in Stafford County, Virginia, where a few years earlier Washington had bought paving and garden steps for his Mount Vernon estate. The beige and gray stone was not really suitable for construction; nevertheless, at Washington's request, it was specified for the foundations and the external facings of the house. The master mason Collen Williamson trained slaves to rough-cut giant blocks, that then were transported 40 miles up the Potomac on shallow-draft schooners and unloaded at Commissioners' Wharf. They were hauled by black laborers to the building site, to be cut, dressed or carved, and set by a team of eighteen stone masons, most of whom had been recruited in Scotland in 1793. The external walls were lined with bricks that were burnt in clamps on what is now the north grounds of the White House. Because the Aquia Creek stone was porous, a protective coat composed of lime, rice glue, casein, and white lead was applied. That gave the house its familiar color and name.

The finer timbers for flooring and joinery came from plantations in Virginia and North Carolina. The coarser stuff for structural framing came from White Oak Swamp near Richmond, Virginia, where it was felled by slaves and rough-cut at a mill before being carried on rafts 100 miles up the Potomac. It was pit sawn into joists and beams on-site. Much of the other skilled work was carried out by Irish and Italian immigrants.

A HOUSE FOR "HONEST AND WISE MEN"

In the face of these inconveniences, the White House took a long time to build. Freemasons from the Georgetown Lodge No. 9 of Maryland, Hoban among them, laid the cornerstone at the southwest corner of the Executive Mansion on October 13, 1792. By the time John Adams succeeded Washington in the presidency in 1797, the walls had been topped and the roof had been framed. Over the following 3 years the joinery was installed, and some interior walls were plastered. By then construction of the simple, rectangular

house already had taken slightly more than 8 years, and cost a little over \$232,000.

When the federal government relocated from Philadelphia to Washington in November 1800, Adams moved into an unfinished White House, just 4 months before his term ended. Many of the plastered walls were still wet; about half were not plastered at all. Hoban's proposed Grand Staircase was not even started. On his second evening in the mansion the president wrote to his wife, "I pray Heaven to bestow the best of Blessings on this House and all that shall hereafter inhabit it. May none but honest and wise Men ever rule under this roof."

The Adamases were hardly delighted with their accommodation, and had the Secretary of Navy Benjamin Stoddert advise the city commissioners that it would "give the President and Mrs. Adams great satisfaction [if] something like a garden [is provided], at the north side of the President's House"; otherwise "that large, naked, ugly-looking building will be a very inconvenient residence for a family." Moreover, there was no plumbing, and servants had to cart water for five city blocks. Abigail Adams justifiably grumbled,

We had not the least fence, yard or other convenience without, and the great unfinished audience room, I made a drying room of—nor were there enough lustres or lamps, so candles were stuck here and there for light—neither the chief staircase nor the outer steps were completed, so the family had to enter the house by temporary wooden stairs and platform.⁷

At the beginning of the nineteenth century the future of the yet-incomplete national capital was in doubt. The Senate voted \$50,000 to expedite public works. In March 1803 Jefferson, the third president, offered the professionally trained English architect Benjamin Henry Latrobe what the latter bitterly described as the "magnificent appointment of surveyor to the public buildings of the United States, an office attended with enormous expense and small salary, and which has . . . furnished me with most laborious employment in detecting the villanies [*sic*] and correcting the blunders of my predecessors." Latrobe had emigrated to Virginia in 1795. In Philadelphia 3 years later he had set up an architectural and civil engineering practice, producing several notable works.

Although most of his time and budget was spent on the United States Capitol, in 1805 Latrobe collaborated with Jefferson—himself a dilettante architect who wanted to "apply his own architectural ideas"—on changes to the White House. To make it "less boxlike and more graceful," they proposed north and south porticoes, which, when built 20 years later, would become the house's most distinguishing features. Jefferson also designed low colonnades linking the mansion with single-story east and west wings that housed stables and store rooms. Latrobe, commissioned to build them, confided in a letter to his chief assistant (that, embarrassingly, was delivered to Jefferson by

mistake) that he was “cramped” by Jefferson’s “prejudices in favor of the old French books,” but allowed that “the style of colonnade he proposes is exactly consistent with Hoban’s pile—a litter of pigs worthy of the great sow it surrounds and of the wild Irish boar their father.” Latrobe also replaced the wooden bridge about which Mrs. Adams had complained with a permanent crossing of stone (it still constitutes part of the north portico); installed a grand staircase; re-covered the leaking slate roof with sheet iron and carried out some landscaping.

Succeeding Jefferson in 1809, President James Madison moved into a structurally complete President’s House. Before his inauguration he appointed Latrobe “agent of the furniture fund” and commissioned him to design “an elegant suite of rooms” incorporating what is today the Blue Room, Red Room, and State Dining Room. After the inauguration Latrobe realized the schemes: “done up in high English Regency taste, the sumptuously outfitted suite featured neoclassical furniture. Silver and glass wall lamps shone on crimson velvet curtains in one room, and sunflower yellow in another.” Mrs. Madison supervised Latrobe’s designs for a set of thirty-six chairs, two sofas, and four settees for the newly decorated drawing room, as well as the purchase of furnishings and redecorating of other principal rooms. Tragically, when the British burned the White House only 5 years later, all would be destroyed. In 1811 war with Britain was looming, and Congress, withholding any more funds for building, abolished Latrobe’s official position; although his work in Washington had ended, he continued to advise Dolley Madison until 1813.

“A UNIQUE AND POWERFUL SYMBOL”

The United States declared war on Britain on June 18, 1812. The conflict centered around the press-ganging from U.S. vessels of over ten thousand sailors—on the pretext that they were British—to fight in the Napoleonic Wars. There were other reasons, including festering disputes over Canada’s border and an attempt to impose a trade blockade that had resulted in the impounding of about fifteen hundred American vessels. But that is not our theme. In April 1813 an American force burned the parliament buildings at York (now Toronto), the Upper Canadian capital. In August 1814, bent on retaliation, British troops landed at Chesapeake Bay and marched north, meeting little resistance; their fleet followed up the Patuxent River. Their primary target was the poorly defended federal capital, then “a meager village with a few bad houses and extensive swamps.” But the invaders reasoned that sacking the city, because of its symbolism, would demoralize their enemies—perhaps even lead to the collapse of the United States. On August 24, following a victory at Bladensburg, the British vanguard advanced on Washington; the force was too small to occupy the capital and its intent was to create

havoc. They put to the torch the Treasury, War Department, and the unfinished Capitol. They then turned toward the President's House.

At about 11 p.m. one hundred and fifty British sailors entered the building. The Madisons had fled. Finding the table laid and dinner prepared for a party of forty, the seamen wolfed the food, then looted the house and set fire to it. Although the thick sandstone external walls survived, they were structurally weakened; only the basement level, the south front, and the pedimented central pavilion of the north front remained sound. The floors, inside walls, and the roof were destroyed. After a 26-hour orgy spent torching almost all of Washington's public buildings, as well as a few privately owned business premises, the British returned to their ships. Within a week the invading force was dispatched to Baltimore.

After the attack on the capital, some congressmen wanted to relocate the President's House in Cincinnati where the government would be more defensible. But when in January 1815 America's decisive victory over the British in New Orleans restored national pride, Congress approved the reconstruction of public buildings in Washington because the idea of rebuilding in the nation's capital became symbolic of triumph. A month later peace with Britain was secured through the Treaty of Ghent and the protagonists restored the *status quo*. More than seventy-two hundred men had died for nothing. Nobody won the War of 1812; then, nobody wins *any* war.

In 1817 Latrobe, who had been recalled to Washington to reconstruct the Capitol, finalized the designs for the White House's north and south porticoes. Madison insisted on restoring the executive mansion to exactly what it had been before the fire, and Hoban was commissioned to supervise the rebuilding. In autumn President James Monroe moved into the partially restored house. The formal entrance, reception rooms, and executive offices were on the first floor; the second was dedicated to private and family use, and the laundry, kitchen, and other domestic functions, together with household staff quarters were housed, in the "dank and poorly lit" groin-vaulted basement. The East Room was incomplete, plastered walls and joinery had not been decorated, and floorboards were still unfinished and bare.

Seven years later, working to Latrobe's specification, as noted, Hoban completed the south portico, with its now-famous double stairs curving up to a porch. In another 5 years, during Andrew Jackson's presidency he completed the north portico, also designed by Latrobe; it was built above the driveway to form a *porte cochere* at the level of the state rooms. As Jefferson intended, the porticoes "further distinguished the President's House as a unique and powerful symbol." And with their completion, regardless of later internal changes (of which there were many), the image of the White House as it is known globally today was achieved. Stylistically, its message was enigmatic: although its final form was achieved during the American Greek Revival, it is neither Greek Revival in style, nor really American. Influenced by contemporary English architectural fashion, it owes most to the eighteenth-century

English Palladian residences of the Whig aristocracy, who were hardly the wellspring of American republicanism.

MAKING THE HOUSE INTO A HOME

The White House is the president's private residence, no matter how long his tenure. From Jackson's administration until 1902, successive incumbents and their wives have refurbished the interiors in response to the needs of their families, to their different tastes, and to fashion.

It seems that only Abraham Lincoln, his mind on weightier matters, cared little about the house, which "was, he said, furnished well enough when they came—better than any house they had ever lived in." He strongly disapproved of his wife's overspending on "flub dubs for that damned old house!" because "it would stink in the land to have it said that an appropriation of \$20,000 for furnishing . . . had been overrun by the President when poor soldiers could not have blankets." Yet it has been claimed that after Lincoln, the White House was "no longer just a house, but an icon of the Presidency and all that America stood for."

In 1873 President Ulysses Grant had the interiors redecorated in an elaborately ornamented high Victorian style officially described as "pure Greek" but ridiculed by some critics as "steamboat Gothic"—an epithet derived from its use in river paddle steamers. About 10 years later President Chester Arthur disposed of twenty-four wagon loads of "old furniture and junk," including "carpets . . . ; chandeliers; children's high chairs; marble-top tables; leather-covered sofas, ottomans, and dining-room chairs; cuspidors; lace curtains; globes; and rat-traps"—and commissioned the famous art nouveau designer Louis Comfort Tiffany to refurbish the state floor. It is said that "practically every surface was transformed with his decorative patterns." The floor-to-ceiling opalescent glass screen, with a geometric design depicting parts of the national emblem in red, white, and blue, that Tiffany designed for the Entrance Hall was disposed of on Theodore Roosevelt's specific orders during a "massive rehabilitation" of 1902.

Over the same period modern conveniences were introduced: running water in 1833, central heating in 1837, gaslight in 1848, a telephone in 1879, and electrical wiring in 1891; ironically, all contributed to the decline of the house. By the end of the nineteenth century, as one commentator drily notes, "the Executive Mansion could well have been described as a lavish menagerie of various tastes with an overarching maintenance problem." Before 1902 most *new* construction at the White House had taken place in the grounds: conservatories, stables (later converted to a garage), and repeated transformations of the gardens and landscaping. Because the mansion itself is the main theme of this essay, a summary of the major architectural changes that were effected in 1902 beyond the house must suffice.

“CONSERVATION MEANS DEVELOPMENT AS MUCH AS IT DOES PROTECTION.”

The Park Improvement Commission of the District of Columbia—the “McMillan Commission”—was convened in April 1901, with Beaux-Arts architect Charles Follen McKim as one of its four appointed members. Extending its purview considerably beyond the brief to “restore and develop the . . . plans of Major L'Enfant for Washington and to fit them to the conditions of today” it reported that the White House had been overcrowded for several years because of “the rapid increase in public business” with the consequence that the president’s private spaces and those intended for receptions and social events had become “primitive to the last degree”—perhaps that was a slight hyperbole. The McMillan Commission offered three possible solutions. The first was to extend the house to the east and west, although it warned that measure would cause “the loss of those characteristic features which endear the edifice to the American people.” A second alternative, which also held little appeal, was to use the existing building solely for public business, and build a new presidential mansion on one of the hills overlooking the city.

The third—a recommendation favored by the incumbent president Theodore Roosevelt—would be to relocate the executive offices and devote the White House “entirely to residence purposes.” In accordance with his own aphorism, “Conservation means development as much as it does protection,” and complaining of the “incongruous additions and changes” that had disfigured the mansion, Roosevelt opted for an extensive remodeling. He wanted to “tread lightly” (though, as noted, he carried a stick big enough to vandalize Tiffany’s wonderful décor) and merely remove the Victorian encrustations of the previous 30 years to return the White House to its “Federal-period roots.” In consultation with the president’s wife Edith, McKim’s changes to the house (including the basement) doubled the living space available to the Roosevelts with their “large and rambunctious family of six children.” Roosevelt had ordered the architect to finish the work in 6 months; commenced in June 1902, it took only 4. The president approvingly and piously remarked, “It is a good thing to preserve such buildings as historic monuments which keep alive our sense of continuity with the nation’s past.”

But McKim’s “preservation” (more accurately, “renovation”) was a stylistic pastiche, much of which was poorly executed, perhaps because of the unseemly haste. One critic accuses the architect of holding “little regard for historical elements, and [working] fast to strip the house of most of its floors and cover over old walls with new plaster . . . the result was more Georgian than federal.”

Besides the cosmetic changes, he removed the original grand stair and made the stair by the Entrance Hall “a grander affair.” He also provided bathrooms on the residential floor, installed an elevator, and replaced most gaslights with electric lights. Congress also provided funds for separate

“wings.” Although Roosevelt maintained another office in the house, McKim designed a rectangular “temporary office building”—the West Wing—with a basement and a first floor, on the former site of the conservatories. It seems that it also was jerry-built, and in 1909 President Taft engaged the architect Nathan C. Wyeth to extend it to include the first Oval Office. Following extensive damage by an electrical fire on Christmas Eve 1929, Herbert Hoover had the building repaired without making significant changes. In 1933 and 1934 Franklin Roosevelt commissioned the architect Eric Gugler to effectively double its area by adding a second floor and extending the office and services spaces in the basement. The Oval Office was relocated in the southeast corner. It should be noted that, the TV series *The West Wing* took liberties (to put it mildly) with its depiction of the building, probably for production reasons.

McKim’s glass-enclosed East Wing was constructed on the foundations of Jefferson and Latrobe’s original building that had been demolished in 1866. The new building, with a *porte cochere*, provided a formal entrance for state occasions; it served twenty-seven hundred guests. In 1942 President Franklin D. Roosevelt engaged the architect Lorenzo Simmons Winslow to redesign the wing “primarily to cover the construction of an underground bunker” (now the Presidential Emergency Operations Center). He also added a second floor for offices; the cloakroom became the family movie theater.

THE THIRD FLOOR

President Taft had a “sleeping porch”—a cool place to sleep on hot nights—built on the roof of the White House in 1909. The house always had an attic, originally used as storage space. There were also eight small sloped-ceiling bedrooms for servants—first for slaves and then for paid help; afraid of being trapped in a fire, most preferred to sleep in the basement, despite the dampness. The 1902 renovation had expanded the attic to provide guestrooms and a space later used as a painting studio by Woodrow Wilson’s first wife, Ellen.

Calvin Coolidge discovered how leaky the roof was during a rainstorm. In 1927 he had the New York “upper-class” Beaux-Arts architect William Adams Delano enlarge the attic, replacing its floor with a steel and concrete one to create a complete third level of guest and service rooms under a new steel roof. The alterations further weakened the fabric of the old structure, already affected by the “somewhat hasty” changes made in 1902. The new third floor survived the Truman reconstruction of 1948 to 1952, described below, when more minor “improvements” were made. Since then it has undergone several interior refurbishments as each first family left its mark. It now houses several bedrooms, a billiards room, a workout room, a music room, and a sunroom—twenty rooms in all—and nine bathrooms.

THE TRUMAN BALCONY

In summer 1947 President Harry S. Truman decided that a second-floor balcony behind the south portico's columns would make his private quarters more "liveable." The notion, though approved by Delano, encountered "a tremendous outcry from the press and the general population—perhaps more political than anything else . . . [Many] regarded the issue as symptomatic of Truman's "blustery . . . style, his hard-headedness, his unbending certainty that he was right." The president justified his proposal on aesthetic and practical grounds. The portico columns (he said, perhaps under advice from a sycophantic architect) were of "outlandish, disproportionate height" and that a balcony would visually balance the south front. Moreover, the "dirt-collecting awnings" that shade the windows of the Blue Room could be replaced with "neat wooden shades [that could be] rolled up under the balcony."

When the Commission of Fine Arts opposed the plan because it would spoil the original design of the house Truman retorted in a peevish letter to its chairman:

Of course, I wouldn't expect you to take into consideration the comfort and convenience of the Presidential family in this arrangement. . . . I certainly would like to have your reasons for preferring the dirty awnings to the good-looking convenient portico and then maybe I'll come to a conclusion on the subject. I don't make up *my* [emphasis added] mind in advance.⁸

By March 1948 the President got his way, and the \$16,000 cost was met with money saved from his household account. It took some time for the shouting and tumult to die, and eventually many architectural gurus actually commended the addition. Most people agreed that it improved the look of the White House. Ironically, Truman was able to enjoy his balcony for less than half of his remaining time in office. The Executive Mansion was on the verge of collapsing.

A CLEAR AND PRESENT DANGER

When Truman moved into the house in 1945 he noticed extensive cracking in the plaster. Over the following months he observed that chandeliers were apt to sway and the floors in several rooms moved even under light traffic. In February 1948 he commissioned engineers and architects to undertake a structural survey of the second floor; one engineer told him that the state dining room ceiling "only stayed up from force of habit." The president wrote to his sister, "The second floor where we live . . . is about to fall down!" In May Congress voted \$50,000 for an investigation of the overall structural condition of the house. Then in summer a spinet in his daughter Margaret's sitting

room broke through the floor. Temporary measures were taken to shore up the interiors until in November Truman wrote again to his sister, “The White House is in one terrible shape. There are scaffolds in the East Room, props in the study, my bedroom, Bess’s sitting room and the Rose Room. . . . We’ve had to call off all functions. . . .” Indeed, the inspection revealed problems so alarming that it was decided that the first family should move Blair House on the other side of Pennsylvania Avenue until renovations were completed.

There were three major issues. First, the dryness of the timber throughout the interiors presented a fire hazard (Franklin Roosevelt dismissed a warning of this in 1941). Second, the footings of the old brick walls, resting on soft clay, were sinking. Third (and most critical), the uncoordinated alterations over a century and a half had dangerously weakened the structure. *Architectural Digest* reported

There is scarcely a beam . . . that has not been bored or cut through dozens of times to accommodate water and sewer pipes, gas pipes, heating pipes, electric and telephone wires, automatic fire alarm and guard signal systems, elevators, a fire extinguishing system and other mechanical innovations. In the very structure of the building itself, generations of architects and builders have concealed the complete mechanical equipment of a modern office building, none of which was provided or even contemplated by the original builders.⁹

Early in 1949 the committee’s report, including the recommendations of a \$5.4 million reconstruction, led to the presidential appointment of the six-member Commission on Renovation of the Executive Mansion (all senators and congressmen); retired army chief of staff Major General Glen E. Edgerton was its executive director. The commission offered alternative courses of action: three entailed demolishing the White House and rebuilding it or with marble, granite, or limestone. But a couple provided for maintaining the White House as an icon: one of them proposed demolishing and rebuilding the interiors but dismantling and reassembling the external walls stone by numbered stone; the other, which the Commission recommended and Truman supported, was to retain the exterior walls, the third floor and the roof, and rebuild the interiors. Congress approved funding on June 23.

WHICH HATCHET? WHICH WHITE HOUSE?

Lorenzo Winslow directed what has been called “the dismantling and reinstalling” of the interiors. In fact, only the first part of that description is true. At the end of 1949 contractors began dismantling rooms; Truman had assured a congressman, “We are saving all the doors, mantels, mirrors and things of that sort so that they will go back just as they were.” That simply did not happen.

A year later the White House, like the promise, was hollow. Inside the “original” exterior (most of which had been rebuilt in 1815) a steel structural

skeleton was erected on new concrete pile footings. Within about 15 months a *replica* stood within what was left of the ancient external walls. Most of the salvaged material had been consigned to the dump; some was sold as souvenirs. On the first floor, only the oak wall panels of the State Dining Room were “reinstalled,” but then painted. Although many original lighting fixtures and other architectural ornaments were returned to the house after being restored, in just as many cases replicas of wood and plaster trim and other architectural details were substituted. In February 1952 furniture—much of it reproduction antique—was delivered.

Major changes had been made: mechanical and electrical services were modernized; air-conditioning was installed; service areas were built under the North Portico; two subbasements, one housing a nuclear shelter—ironic enough, during the Truman administration—were added; and the Grand Staircase was altered to open into the Entrance Hall. The interior was replete with new paint, wall coverings, parquet flooring, and tiles. In fact little except the general floor plan remained from the house’s early history because, as William Allen writes, “the urge to preserve the past was not as strong as the love of modern amenities, nor as motivating as a frightening report from a structural engineer.”

The Truman family returned to the Executive Mansion on March 27, 1952. About thirty years later William Ryan and Desmond Guinness asserted in *The White House: An Architectural History* that, though the structural engineering work was successful, from a preservationist’s viewpoint the rebuilding was the “greatest calamity to befall the President’s house since the fire of 1814.” The White House that we see today is the house that Harry S. Truman rebuilt. One critic, admitting that Truman’s project “seems more destructive than restorative”—an odd choice of word—claims that it turned “the national spotlight to the historic significance of the White House’s architecture.” The question must be asked, “Which White House?”

ICON OR ILLUSION?

Architectural historian David Gebhard noted Jefferson’s conviction that “if a building was reflective of the cultural values of the nation in which it was constructed and if it was beautiful . . . it would reinforce the ideals of that country, improve the taste of its citizens, and raise its esteem in the world’s eyes.”¹⁰ The doctrine of architectural determinism—the idea that good architecture (whatever that is) makes good people (whoever they are)—has become passé, and it is difficult to say whether successive presidents or their advisers were guided by Jefferson’s dictum. But the flirtation with fashion of Chester Arthur and others, and especially the major architectural programs—reconstruction after the 1814 fire; McKim’s hip-and-thigh revisions for Theodore Roosevelt; and the total rebuilding of the interiors for Truman—all involved retaining or

replicating James Hoban's exterior of the Executive Mansion. Was that preserving history or creating it? And what did such movements say about national culture values?

The White House, the only residence of a head of state in the world that is open to the public, has upwards of a million and a half visitors every year. Whatever the security measures are, such accessibility in itself reflects the underlying ideals of the Republic. But now the words, "the pioneer boy, and how he became President," describing Abraham Lincoln, or "from log cabin to White House," describing James Garfield, belong to distant myth that any American citizen could aspire to the nation's highest office; that goal belongs only to the very wealthy. The relationship between the president and the Congress often has been strained, and frequent shifts of ascendancy between the two major parties demonstrate that all the people are not happy all the time. But though some Americans may not love a particular president—perhaps because they believe he falls short of John Adams' standard of "honest and wise Men"—they love the idea of the presidency. Despite such tensions, insofar as it is the icon of an ideal (as many commentators have remarked), the President's House has been "a symbol and focal point of the government, . . . evoking a strong passion from almost every American."

In the twenty-first century the term *White House* more often conjures not a building, but the world's most powerful political office. The icon has become globally familiar as TV news reporters—with a seemingly pathological need to fit an image to every word—stand in front of the out-of-focus White House to tell the world of the machinations of the U.S. administration.

POPULAR CULTURE

The White House, not always accurately rendered, has been presented to international cinema audiences from the early days of the "talkies," because it is a necessary part of films about presidents and the presidency. Some movies were overt propaganda tools. In 1933—four years into the Great Depression—Metro-Goldwyn-Mayer released *Gabriel over the White House*, in which a newly elected president initially decides to leave "the problems of Depression America to local authorities until a personal tragedy steels him to take on every social evil and nothing, not even the nations of the world, will stop him" Towards the end of World War II, the patriotic "ponderous film marathon" *Wilson* won five Academy Awards; for all that, what *The New York Times* called "Darryl F. Zanuck's budget-busting valentine to the 28th president of the United States" was a box-office flop. During the Cold War Stanley Kubrick's film noir satire *Dr. Strangelove, or: How I Learned to Stop Worrying and Love the Bomb* and Sidney Lumet's *Fail-Safe*, both of 1964 and both dealing with the chilling possibility of nuclear strategy going wrong, inevitably were set partly in the White House. So was Paramount and Warner Brothers'

Seven Days in May, released in the same year, which also reflected the current tensions between the United States and the Soviet Union.

However, the most productive decade of “White House movies” was the 1990s. *Time* magazine reporter Bruce Handy wrote in 1997, “‘No one’s interested in movies about the President,’ an agent told me in the spring of 1992, explaining why we had seen relatively few presidential characters on the big screen since . . . the ‘60s. ‘People get enough of him on the news every night. They don’t want to see him at the multiplex.’” Handy continued, “[since 1993] we have . . . seen Presidents and ex-Presidents as the lead in a romantic comedy (*The American President*), as crabby partners in a road movie (*My Fellow Americans*), as an ambiguous foil for action hero Harrison Ford (*Clear and Present Danger*) [and as] battlers of alien invaders (*Independence Day*, *Mars Attacks!*).”¹¹

Into the twenty-first century, the *genre* continues. Since the impeachment of Richard Nixon and his resignation in 1974 and the sexual scandal involving Bill Clinton, movies have not presented the fictitious presidents always in a good light: for example, in Clint Eastwood’s *Absolute Power* (1997) the president is an accessory to murder; in *Murder at 1600* (1997) he is murder suspect; in the frighteningly plausible comedy *Wag the Dog* (2001) he is party to a monumental conspiracy to secure a second term in office. In all these films the White House, although indispensable to the plot, is (so to speak) a “bit player.”

Given the need for accessibility when filming, some are remarkable for their attention to production-set detail, especially Oliver Stone’s *Nixon—Director’s Cut*, and Rob Reiner’s *The American President*, both of 1995; the latter was written by Aaron Sorkin, creator of *The West Wing* for television. The rendition of the executive mansion and the West Wing in that series has been noted above. Other TV miniseries have included *Backstairs at the White House* (1979) based on the memoirs of African Americans Lillian Rogers Parks, a seamstress, and her mother Margaret “Maggie” Rogers, a maid, who each worked for 30 years in the house, and the two-part *Gore Vidal’s Lincoln* (1988), which used an altogether *different* house for its location.

Both of these series and most of the films and are based on books. Historical and political nonfiction about the presidency for adults and children—and therefore about the White House—abounds, a fact attested to by a search of the Library of Congress catalogue. The list is far too long and broad to allow any to be singled out. There is a great deal of fiction, too, encompassing political thrillers, murder mysteries, and even horror.

A personal anecdote may underline the pervasiveness of the house’s iconic status. The writer’s granddaughter, when only 7 years old (our family has always lived in Australia), announced that when she grew up, she wanted to live in the White House, “the one in America.” Only after it was explained that the residence probably would be occupied by someone else did she demur. Her second choice was the Taj Mahal.

NOTES

1. Patterson, Bradley H., Jr., *The White House Staff: Inside the West Wing and Beyond*. Washington, D.C.: Brookings Institution Press, 2000.
2. Bowling, Kenneth R., “[Review of] Joel Achenbach, *The Grand Idea: George Washington’s Potomac and the Race to the West*,” *H-DC, H-Net Reviews* (January 2005). www.h-net.org/reviews/showrev.cgi?path=170571115837756
3. Sterling, Christopher H., “[Review of] Kenneth R. Bowling, *Peter Charles L’Enfant: Vision, Honor, and Male Friendship in the Early American Republic*,” *H-DC, H-Net Reviews* (May 2003). www.h-net.org/reviews/showrev.cgi?path=137561055741638
4. Jusserand, Jean Jules, “Major L’Enfant and the Federal City” in *With Americans of Past and Present Days*. New York: Scribner, 1916. www.bartleby.com/238/23.html
5. Seale, William, *The President’s House: A History*. Baltimore: Johns Hopkins University Press; Washington, DC: White House Historical Association, 2008. 2nd ed., vol. 2, 5.
6. Seale, William, “Beauty and History Preserved in Stone.” www.whitehousehistory.org/08/subs/08_b03.html
7. “White House Plumbing.” *Plumbing and Mechanical* (July 1989). www.theplumber.com/white.html
8. Truman to Gilmore D. Clarke, December 2, 1947, cited in Giangreco, D. M. and Kathryn Moore, *Dear Harry—: Truman’s Mailroom, 1945–1953: The Truman Administration Through Correspondence with “Everyday Americans.”* Mechanicsburg, PA : Stackpole Books, 1999.
9. “White House Plumbing.”
10. White, Jeff, “The Political Ideology in Thomas Jefferson’s Civic Architecture” (2000). www.holycross.edu/departments/classics/wziobro/ClassicalAmerica/jwrpsp00.htm
11. Handy, Bruce, “Acting President,” *Time* (April 14, 1997).

FURTHER READING

- Abbott James A., and Elaine M. Rice. *Designing Camelot: The Kennedy White House Restoration*. New York: Van Nostrand Reinhold, 1998.
- Breeden, Robert L., et al. “The Truman Renovation of the White House, 1948–1952,” *White House History* (Spring 1999).
- Freidel, Frank, and William Pencak, eds. *The White House: The First Two Hundred Years*. Boston: Northeastern University Press, 1994.
- Garrett, Wendell. *Our Changing White House*. Boston: Northeastern University Press, 1995.
- Library of Congress. *The White House: Resources for Research at the Library of Congress*. Washington, D.C.: The Library, 1992.

- McEwan, Barbara. *White House Landscapes: Horticultural Achievements of American Presidents*. New York: Walker, 1992.
- Monkman, Betty C. *Living White House*. Washington, D.C.: White House Historical Association, 2007.
- Patterson, Bradley H., Jr. *The White House Staff: Inside the West Wing and Beyond*. Washington, D.C.: Brookings Institution Press, 2000.
- Ryan, William, and Desmond Guinness. *The White House: An Architectural History*. New York: McGraw-Hill, 1980.
- Seale, William. *The President's House: A History*. Baltimore: Johns Hopkins University Press; Washington, DC: White House Historical Association, 2008.
- Seale, William. *The White House: The History of an American Idea*. Washington, D.C.: White House Historical Association, American Institute of Architects, 2001.
- Seale, William, and Erik Kvalsvik. *The White House Garden*. Washington, D.C.: White House Historical Association, 1996.

INTERNET SOURCES

- The White House Historical Association. www.whitehousehistory.org
The White House Museum. www.whitehousemuseum.org



Courtesy Associated Press

World Trade Center, New York City

*An icon that was, has ceased
to be, and is yet to come*

In 1963 *Time* magazine fulsomely promised that New York's World Trade Center (WTC) would house

anyone and anything connected with world trade: U.S. Bureau of Customs, customs brokers, freight forwarders, foreign consulates, exporters and importers, trade associations, chambers of commerce, banks, insurance firms and finance agencies, now scattered blindly about the city. There will be trade fairs, steamship, air, truck and rail carriers, foreign trade publications, commodity exchanges, a hotel, shops, restaurants, a world trade institute and library and a bewildering assortment of information agencies.¹

Looking back in 1990, Roger Cohen asserted that of all the public works undertaken by Austin Tobin, executive director of the Port of New York Authority, none was so big or ambitious as the development of the World Trade Center:

Surely none stirred the blood in so many ways for so long a time. . . . When the final design plans for the Trade Center were unveiled at a Saturday morning press conference . . . in January 1962, the next day's *New York Times* editorial presciently declared: "Their impact on New York, for better or for worse, is bound to be enormous. . . . First a financial white elephant, the complex . . . has delivered on its promise to help rejuvenate Lower Manhattan. As a global symbol of New York, the Twin Towers are as identifiable as the Eiffel Tower, the Capitol dome or Big Ben are of their respective cities."²

Little more than a decade later, the impact on the city of the sudden destruction of the Center was indeed enormous. Rather, it was an enormity. It struck the city of New York to its heart and forever changed America's role in the world. As James Glanz and Eric Lipton observe, when its creators "shaped [the trade center] into an icon of international financial prowess and . . . when they drew the blueprints for its construction, they had unwittingly written the script for its eventual destruction." And as art critic Sharon Mizota points out, it was the so-called Twin Towers (One and Two World Trade Center) that instantly became "iconic, permanent fixtures of the Manhattan skyline, two giants sprung fully formed out of the ground."

Once the tallest buildings in the world, the Twin Towers were symbols of U.S. dominance and the reign of global capitalism. Their demise was unthinkable. Minoru Yamasaki's architectural vision . . . was an act of hyperbolic faith in the potential of American society. It also expressed a profound conviction that buildings provide more than physical shelter: they are the symbolic homes of our beliefs, values and aspirations.³

The Twin Towers were an "icon that was." Their destruction and collapse, the consequent demolition of the entire WTC, and the 8-month removal of the debris exposed 16 acres of Manhattan that were physically empty but

replete with memories, anger, grief, and regret; “Ground Zero,” as it came to be called, will remain an icon of things that have ceased to be. The creation of Freedom Tower and “Reflecting Absence” (neither complete at the time of writing), because they are reminders of what has gone before, promise to be an icon that is yet to come.

A WORLD TRADE CENTER

Construction of a world trade facility had been on New York City’s agenda since the end of World War II. Basking in victory, the United States was preparing for the surge in economic growth engendered by the reconstruction of Europe; that would involve a commensurate increase in transatlantic trade. Seizing the day, in 1946 the New York Legislature created a World Trade Corporation to explore the feasibility of establishing a trade center in Manhattan.

The earliest conceptual designs proposed a \$140 million complex of twenty-one buildings covering about ten city blocks and providing 5 million square feet of exhibition space and offices. When more detailed analysis suggested that to make the center financially viable nearly five thousand of America’s largest companies would need to become tenants, the project was shelved. But it was not forgotten and would be revived when changes to the economic geography of the United States at the end of the 1950s meant that New York had consolidated itself as North America’s financial capital. Most of the commercial growth was in midtown, and Lower Manhattan was at first overlooked as a location for new enterprises. One notable exception was the sixty-story Chase Manhattan Bank (commenced 1957) designed by Gordon Bunshaft of Skidmore, Owings and Merrill (SOM). Chase’s president, David Rockefeller, “seeing [the bank’s] massive investment at risk from the continuing relative decline of the district’s real estate values,” formed the Downtown-Lower Manhattan Association (DLMA). Collaborating with other powerful interests, the DLMA sought ways to “restore downtown’s former luster.”

In 1958, it commissioned SOM to develop a plan for a new Lower Manhattan—a scheme for “rebuilding and expansion of the financial district: the narrow streets would be closed, others widened, traffic redistributed and over 100 blocks razed.” Elements of the SOM plan were implemented in some form or other—a Civic Center east of City Hall, a large marina on the East River, and an East River heliport. SOM also suggested establishing a World Trade Center, a notion that especially interested Rockefeller.

By January 1960 the DLMA had announced plans for a \$250 million development with 5 million square feet of office space on a 13.5-acre East River site. It was on a scale that Rockefeller would later describe as “catalytic bigness”—catalytic in the sense that it would give impetus to later developments while keeping his own property values high. Rockefeller laid out the

mega-scheme before his brother Nelson (then governor of New York), New Jersey Governor Robert Meyner, and the Port of New York Authority (later the Port Authority of New York and New Jersey), whose staff had provided input to the initial plan. Superimposed on the existing street grid, it included a seventy-story hotel-cum-office block, an international trade exposition, a retail arcade, and a securities exchange building, all surrounding a large plaza on a two-story podium.

In May 1960 Tobin proposed that the Port Authority should build the project. Under its former architect and planner, Richard Adler, the agency mustered a panel comprising architects Gordon Bunshaft, Edward Durrell Stone, and Wallace K. Harrison, the Rockefeller family's "in-house" designer. Ten months later the Authority announced an 11 million square foot development, estimated to cost \$335 million, that would include a seventy-two-story world trade mart, with a hotel, trade institute and exhibition facility; a thirty-story commerce exchange (housing government offices and agencies); a twenty-story trade center "gateway" for international banking, law and other business services; and a securities exchange building.

It was anticipated that the complex would "stimulate the flow of commerce through the Port, would be economically feasible, and, due to its unique problems of financing, organization and operation . . . could only be undertaken by a public agency." The panel of architects argued that the efficiency of collocated world trade functions, "would bring savings in time and money, which would in turn attract greater cargo tonnage" and "provide an appropriate symbol of the Port's pre-eminence."⁴

Although the proposal was well received generally, not everyone was thrilled by it. As soon as details became public, New Jersey politicians demanded to know what benefit the scheme held for their state. The Port Authority responded by proposing to move the trade center to the west side of Lower Manhattan on a superblock defined by Vesey, Liberty, Church, and West Streets, and then occupied by the commuter terminal of the near-bankrupt Hudson and Manhattan Railroad linking Manhattan and New Jersey—the "Hudson Tubes." Despite the probability of annual losses of millions of dollars, the Authority offered to expand, modernize, and run the Hudson Tubes; the system would be rebadged as the Port Authority Trans-Hudson Corporation (PATH) that by 2007 would carry over seven million passengers annually. On February 13, 1962, the New Jersey Legislature unanimously passed the Hudson Tubes-World Trade Center bill; about 3 weeks later it was passed by New York State also; after another 3 weeks Governor Rockefeller signed it into law.

However, opposition to the Trade Center continued, launched from different beachheads—notably New York City Hall, and later a succession of various business interests. New York Mayor Robert F. Wagner voiced his "very strong displeasure" at being excluded from the discussion about relocation and being treated (he said) "as an outsider rather than a central figure." On a

less peevish note, he demanded that the New York Stock Exchange be excluded from the plans because “its relocation would . . . depress the rental market in the central spine of the financial district.” He also challenged the Port Authority’s intention to make payments to the city in lieu of taxes, whether the bi-state agency would adhere to New York’s municipal procedures, and (perhaps most significantly) who would control any urban renewal funds that might be made available by the federal government.

Tobin offered either to turn the entire project over to the city if Wagner could assure both governors it would be promptly built, or enter into a joint venture in which the city and Port Authority split the capital costs. On both suggestions, the mayor begged off. However, on each substantive issue the city raised Tobin yielded to Wagner’s satisfaction, explaining that the alternative might have been months and possibly years of “dreary bargaining, recrimination and counter-charges.”⁵

A group called the Downtown West Businessmen’s Association, representing a number of retailers threatened with relocation should the project proceed, led much of the business opposition. Another group representing landlords objected to the potential of the WTC to depress the local real estate market. A series of litigations resulted, some won by the Port Authority, others lost. Finally the New York Court of Appeals upheld the agency and the U.S. Supreme Court refused in December 1963 to review the matter further.

THE TALLEST BUILDING IN THE WORLD

In February 1962 Tobin gave the engineer Guy F. Tozzoli responsibility for planning, building, and operating the WTC. About 30 years earlier, New York City had watched a “race to the sky”—rivalry for the tallest building status—initially between the 927-foot Bank of Manhattan Trust Company on Wall Street (completed in April 1929), and the 1,048-foot Chrysler Building, completed 6 months later. Both were surpassed in May 1931 by the 1,472-foot Empire State Building, which would hold the record for 42 years. Acting on a suggestion from Lee K. Jaffe, the Port Authority’s public relations director, Tozzoli took the decision to make the buildings the tallest in the world. When construction began, Tozzoli effectively became the general contractor, “coordinating the efforts of 256 construction trades and saving millions of dollars by handing out the steel fabrication contracts [to] hundreds of smaller companies around the region.”

In spring 1962 Tozzoli selected the Detroit firm of Yamasaki and Associates from a dazzling array of internationally acclaimed American architects, including Philip Johnson, Walter Gropius, and I. M. Pei. Yamasaki had designed only one high-rise building, the twenty-eight-story Michigan Consolidated Gas tower in Detroit. Tozzoli had been impressed with the architect’s Federal

Science Pavilion at the 1962 Seattle World's Fair. Of Yamasaki's design *Time* magazine would write in 1963:

Probably no building put up in 1962 caused such a world of comment or brought into action so many cameras. Professional critics found dreadful flaws, but to almost everyone else the U.S. Science Pavilion, that pleasure dome of the Space Age at Seattle's Century "21" Exposition, was a modern Xanadu, built for their delight, a declaration of independence from the machine-made monotony of so much of modern architecture.

When he received the unsolicited letter asking if he wanted to participate in the competition for the WTC, with an estimated budget at \$280 million, it is said that Yamasaki thought there was a typographical error—perhaps a stray zero had found its way into the figure. Anyway, he won the closed competition. Antonio Brittiocchi and Emery Roth and Sons were associate architects and (at Yamasaki's request, who had worked with them before) John Skilling and Leslie Robertson of the firm of Worthington, Skilling, Helle. and Jackson were engaged as engineers. Architectural historian Paul Heyer writes,

Yamasaki's commission to design the WTC with the New York firm of Emery Roth and Sons . . . house(s) anyone and anything connected world trade. The program presented to Yamasaki . . . : twelve million square feet of floor area on a sixteen acre site, which also had to accommodate new facilities for the Hudson tubes and subway connections—all with a budget of under \$500 million. The vast space needs and limited site immediately implied a high-rise development that . . . make(s) the adjacent drama of Manhattan's business tip seem timid in comparison."⁶

Yamasaki continually reworked the massing of the complex, generating no fewer than 105 site models. Finally he decided that two slender towers, between eighty and ninety floors high, "framed by a collection of boxy low-rises, would stand out boldly in a plaza." His clients liked the concept, but the towers that he proposed would provide only 8 million square feet of rentable office space—2 million fewer than they had asked for. They had their way and the final scheme included two 110-story towers—the world's tallest buildings.

When the design was unveiled in 1964, the size of the Twin Towers immediately provoked entrepreneur and lawyer Lawrence Arthur Wien, owner of a large part of the Empire State Building, to become one of the WTC's most strident opponents. He formed the Committee for a Reasonable World Trade Center, claiming, "it seems that without any supervision, without being accountable to anybody in the city of New York, to build the largest buildings in the world with a method of construction which has not been tested and tried and proved appropriate, subjects the city of New York to the possibility of a major physical disaster." Wien appointed Robert Kopple, a 53-year-old

lawyer, to head up the committee. Kopple promised, “We are ready to go to court to try to get this bloated project—these ‘Tobin Towers’—brought down to size.” The project’s major opponents were citywide real estate operators, who demanded that the Port Authority should scale down its plans because the proposed development would be three times larger than necessary and would erode the rental values of Manhattan office space. In 1966 Wien’s committee won the support of the new mayor, John V. Lindsay, who had the Planning Commission undertake a new study on the effects of the project. Among the matters raised was the possible interference with television transmissions from the Empire State Building—a problem that some judicious spending quickly solved.

Architecture critics also censured the WTC design as a “supreme example of self-glorifying monumentalism on the part of unaccountable, autonomous public authorities.” They variously described it as “graceless”; a “fearful instrument of uricide”; and (referring to Yamasaki’s Neo-Gothic reference) “General Motors Gothic.” Its scale also was said to be threatening. At the end on May 1966 the influential critic Ada Louise Huxtable wrote in *The New York Times*, “Who’s afraid of the big, bad buildings? Everyone, because there are so many things about gigantism that we just don’t know. The gamble of triumph or tragedy at this scale—and ultimately it is a gamble—demands an extraordinary payoff. The trade-center towers could be the start of a new skyscraper age or the biggest tombstones in the world.”

Indeed, most of the antagonism was focused on the twin towers. But the complex had other parts: a twenty-two story, 818-room hotel (Three WTC); two nine-story office buildings (Four and Five WTC); an eight-story Customs House (Six WTC); and, although built later, another forty-seven story office building (Seven WTC). They were grouped around the 5-acre landscaped plaza named for Austin J. Tobin. Beneath the plaza was The Mall, housing about sixty specialty shops, banks, restaurants, and function spaces and PATH subway stations. About five hundred international businesses, employing a total of fifty thousand people, were located in the Center. In March 1999 a panel of U.S. construction executives would include the complex among the top-ten construction achievements of the twentieth century. The combined seven hundred contracts needed to achieve it were coordinated by the Titman Realty and Construction Co.

Groundbreaking took place on August 5, 1966. The foundation excavation was made difficult by the need to protect two adjacent subway tubes without interrupting busy downtown services but a six-level basement was built in the 70-foot deep hole and the one million tons of spoil produced 23 acres of landfill, the site of Battery Park City.

The Twin Towers, each 208 feet square in plan, began to rise in March 1969. Derived from his twenty-story I.B.M. Building in Seattle, Washington, completed in 1963, Yamasaki’s “row upon row of precise, narrowly spaced vertical columns” were not for mere aesthetic effect. Using the same structural

principles as those in the one-hundred-story John Hancock Center in Chicago (Graham and Kahn, completed 1969), Skilling and Robertson designed the load-bearing external walls as a rigid “hollow tube,” with 18-inch wide aluminum-clad perimeter box columns at 40-inch centers. Spandrels welded to them at each floor effectively made them into huge trusses and dramatically reduced the weight of the structure. The façades became steel lattices, providing efficient wind bracing; less than a third of each tower’s surface area was glass, with vertical slot-like windows. The restrictions of the urban site presented difficulties for the assembling of two hundred thousand modular components, prefabricated in Seattle, Washington, St. Louis, Missouri, and Los Angeles, California. Delivery and fixing was managed by a computer-programmed control system; eight “kangaroo” cranes were used to hoist the elements into place.

Elevators and service shafts, restrooms, stairwells, and other support spaces were located in the towers’ 87 by 135 foot rectangular cores. Each core contained forty-seven steel columns running from the bedrock to the top of the tower. The column-free space between each building’s perimeter and its core was bridged by 33-inch deep prefabricated steel trusses carrying 4-inch thick lightweight concrete slabs. The floors supported their own weight as well as imposed loads, while providing lateral stability to the external walls, and distributing wind loads. The structural system yielded about 40,000 square feet of rentable office space per floor—about 75 percent of the gross area, at a time when the average for high-rise buildings in the United States was around 50 percent.

Efficiency of vertical movement through the towers was enhanced by a “sky lobby” transportation system—a combination of express and local elevator banks—that called for fewer elevator shafts. Developed by Otis Elevators, it had been first employed in the John Hancock Center. In the case of the WTC, each tower had three vertical zones; express elevators served sky lobbies at the forty-first and seventy-fourth floors; from these, and from the plaza level, four banks of local elevators carried passengers to each of the three zones.

Four two-floor sections of each tower’s 110 stories, equally spaced up the building, were reserved for mechanical services. The remaining levels were dedicated to open-plan offices; in all, the seven-building complex provided 11.2 million square feet of area that allowed for very flexible subdivision. As noted, at peak usage in the 1990s about five hundred tenants, including the Port Authority itself, were accommodated in the complex. The top floor of One WTC (North Tower) housed transmission equipment for commercial and public service radio and television; its roof bristled with transmission antennas. There was a restaurant, “Windows on the World,” on the 107th floor. Two WTC (South Tower) had an indoor public observation space, “Top of the World,” at a height of 1,310 feet. In good weather visitors could proceed to a 1,377-foot *outdoor* platform that provided an unequalled view.

The first occupants moved into the lower floors of One WTC December 16, 1970, although the upper stories were not completed until 1972. Tenants first

took up space in Two WTC in January 1972, and the building was finished in 1973. The ribbon-cutting ceremony was held on April 4, 1973, before four thousand people, mostly Port Authority employees and construction workers. Although the WTC buildings were intended to be a complex dedicated to organizations and businesses with a direct role in “world trade,” at first it proved difficult to fill the space. During the early years, various government bodies, including the State of New York, were the major occupants; and it was not until the 1980s that an increasing number of private companies—mostly financial firms—took up tenancies.

Minoru Yamasaki said of his building “World trade means world peace and consequently the World Trade Center buildings in New York . . . had a bigger purpose than just to provide room for tenants.” Regarding it as “a living symbol of man’s dedication to world peace . . . , beyond the compelling need to make this a monument to world peace,” he believed that the World Trade Center should, because of its importance, become “a representation of man’s belief in humanity, his need for individual dignity, his beliefs in the cooperation of men, and through cooperation, his ability to find greatness.”⁷

As noted, the original budget had been \$280 million, but Yamasaki’s own early estimates inflated that by 25 percent. It has proven difficult to find a reliable, consistent figure for the final cost—sources cite anything from \$400 million to \$1.5 billion. Brian Anderson of the conservative *City Journal* observed only weeks before the destruction of the Twin Towers that “virtually every important consideration in developing the World Trade Center had nothing to do with business and everything to do with politics, accusing, ‘The final cost of the twin towers . . . swelled far beyond initial estimates. Supporters of the development had low-balled those estimates to win public support. Since the WTC originated as government’s idea of what lower Manhattan needed, rather than as what the market really called for, it’s no surprise that it misfired commercially.’”⁸

A “DAY THAT WILL LIVE IN INFAMY.”

The destruction of the WTC was part of a coordinated attack upon the United States by an international extremist Islamic alliance. The plot was conceived and carried out by six core organizers and thirteen other members of a terrorist organization, *al-Qaeda* (The Base). In 1979 the U.S. government had assisted Saudi-Arabian Osama bin Laden to resist the Soviet occupation of Afghanistan; 10 years later he established *al-Qaeda* “as a ‘rapid reaction force’ in jihad against governments across the Muslim world.” In 1996 he announced his objections to U.S. foreign policy regarding Israel and to America’s political intrusion in the Middle East, calling for “American soldiers to get out of Saudi Arabia.” Two years later he “directed his followers to kill Americans anywhere.”

On the morning of September 11, 2001, four teams of terrorists, each including at least one trained pilot, hijacked four commercial passenger jets en route to California from Dulles International, Logan International, and Newark airports. One plane, American Airlines Flight 77, a Boeing 757-200, targeted the Pentagon in Virginia. The passengers and crew in a second plane, United Airlines Flight 93, tried to overcome the hijackers, but it crashed in a field near the town of Shanksville, Pennsylvania; *al-Qaeda* leader Khalid Shaikh Mohammed later confirmed that Flight 93's target was the U.S. Capitol.

And other hijackers deliberately crashed an aircraft into each of the Twin Towers of the WTC, "causing massive initial damage and triggering uncontrollable infernos."

Terrorists had attacked the WTC before. In February 1993 a 1,200-pound truck bomb had exploded in the parking garage, blasting a 150-foot diameter hole. Six people died, and over 1,000 more were injured. Although three levels of floors were shattered below the detonation point, the building's structural integrity—because of the "tube" construction—was hardly affected. But a stationary 1,200-pound truck bomb can hardly be compared with a 150-ton aircraft, carrying 12,000 gallons of aviation fuel and moving at over 400 mph.

At 8:46 A.M. Eastern Time American Airlines Flight 11, a Boeing 767-200, was flown into the 94–98th floors of north façade of One WTC (North Tower). Having just taken off, the aircraft was fully loaded with fuel for a trans-continental flight. Seventeen minutes later another 767-200, United Airlines Flight 175, crashed into the 78–84th floors of Two WTC (South Tower). That event was thoroughly covered by commercial television broadcasters and transmitted to stunned audiences around the world. Followed a half hour later by its twin, the South Tower underwent a spectacular and complete structural collapse at about 10:00 A.M.

WTC 7, a forty-seven-story office block that had been added to the Center in 1987, having been damaged by the collapsing North Tower, caught fire toward evening and also collapsed. Many other buildings were destroyed or significantly damaged, including all buildings of the WTC complex: WTC 6, the U.S. Customs House to the north; WTC 3, the twenty-two-story Marriott hotel west of Tower Two; and the Plaza Buildings to the east, WTC 4 and 5. The Deutsche Bank Building was later condemned due to the toxic conditions inside it. The Borough of Manhattan Community College's Fiterman Hall at 30 West Broadway was also condemned due to extensive damage. Other neighboring structures, including the Verizon Building and 90 West Street suffered major damage but were later restored. World Financial Center buildings, the fifty-four-story One Liberty Plaza, the Millennium Hilton, and 90 Church Street underwent moderate harm. Radio, television, and two-way radio antenna towers were destroyed beyond repair.

The debris smoldered for ninety-nine days. The New York City Fire Department (FDNY) sent half its units to the disaster site; off-duty firefighters also

rushed to help, together with New York City Police Department (NYPD), Emergency Service Units (ESU), and Emergency Medical Technicians (EMTs). But “search and rescue” tasks soon turned into “search and recovery.” Thousands labored around the clock to recover bodies and remove 1.8 million tons of debris. For a time the tragedy unified New Yorkers and the rest of the American people. Many police and rescue workers from elsewhere in the country traveled to New York City to offer their help.

By May 30, 2002, when the site-clearing process officially concluded, 1,796 people remained unaccounted for. Five years later, 2,750 death certificates had been filed, about 60 percent of the victims having been identified from forensic remains. The FDNY lost 341 firefighters and two paramedics, while twenty-three NYPD, thirty-seven Port Authority Police Department officers, and eight private ambulance personnel were killed during the rescue and recovery operations. Altogether about twenty-eight hundred people—in New York City, 2,603 in the towers and on the ground—died as an immediate result of the four attacks. The frequently quoted report of the National Commission on Terrorist Attacks Upon the United States (9/11 Commission) said:

1,366 people died who were at or above the floors of impact [in One WTC]. Hundreds were killed instantly . . . by the impact while the rest were trapped and died after the tower collapsed. As many as 600 were killed instantly or were trapped at or above the floors of impact in Two WTC. Only about 18 managed to escape in time from above the impact zone and out of the South Tower before it collapsed. At least 200 people jumped to their deaths from the burning towers, landing . . . hundreds of feet below. Some of the occupants of each tower above its point of impact made their way upward toward the roof in hope of helicopter rescue, but no rescue plan existed for such an eventuality. The roof access doors were locked and thick smoke and intense heat would have prevented rescue helicopters from landing. . . . Approximately 16,000 people were below the impact zones in the WTC complex at the time of the attacks. A large majority of those . . . survived, evacuating before the towers collapsed.

It was later reported that there were twenty-five hundred contaminants in the piles of toxic debris resulting from the collapse of the Twin Towers. Also, the fires produced extremely high levels of dioxin and other toxins from the fires; many of the substances were carcinogenic, and others could cause various medical problems. In the few years since the disaster, exposure to them has generated “debilitating illnesses among rescue and recovery workers [and] to some residents, students, and office workers of Lower Manhattan and nearby Chinatown.” Immediately following the crashes, funds were established to provide financial assistance to the survivors and to the victims’ families. Throughout the world memorial services and vigils were held, and temporary monuments were erected at the three crash sites, with permanent memorials in the planning stages, or under construction. In New York, 6 months after the event the *Tribute in Light*, an installation of eighty-eight

searchlights at the bases of the Twin Towers projected two vertical columns of light; on each anniversary of the tragedy the ceremony has been repeated.

CONTROVERSIES, CONSPIRACIES, AND CRACKPOTS

As always, the conspiracy theorists could be relied upon to rise to the surface following “9/11.” The view most aired among them is that “somehow the Bush administration, with the collusion of the Pentagon, was either behind the attacks or simply allowed them to happen in order to institute a quasi-police state”; it was followed closely by another crackpot and dangerous “revelation” about the involvement of the Israeli government “and, by natural extension the perennial and ever-useful ‘international Jewish conspiracy.’”

There have been many variations on these basic themes: *Vanity Fair* contributing editor, Nancy Jo Sales writes, “Nine-eleven conspiracy theories have been circulating for years, producing millions of Web links [an exaggeration; there are only 356,000 on *Google*], scores of books, and a nationwide collection of doubters known as the ‘9/11 Truth’ movement.”

. . . according to a May 2006 Zogby poll, 42 percent of Americans [believed] that the U.S. government and the 9/11 Commission “concealed or refused to investigate critical evidence that contradicts their official explanation of the September 11th attacks,” and that “there has been a cover-up.” . . . For those who can’t find information about the alleged cover-up on the nightly news, there is *Loose Change*, a documentary about 9/11 conspiracy theories. . . . Since it appeared on the Web in April 2005, the 80-minute film has been climbing up and down Google Video’s “Top 100,” rising to No. 1 this May [2006], with at least 10 million viewings.⁹

WHAT DID HAPPEN TO THE TWIN TOWERS?

The ten-member independent, bipartisan 9/11 Commission was created by Congress in late 2002. Its report, published on July 22, 2004, concluded that the impact of the planes blew off the fireproofing of the Twin Towers’ structural frames, exposing the steel. Although the fire would not have been hot enough to actually melt the steel, the metal’s strength was dramatically reduced by prolonged exposure to it, increasing deflections. The conflagrations—perhaps 1,500 to 2,000 degrees Fahrenheit—weakened the under-floor trusses, which sagged, causing the external steel columns to buckle inward; because the core columns had failed in the heat, the exterior columns, unable to carry the building loads by themselves, collapsed. A simplistic analysis.

A more urgent structural investigation had already been published. The *WTC Building Performance Study: Data Collection, Preliminary Observations and Recommendations* was produced jointly by the Federal Emergency

Management Agency (FEMA), the American Society of Civil Engineers (ASCE), and other organizations in May 2002. Its authors attributed the delayed collapse of the towers to a sequence of three separate “loading events.” The first was the aircraft hitting the building at speed, slicing through the structural skin, and creating a fireball that immediately ignited some of the jet fuel. The structural system had a high enough factor of safety to prevent even this major damage from causing collapse. But continuing fire, fed by aviation fuel and combustible building contents, “weakened the structural systems, adding stress to the damaged structure.” The sprinkler systems, “compromised by the impacts, were not operating as designed.” Finally, as soon as one story collapsed all floors above it would have started to fall. The huge falling mass would gain momentum, crushing the intact floors below, ending in the failure of the entire structure.

These explanations have been challenged by some. Questions remain, and the complete story may never be known.

THE WTC IN POPULAR CULTURE

The Twin Towers dominated the Manhattan skyline for about 30 years, so it was virtually impossible for moviemakers to exclude them from any long-distance shot of the city. One compulsive-obsessive website lists no fewer than 472 movies (as at 2006) in which the buildings have appeared; as if it mattered, the compiler even provides a detailed gloss—for example, “Opening credits (twice, as airplanes fly over Manhattan, close to the towers), 1 hour 42 minutes, 1 hour 57 minutes.” The towers, still under construction, appeared first in William Friedkin’s Oscar-winning 1971 thriller, *The French Connection*. But they were only in the background.

Because of their superlative height and clarity of form they were bound to capture the popular imagination and before long, as well as being employed for “establishing shots” by filmmakers, they began to be used as locations, making it but a short step to their integration into movie plots. In Sydney Pollack’s *Three Days of the Condor* (1975), the CIA is based in One WTC. And most spectacularly of all, in Dino De Laurentiis’ 1976 remake of *King Kong*, the final confrontation between ape and aircraft took place atop the WTC, instead of the Empire State Building, as in the original 1933 film—a change that recognized that the Twin Towers had won the title (at least temporarily) of the world’s tallest buildings. In 2005 Peter Jackson’s nostalgic version *Kong* was back on the Empire State, whose fenestration would have made it easier to climb, anyway. Other films—too many to discuss here—used the WTC, inside and out, for location filming.

The Twin Towers have appeared in some way or other in many popular television series, as well as to give interest to the bland nonmusic videos of bland nonmusical performers. They have been featured in many video and

computer games, animated cartoons, and even comic books. Without listing the tedious minutiae, the obvious point can be made that such a plethora of populist expression demonstrates how the WTC—in its birth and its death—has loomed and still looms large as a populist icon. Its resurrected role awaits later assessment: will the structures that replace it be “icons of the future?”

On the eve of the first anniversary of 9/11, the controversial independent filmmaker Lloyd Kaufman published on his website *The Unsung Hero of 911*, a blistering polemic on the mainstream media’s opportunism and greed. He noted that in the days immediately following 9/11, “we have been graced by all sorts of heroes who have preserved America’s optimism: cops and firemen who selflessly lost their lives by attempting to rescue people from the Towers, EMS lifesavers, teachers who assuaged the worries of our young ones, psychologists who have counseled the victims, etc.” Then he bitterly added,

While all of these magnificent, glorious people should certainly be memorialized . . . the American Mainstream Media (AMM) needs to be honored. Yes, for the past year, AMM has been brave enough to stand by our side every minute of every day, pumping a positive and patriotic blood into our veins via television, newspapers, magazines, and soon movies!

He gave examples of media exploitation: for instance, how the FOX-TV network repeatedly broadcast the “burning Towers spitting out live people again and again and again and again,” ostensibly as a public service and how the networks, realizing that continually replayed footage “might have become boring without an ominous musical score [they invented a catchy title . . . ‘America fights back’ was now instantly superimposed over the never-ending re-broadcasts of the now musically scored scenes of World Trade Center oblivion.”¹⁰

The terrorist attacks changed the popular perception of the WTC from triumph to tragedy. A few weeks after 9/11, critic Kevin Pack observed, “To me, things seem so contradictory in this ‘new’ world we live in. Since the horrific day . . . everyone either seems to act as if they were born again and celebrate and appreciate life, or have become consumed and driven by hate.”

Radio stations have [long] lists of songs that can’t be played . . . because it could be seen as “offensive” and more depressed than we already are. Just a minute ago, everyone was on ecstasy, [now we are] all suffering from the most extreme case of depression. . . . The public can’t hear songs like “New York, New York” by Old Blue Eyes, and movies are having their release dates pushed back because we need to edit out every . . . shot of the World Trade Center. People don’t want any reminders of the devastating events that have happened and can’t be bogged down with thoughts, feelings, sights, or sounds that could push them over the edge. *Sidewalks of New York* had its release date pushed back . . . because scenes of the WTC had to be edited out . . . The WTC may be rubble

now, but when the film was shot it was a tall monument that was a symbol of America and a hallmark of one of the best cities in the world, NYC. So, instead of celebrating what once was, we have to walk on tip toes and edit it from, well, I guess everything.¹¹

Washington Post journalist Rita Kempley warned, “If we erase the towers from our art, we erase it [*sic*] from our memories. It’s right out of *Forrest Gump* and *Zelig*. We’re destroying our own history, never a wise idea.” She might have said, “It’s right out of *1984*.” In George Orwell’s 1949 novel, the Ministry of Truth dealt with news, entertainment, education and the fine arts, expunging from records—it was called “rectifying”—anything that was distasteful to politicians; in short, “destroying history.” That’s how the film and television industry, assuming the role of arbiter of taste, dealt with the Twin Towers issue: for months after the attack, nearly all made-in-New-York movies and TV shows (even re-releases), either by editing out the footage or digital removal, disposed of the buildings. Kaufman complained, “AMM seemed to be against the idea of the pre-September 11th towers appearing. After all, seeing the [them] crumble one hundred times a day on CNN was much healthier for . . . children than seeing [them] stand tall and proud on a fictional program.”

One Internet source lists a dozen or so movies and television series from which the towers were removed. Here a few typical examples will suffice. A battle at the end of *Men in Black II*, originally shot on the roof of the WTC, was refilmed at the Chrysler Building; but the original finale could be seen as the “alternate ending.” in the 2005 DVD release. In the comedy *Zoolander*, released on September 28, 2001, the towers were digitally removed from one scene and obscured in another. And as noted, all this sensitivity was retroactive: early in Touchstone Pictures’ sci-fi disaster movie *Armageddon* (1998), a meteorite shower rains on New York City. One hits the top of Two WTC, partially destroying it and starting a fire; another punches a hole in One WTC. When ABC aired *Armageddon* on TV in April 2002, the scene was cut.

But, according to Kaufman, “Soon, [an annoyed] American public began to disapprove of the AMM monopolies erasing the Twin Towers. They felt that removing [them] was like destroying them all over again. . . . The television media elites decided that they had to safeguard America’s feelings as well as their station’s ratings [and] therefore they stopped editing the Towers out of television programs.”

The events of 9/11 have been portrayed in over fifty documentaries and about ten acted movies, including two major films, both released in 2006. Paul Greengrass’ *United 93* is, of course, about the aircraft that crashed in Pennsylvania. Oliver Stone’s *World Trade Center* is the first feature-length film specifically about the attacks on the Twin Towers.

INEVITABLY: KITSCH

A year—almost to the day—after the disaster, Jessica McBride reported in the *Milwaukee Journal Sentinel* that Ground Zero was a hotbed of kitsch peddlers, selling Osama bin Laden toilet paper (in regular and “commemorative” editions—at which the mind boggles), Ground Zero and New York Police Department baseball caps, soft pretzels, New York Fire Department Beanie Babies, WTC paperweight snow globes and key chains. She described the district as having “the heartbreaking solemnity of a Holocaust museum—a sea of tattered family pictures staring out from the past—combined with Graceland-style kitsch.” In the first 6 months of 2002 a million people visited the site, after which the city stopped keeping count. By 2004 about 8.2 million tourists, many “with a morbid fascination for Ground Zero,” were visiting Lower Manhattan. In March the New York State Legislature, wanting to maintain the sanctity of Ground Zero, passed a law limiting the number of legal street vendors. The Port Authority posted signs asking tourists, “Please help us maintain this site as a very special place. Please do not purchase any items or services here, or donate money to people soliciting here, so that this place can be fully appreciated by all visitors.” Despite all efforts and enactments, according to one report trade in souvenirs, many tasteless, prevails. As late as November 2007, the area was an open-air bazaar for everything from Rolex knockoffs and 9/11 figurines to photo books printed in India, showing the devastation of the WTC. Lee Ielpi, who lost his firefighter son in the attack and later established the nonprofit Tribute Visitor Center, whose earnings support educational programs, complains about the souvenir sharks: “To think that these people are coming here using this horrible disaster that our country suffered, to profit off it totally for themselves, is tasteless. . . . It should not be a place where people come and make money on the dead.”

The WTC site has special significance, not just for New Yorkers, but for the American people. It has no “light side.” Souvenirs become a question of propriety that lies with the tourists, whether foreign or home-grown. Many agree that it is inappropriate and “not very tasteful” to have merchandise commemorating the attacks, and ask “How can you profit from something like this?” But what entrepreneur could resist such opportunity?

THE IMPERATIVES OF COMMERCE

The Australian art critic Robert Hughes, who considered the original WTC ugly boxes, is reported as saying that its loss “did no architectural damage to New York.” He believed it to be “a large, scaleless lump, which completely dominated that end of Manhattan” and which “only became iconic when it was knocked over by a bunch of Arabs.” He callously added that there was no need for a monument to mark the tragedy, “though you can’t say that to

the relatives of those who died. What I'd prefer is for an empty space to be left or perhaps some smaller memorial. . . .” It's good that nobody listened to him. Besides, given the value of real estate in Lower Manhattan, it was impractical and imprudent to leave Ground Zero empty.

In purely economic terms, the attack on the Twin Towers ultimately cost the City of New York 13 million square feet of office space; it cost eighty-three thousand people their jobs. The repercussions were far wider: the United Nations estimates that the attacks on America put twenty-four million people around the world out of work, and drove fifteen million more into deeper poverty.

Proposals for rebuilding the area, incorporating a memorial, commercial/retail space and a transportation node were invited on April 30, 2002. Of course there was wide and intense public interest in the project. The Municipal Art Society of New York conducted about 230 public workshops and collated no fewer than eighteen thousand suggestions for the site. Around mid-July the Lower Manhattan Development Corporation (LMDC; the agency responsible for coordinating reconstruction) released six concept plans. The proposals included Memorial Plaza, by Cooper Robertson and Partners for Brookfield Properties; Memorial Square and Memorial Triangle, both by Beyer Blinder Belle; Memorial Garden by SOM for the developer Larry Silverstein, who controlled the lease of the site; and Memorial Park and Memorial Promenade by Peterson/Littenberg Architecture and Urban Design, both for the LMDC. It was expected that a winner would be chosen by December 1. Not so.

A *New York Times* editorial described the schemes as “dreary, leaden proposals that fall far short of what New York City—and the world—expect to see rise at Ground Zero.” It continued, “The public will never be satisfied with any redevelopment that contains as much commercial space as the site did before September 11. . . . Despite all the talk about a downtown that would be alive 24 hours a day with cultural institutions, entertainment and residential developments, these features, which make an urban area live and breathe, are missing.” The newspaper's architecture critic, Herbert Muschamp, agreed: “the plans have little to recommend them. Thus far, . . . [the LMDC] has demonstrated little besides a breathtaking determination to think small. Don't come looking for ideas that reflect the historic magnitude of last year's catastrophe.”

Although the designers defended their proposals, blaming the constraints of the architectural program, as early as mid-August 2002, “in reaction to widespread negative criticism, planning officials for the site indicated that they would [make revisions to space requirements] and invite more architects to submit designs.” Consequently, in summer 2002 the LMDC launched an international search for “visionary designs.” More than four hundred submissions were received from around the globe. Nine designs were shortlisted in mid-December, and following extensive deliberations, public hearings and

community consultation, on February 4, 2003, the LMDC and Port Authority announced that two conceptual proposals “were under final consideration”: the Memory Foundations design by Studio Daniel Libeskind of Berlin, Germany, and the World Cultural Center design by THINK, a team led by Shigeru Ban, Frederic Schwartz, Ken Smith, and Rafael Viñoly. The Libeskind design was judged to be “best overall based on twelve criteria including price, public response, vision, connectivity, public space, and how the victims of the September 11th attacks would be memorialized”; its focus and tallest structure was a 1,776-foot office tower and spire, whose height reflected the year of American independence.

A PARENTHESIS

In April the LMDC announced the WTC Site Memorial Competition. Committees that included survivors, first responders, victims’ family members, residents, community leaders, and design professionals developed the mission statement and program for a single memorial that “should clearly show the ‘footprints’ of the fallen towers, designate a resting place for unidentified victims and acknowledge everyone who was killed at the site as well as those killed in an earlier terrorist attack on the towers February 26, 1993.” The first stage called for an anonymous single-sheet conceptual design. A thirteen-person jury represented a cross-section of the community: the widow of a 9/11 victim; art administrators; New York City politicians and bureaucrats; artists, architects, and designers; representatives of philanthropic organizations; a museum curator; and academics. The open competition attracted more than 13,500 international registrants, resulting in fifty-two hundred entries from sixty-three countries. From those, a jury chose eight finalists and financed them to further develop their designs. None was a well-known designer or architect.

The winner, “Reflecting Absence” by Israeli architect Michael Arad and (following the recommendation of the jury) landscape architect Peter Walker, was announced on January 13, 2004. The jury statement said in part that the design

fulfills most eloquently the daunting—but absolutely necessary—demands of this memorial. In its powerful, yet simple articulation of the footprints of the Twin Towers, “Reflecting Absence” has made the voids left by the destruction the primary symbols of our loss. By allowing absence to speak for itself, the designers have made the power of these empty footprints the memorial. . . .

In our descent to the level below the street, down into the outlines left by the lost towers, we find that absence is made palpable in the sight and sound of thin sheets of water falling into reflecting pools, each with a further void at its center. We view the sky, now sharply outlined by the perimeter of the voids, through this veil of falling water. At bedrock of the north tower’s footprint, loved ones

will be able to mourn privately, in a chamber with a large stone vessel containing unidentified remains of victims that will rest at the base of the void, directly beneath an opening to the sky above.

While the footprints remain empty, however, the surrounding plaza's design has evolved to include beautiful groves of trees, traditional affirmations of life and rebirth. These trees, like memory itself, demand the care and nurturing of those who visit and tend them. . . . "Reflecting Absence" has evolved through months of conversation between the jury and its creators.¹²

A couple of critics, both writing for *The New York Times*, were unkind to all eight short-listed proposals, Herbert Muschamp asserting that "none of them deserve to be built in their present form." Although Arad's scheme (he wrote) had the "signal virtue of focusing the viewer's attention where we want it to be focused: on the symbolic pair of shapes that have come to represent the simultaneity of public and private loss, the design has problems, too." The rest of his diatribe shows that he didn't really grasp that design. Published a few days later, the *Times* chief art critic Michael Kimmelman's condemnation was much more peremptory: "Now that everyone agrees that the Ground Zero memorial finalists are a disappointment, there's only one thing to do. Throw them all out."

In December 2004, allegedly in response to security and economic constraints, the memorial design was revised. The new plan included a Memorial Hall between the reflecting pools to mark the footprints of the former WTC. It also included a grove of oak trees with a clearing for memorial services, and public access to the stumps of the columns that once held the Twin Towers aloft. Among other changes, the names of the dead were to be raised above ground, waterfalls would cascade into underground pools, and most of the underground galleries were to be eliminated—considered by Arad as the most significant and unwarranted revision. Commentator Haim Handwerker writes, "If [Arad] had thought, somewhat naively, that his plans would be implemented in the format he envisioned, he was quickly disillusioned . . . a young architect who seemed steeped in euphoria and quite astounded by his win, he became caught up in an imbroglio of politicians, architects, public officials and interest groups."

Arad's project drew considerable criticism, in part for its high price—estimated at almost \$1 billion. His response was that the figure was inflated by including the estimated cost of the surrounding structure. In the inevitable political manipulations, the project was effectively taken out of Arad's hands, and its realization given to New York architectural firm Davis Brody Bond—inexplicably, not to Handel Architects, in which Arad is a partner. *The New York Times* editorialized, "what Arad had designed quickly turned into something else, a site being planned by a committee: almost everyone has a hand in it, and sometimes there are conflicts. What is happening here is a recipe for chaos." The memorial project was due to be completed in 2009, but most likely will not be done until 2010.

MEANWHILE, BACK AT FREEDOM TOWER . . .

Libeskind's rebuilding scheme may have won the competition, but by July he seems to have been "relegated to becoming the site's 'planner.'" The developer Larry Silverstein, who controlled the lease on the site, commissioned David Childs of SOM, who was responsible for the World-Wide Plaza on Eighth Avenue (1989) and the reflective-glass towers of the AOL-Time Warner Center (begun 2000), to design what became known as the "Freedom Tower." The so-called collaboration between Libeskind and Childs threatened to end in disaster as they "became exceedingly testy and appeared headed on a crash course." Leaked press reports described Childs' design as a "torqued" tube crowned with a trellice [*sic*] inside of which would be windmills—an idea far removed from what Libeskind had proposed. The hybrid scheme was made public on December 19, and the next day architecture critic Justin Davidson, noting that "design by politics and committee is almost always compromised," wrote a cautious, balanced review in *Newsday*, noting that "the weakest elements of the design are those at the borders where Childs' method and Libeskind's literary ideas meet" and "the tower's three levels—solid base, airy torso and slender needle—are well articulated but need to be better glued together. For now the top third of the building looks a bit like a nutcracker soldier's tall hat adorned with a wispy feather that is practically begging to be knocked off."

Childs has been heretofore a good practitioner of classy but basically conventional high-rise office towers. Despite the hoop-la and controversies over their collaboration, the two architects have somehow forged an interesting new design that is likely to become popular because of its asymmetry and its height . . . this design is a much better start than most of us anticipated in this very tortured design process, but it's still a bit early to give a final verdict.

"A bit early" was right. Of course there were further bureaucracy-driven compromises, and a redesigned Freedom Tower was unveiled in June 2005. Over the intervening 18 months voices were raised against the wisdom of the project. In the *New Yorker*, critic Paul Goldberger called the Freedom Tower "an unnecessary building," and with 9/11 fresh in the city's memory, *New York Times* columnist Frank Rich demanded, "What sane person would want to work in a skyscraper destined to be the most tempting target for aerial assault in the Western World?" And just as Childs' revised design was made public, *New York Observer* columnist Ron Rosenbaum extravagantly accused that it was "dreadfully apparent that the entire project—and the lives of its potential inhabitants—[was] in the hands of a group of egotists, idiots, political opportunists and incompetents."

The new scheme bore little relation to Libeskind's original proposed tower, his master plan, "nor to any of the many previously submitted designs." Only the height of the antenna remained unchanged. The new design

included moving the base of the tower 40 feet to the east, in the northeast corner of the 16-acre former WTC site, for “security reasons.” Rising from a 186-foot, nineteen-floor podium with 3-foot thick concrete walls, the Freedom Tower’s sixty-nine floors, reached via an 80-foot high lobby, provided 2.6 million square feet of rentable office space and twenty more floors for other uses. In June 2006 it was decided that the podium, criticized for being “too brutalist,” would be covered by a screen of glass prisms.

Nicolai Ouroussoff of *The New York Times* confessed that “the temptation is to dismiss it as a joke . . . [an effort that] fails on almost every level.” That view contradicted the paper’s editors, who wrote, “In almost every respect, the new design for the so-called Freedom Tower . . . is better than the one it replaces.” But perhaps that was damning it with faint praise.

New York’s Governor George Pataki wanted the structural frame to be completed by September 11, 2006—a vain hope—and the skyscraper finished by 2008. The debate between the Port Authority and developer Silverstein “over who will build on Ground Zero, how much rent will be paid, and how to divide money paid to Mr Silverstein” continued until March 2005 when the Authority withdrew from negotiations. But discussions soon resumed, and a tentative deal being agreed, construction work began late in April. By then, site works had been in progress on the WTC Memorial and Museum for about a month.

An agreement provided that Silverstein would cede rights to develop the Freedom Tower and Tower Five in exchange for financing with Liberty Bonds for Tower Two, Three, and Four. On June 22 the Port Authority announced that J.P. Morgan Chase would build the forty-two-story Tower Five on the site occupied by the Deutsche Bank Building; the architect, named a few weeks later, was Kohn Pedersen Fox. The final designs for Towers Two (architect, Sir Norman Foster), Three (architect, Richard Rogers), and Four (architect, Fumihiko Maki) were unveiled on September 7. The Freedom Tower was slated for completion in 2012.

The piecemeal approach to the rehabilitation of the Ground Zero site has been costly in every way. When the design process had scarcely begun, Critic Carter B. Horsley made an observation that held true throughout the project: “Overhanging the [memorial] competition is the messy and still unresolved design for the rebuilding of the WTC. What has been particularly disturbing is the public announcement of a selection and then its subsequent redesign to something substantially different.”

Such a process is a charade and smacks of poor planning and, worse, influence peddling. Both competitions are not for some suburban mall, but for one of the world’s most famous sites. In their zeal to involve the public, the sponsors . . . have emphasized the need to honor those lost in the terrorist attacks and not surprisingly the families of the victims have become very, very vocal. Their concerns are important, but the project is more important than the individual victims.

It needs to be a community-wide, city-wide and national response and monument. Indeed, it needs to be an internationally meaningful design. Such a solution . . . would be difficult to achieve on a barren battlefield, let alone at the center of a [very] large mixed-use development that is integral to the future of Lower Manhattan, which for several decades in the early 20th Century was the world's most glorious, important and influential skyline.¹³

Minoru Yamasaki

Minoru Yamasaki, a second-generation Japanese American, was born in the Yesler Hill neighborhood of Seattle, Washington, on December 1, 1912. His father John Tsunejiro, who had emigrated to the United States in 1908, was a struggling purchasing agent; his mother Hana was a pianist. In 1926, when Minoru was in his second year at James A. Garfield High School, his mother's brother, Koken Ito, an architecture graduate from the University of California at Berkeley, came for a short stay with the family. The more his uncle talked about architecture, the more Minoru wanted to become an architect. He paid his way through the University of Washington by working at Alaskan salmon canneries in his summer breaks.

In September 1934, partly because of racial discrimination, upon graduating he moved to New York and arrived with \$40 to his name. It was hard to find work in the Depression, and many architects had no commissions. So Yamasaki spent his first year in Manhattan wrapping china for an import firm. Attending night classes, he gained a master's degree from New York University, and in summer 1935 he found work in the office of Githens and Keally. He next moved to Shreve, Lamb, and Harmon (1937–1943), who had designed the Empire State Building, then to the office of the Rockefellers' architect, Harrison, Foulhoux, and Abramovitz (1943–1944), and finally to industrial designer Raymond Loewy (ca.1944–1946). He taught for 2 years at Columbia University before in 1945 accepting the position of head designer in the six-hundred-strong Detroit practice of Smith, Hinchman, and Grylls.

In 1951 he established three separate practices with former colleagues from that firm: Yamasaki and Associates in Troy, Michigan; Yamasaki, Leinweber, and Associates in Detroit, Michigan; and Yamasaki and Hellmuth in St. Louis, Missouri. From 1951 to 1956 he built the Lambert-St. Louis Municipal Air Terminal; his design, with three pairs of intersecting copper-sheathed concrete barrel vaults, won the American Institute of Architects (AIA) First Honor Award. The stress of managing the project—"arguments and compromises with engineers and client, the insufferable commuting between St. Louis and Detroit"—caused his health to fail at the end of 1953, and after radical surgery and 2 months in hospital he limited his professional activity to the Detroit firm, that became Yamasaki and Associates in July 1955.

What has been called his “breakthrough commission” came in 1954: a building for the U.S. Consulate General in Kobe, Japan. During a month-long visit to Japan, he was charmed by the garden settings of traditional architecture that influenced his subsequent work. He later confessed, “I was overwhelmed by the serenity that can be achieved by enhancing nature. It was here that I decided that serenity could be an important contribution to our environment, because our cities are so chaotic and full of turmoil.”

Soon after returning from Japan, Yamasaki undertook an extensive tour of Asia, the Middle East, and Europe. The delight that he discovered in the forms of historical architecture emphasized a major deficiency of ornament, decoration and texture in European Modernism—what had by then become the so-called International Style. According to a January 1963 article in *Time* magazine, “Back in the U.S., Yamasaki told his professional colleagues what he had learned: ‘he paid handsome tribute to the glass box of the great Mies van der Rohe,’” but observed that “the glass box, except in the hands of a few highly talented men, had deteriorated into a cliché.” He denounced “the dogma of rectangles” and the module system of building—“as monotonous as the Arabian desert.”

His acquired ideas were demonstrated in his award-winning design for the McGregor Memorial Community Conference Center at Detroit’s Wayne State University (1955–1958). In other buildings, he continued to temper the International Style with allusions to the architecture of other cultures. He was particularly influenced by Islamic arches, a motif that he employed in the bases of the Twin Towers and Gothic elements (which were derived from Islamic models anyway), as seen in Seattle’s U.S. Science Pavilion (1962) and the Music Conservatory at Oberlin College, Ohio (1966).

But according to his biographer Sharon Mizota, though his multicultural style appealed to many, “it also elicited scathing critiques, mostly from the architectural critics of the day.”

In trying to push architecture beyond the ascetic confines of modernism, his work was derided as excessively ornamental. On the other hand, his designs for the World Trade Center were criticized for being too brutally minimalist. Caught between the end of high modernism and the birth of eclectic postmodernism, Yamasaki was a pioneer in the development of today’s [2004] dominant architectural style, a contribution for which he has never been fully recognized.

Yamasaki’s oeuvre is far too extensive to discuss, or even list here. Suffice it to say that throughout the United States between 1951 and 1979 he designed university buildings (and entire campuses), urban development schemes, commercial buildings and banks, hotels, synagogues, and airport

terminals. Abroad, “oil-rich Saudis and auto-rich Japanese continued to hire him, not only as a reflection of their wealth and power, but out of satisfaction with [his] tributes to their cultural heritage.” He designed the Dahrn Air Terminal (1961), the Monetary Agency Head Office in Riyadh (1973–1982), and the Eastern Province International Airport (1985), all in Saudi Arabia. He also produced the U.S. Pavilion, World Agricultural Fair, New Delhi, India (1959), the Founder’s Hall, Shinji Shumeikai (1982) in Shiga Prefecture, Japan, and the Torre Picasso, Madrid, Spain (1982–1988).

To balance the scale of these successes, Yamasaki’s disastrous Pruitt-Igoe Public Housing project of 1956—“his first and only foray into low- and middle-income housing”—must be mentioned *en passant*. Alexander von Hoffman of Harvard’s Joint Center for Housing Studies calls it “arguably the most infamous public housing project ever built in the United States.” In 1972, after futilely spending over \$5 million on remedies the St. Louis Housing Authority demolished three of the high-rise buildings. A year later the remaining buildings followed. Von Hoffman comments, “Pruitt-Igoe has lived on symbolically as an icon of failure. Liberals perceive it as exemplifying the government’s appalling treatment of the poor. Architectural critics cite it as proof of the failure of high-rise public housing for families with children. One critic even asserted that its destruction signaled the end of the modern style of architecture.”

Yamasaki regretted that some of his influential peers believed that each building should be a powerful monument to “the virility of our society,” and as a consequence they disparaged “attempts to build a friendly, more gentle kind of building.” Minoru Yamasaki died of cancer on February 7, 1986, aged 73.

NOTES

1. “The Road to Xanadu.” *Time* (January 18, 1963).
2. Cohen, Roger, “Casting Giant Shadows: The Politics of Building the World Trade Center.” *Portfolio* (Winter 1990-1991). www.greatbuildings.com/buildings/World_Trade_Center_History.html
3. Mizota, Sharon, “Minoru Yamasaki: Architect of the American Dream,” *Nikkei Heritage* (Spring 2004). <http://sharonmizota.com/writing/art/yamasaki.html>
4. Cohen.
5. Cohen.
6. Heyer, Paul, *Architects on Architecture: New Directions in America*. New York: Van Nostrand Reinhold, 1993, 194–195. www.greatbuildings.com/buildings/World_Trade_Center.html
7. Yamasaki, Minoru. www.greatbuildings.com/buildings/World_Trade_Center.html

8. Anderson, Brian C., "The Twin Towers Project: A Cautionary Tale," *City Journal* (Autumn 2001).
9. Sales, Nancy Jo, "Click Here for Conspiracy," *Vanity Fair* (August 2006).
10. Kaufman, Lloyd (2002). www.lloydkaufman.com/roids/2002/09/11/unsung-hero-911/
11. Pack, Kevin, "Hollywood Patriotism, 2001." www.publicitywhore.com/pwblast16/Articles/hollywood1.html
12. WTC Memorial jury statement for winning design. www.wtcsitememorial.org/about_jury_txt.html
13. www.thecityreview.com/memwtc.html

FURTHER READING

- Dal Co, Francesco. "Ground Zero: The Facts and the History." *Casabella*, 71(October 2007), 3–29; 113–117.
- Darton, Eric. *Divided We Stand: A Biography of New York City's WTC*. New York: Basic Books, 1999.
- Doumato, Lamia. *Minoru Yamasaki*. Monticello, IL: Vance Bibliographies, 1986. See also Robert B. Harmon, *Serenity and Delight in the New Architecture as Exemplified in the Work of Minoru Yamasaki: A Selected Bibliography*. Monticello, IL: Vance, 1981.
- Friend, David. *Watching the World Change: The Stories Behind the Images of 9/11*. New York: Farrar, Straus and Giroux, 2006.
- Glanz, James and Eric Lipton. *City in the Sky: The Rise and Fall of the World Trade Center*. New York: Holt, 2003.
- Huxtable, Ada Louise. "Minoru Yamasaki's Recent Buildings." *Art in America*, 50(Winter 1962), 48–55.
- Keegan, William, Jr., with Bart Davis. *Closure: The Untold Story of the Ground Zero Recovery Mission*. New York: Simon & Schuster, 2007.
- Lubell, Sam, et al. "Redesigned Freedom Tower Will be Sleeker, Safer; Architects: Skidmore Owings & Merrill." *Architectural Record*, 193(August 2005), 23–26.
- "Minoru Yamasaki." *Architectural Record*, 135(September 1964), 169–184.
- Mizota, Sharon, "Minoru Yamasaki: Architect of the American Dream." *Nikkei Heritage* (Spring 2004).
- Pledge, Robert, ed. *Eleven: Witnessing the World Trade Center, 1974–2001*. New York: Universe, 2002.
- Rybczynski, Witold. "Less Is Less; Architect: Michael Arad, with Landscape Architect: Peter Walker." *Landscape Architecture*, 94(March 2004), 20–24.
- Salomon, David L. "Divided Responsibilities: Minoru Yamasaki, Architectural Authorship, and the World Trade Center." *Grey Room* (Spring 2002), 86–95.
- Skidmore Owings & Merrill. "Freedom Tower, New York, USA, 2003-." *Architecture and Urbanism* (June 2004), 6–11.
- Smith, Dennis. *Report from Ground Zero*. New York: Plume, 2003.
- Snoonian, Deborah, et al. "World Trade Center, 1973–2001; Architects: Minoru Yamasaki & Associates."

Stout, Glenn, Charles Vitchers and Robert Gray. *Nine Months at Ground Zero: The Story of the Brotherhood of Workers Who Took on a Job Like No Other*. New York: Scribner, 2006.

Woods, Lebbeus. *The Storm and the Fall*. New York: Princeton Architectural Press, 2004.

Yamasaki, Minoru. "A Humanist Architecture; the Annual Marley Lecture Sponsored by the Yerbury Foundation, given by Minoru Yamasaki at the R.I.B.A. . . ." *Architect and Building News* (November 23, 1960), 665–666.

Yamasaki, Minoru. *A Life in Architecture*. New York; Tokyo: Weatherhill, 1979.

Glossary

abutment. (In bridge construction) the landward approach to the bridge; the part of a structure that supports the end of a span or accepts the thrust of an arch; sometimes supports and retains the approach embankment. (In dam construction) the part of the canyon or valley side against which the dam is constructed.

adobe. Sun-dried brick of clay, water, and sometimes a bonding material (e.g., straw).

aggregate. Broken stone, gravel (coarse aggregate), and sand (fine aggregate) that is mixed with portland cement (or lime) and water to form concrete.

aisle. (In churches) the part of the building running parallel to the nave and separated from it by an arcade or row of piers.

anchorage. (In suspension bridges) the part located at the outermost end to which the main cables are attached.

apse. (In churches), the termination (usually semicircular in plan) at the east end that often houses the altar.

arcade. A series of arches supported by columns, piers, or pillars, either free-standing or attached to a wall to form a gallery.

architecture parlante. (lit. “speaking architecture”) A late-eighteenth-century architectural philosophy (initially French) that “sought to mold form and ornament to express a building’s purpose and thereby inspire social reform.”

Art Deco. A popular movement (mid-1920s until World War II) in architecture, interior design and industrial design, and the applied arts, inspired by The *Exposition Internationale des Arts Décoratifs et Industriels Modernes* (International Exposition of Modern Industrial and Decorative Arts), Paris, 1925.

arts and crafts. A late-nineteenth-century artistic movement, a reaction to industrialization, based on the ideas of John Ruskin and William Morris, which

promoted traditional forms of design and the use of traditional materials, restrained vernacular decoration, and handcraft construction.

ashlar. Squared blocks of smooth stone laid in courses.

attic story. (In Neo-Classical architecture) a low story above the main order of a façade.

Baroque. An architectural style that developed from the late Renaissance in the seventeenth and eighteenth centuries, “characterized by exuberant decoration overlaid on classical architectural details.”

barrel vault. The simplest form of vault, consisting of a series of semicircular arches extended prismatically; also known as a tunnel vault.

bascule bridge. An opening bridge in which a hinged counterweight at one end of a span falls, causing the deck to rise.

bas-relief. Low-relief sculpture or carving, often applied as architectural decoration.

battered wall. A wall whose face inclines inwards toward the top.

bedrock. The solid rock underlying unconsolidated sediment or soil.

bevel. A right-angled corner cut off asymmetrically (i.e., at other than 45 degrees).

breastworks. (In defenses) a barricade, usually about breast high, that shields defenders from enemy fire.

breccia. A sedimentary rock composed of angular rock fragments cemented together.

brise-soleil. A sun protection device used to prevent façades with a large areas of glass from overheating during summer.

built-up roofing. A continuous, semiflexible membrane consisting of saturated felts, coated felts, fabrics, or mats with alternate layers of bitumen and surfaced with mineral aggregate, bituminous material, or a granule surfaced sheet.

buttress. A masonry support built against an exterior wall (usually) of a building to absorb lateral thrusts from roof vaults; local thickening of a wall.

caisson. A watertight chamber used in underwater construction work or as a foundation.

cantilever. A horizontal projection from a building (e.g., a balcony, beam, or canopy) that is without external bracing and that appears to be self-supporting.

capital. The head of a column.

cast iron. A brittle and nonmalleable alloy of iron, carbon and silicon cast in a mold.

cast stone. Concrete with a fine aggregate or mortar made to resemble natural building stone, cast into blocks or slabs.

catenary. The shape of a hanging flexible chain or cable when supported at its ends and acted upon by a uniform gravitational force (its self-weight).

centering. The temporary formwork, usually timber, used to support elements of arches or domes until the keystone is placed, and they are self-supporting.

clerestory. The upper part of any wall whose windows allow light into the center of a space. (Also clearstory or overstory).

coffering. Decorative pattern on the underside of a ceiling, dome, or vault, consisting of sunken square or polygonal ornamental panels. It reduces the weight of the ceiling without structurally weakening it.

colonnade. A row of columns supporting an entablature or arches. See Arcade.

compressive strength. The ability of a structural material (e.g., stone, brick, or concrete) to withstand a load when being crushed.

coping. A course of stones or other material protecting the top of a wall from water penetration.

corbel. A projecting block of stone built into a wall, usually to support horizontal construction or the springing of a roof frame.

Corinthian. The latest, most ornate of the three Greek orders of architecture, (Doric, Ionic, Corinthian). It comprises a molded base, a fluted shaft, a bell-shaped capital decorated with Acanthus leaves, and an entablature with a continuous frieze.

crossing. (In churches) the space at the intersection of the nave and the transepts.

cupola. A dome, especially a small dome, on a circular or polygonal base, crowning a roof or turret.

curtain wall. In modern architecture, the outer skin of a building that has no load-bearing function but serves as an environmental filter.

dado. The lower part of an interior wall, usually specially decorated or faced with a different material from the rest of the wall.

dead load. The self-weight of a structure itself, independent of traffic, or the environment.

deformation. The change in shape that occurs in a structural member when loads are applied.

Doric. The order of Greek architecture that originated on the Greek mainland around the 6th century BC. It comprises a baseless column with a cushion capital and a modular entablature.

dormer. A gable extension of a sloping roof to accommodate a vertical window.

double-hung (window). A window in which the upper and lower sliding sashes move up and down against counterweights.

downpipe. A pipe that conveys rainwater to the ground from the upper parts of buildings.

dressings. Masonry moldings around openings and at the corners of buildings, usually of better quality than the other facing work.

drystone. Walls built without mortar, in which the horizontal joints slope outward, to allow water run-off.

entablature. (In Neo-Classical architecture), the part of an architectural order between the tops of the columns and the roof, comprising an architrave (the lower horizontal section that connects the columns), a frieze, and a cornice that projects to support the edge of the roof.

escutcheon. Armorial bearings displayed on a shield.

fanlight. A semicircular window above a door, of the same width as the door.

fascis. A bundle of rods containing an axe with the blade protruding; in ancient Rome it was a symbol of a magistrate's power.

fitch. A piece of timber with a cross section exceeding 4 by 12 inches.

formwork. A set of temporary framing placed to hold wet concrete until it sets; also known as shuttering.

fresco. (fr. the Italian "affresco" meaning fresh) "Buon fresco" is painted on wet plaster, "a secco" on set plaster.

frieze. (In Classical architecture) the part of an entablature between the architrave and the cornice.

gable roof. A roof consisting of two sloping planes meeting at a ridge, and supported at their ends by triangular extensions of the walls (gables).

Georgian. Architectural style current in Britain and her colonies between about 1720 and 1840, named after the British monarchs George I, II, III, and IV.

Gothic Revival. An eighteenth- and nineteenth-century architecture style based on those of northern and western Europe from the middle of the twelfth century to the early sixteenth century. Also "Neo-Gothic" and "Gothick."

grout. A mixture of Portland cement, aggregates, and water, which can be poured or pumped into cavities in concrete or masonry to fill joints/voids.

Guastavino tiles. The "Tile Arch System" patented in the United States in 1885 by architect/builder Rafael Guastavino (1842–1908) to build self-supporting arches and vaults using interlocking terracotta tiles.

hipped roof. A roof with slopes on all four sides. The “hips” are the joints formed when the slopes meet at the corners.

in situ concrete. Concrete poured in forms in location (as opposed to prefabricated concrete).

Ionic. The order of Greek Classical architecture that originated in Asia Minor in the mid-sixth century B.C. It comprises a molded base, a fluted shaft, a cushion-shaped capital with volutes, and an entablature with a continuous frieze.

lantern. A small open-sided structure crowning a dome or roof, to admit light and/or air into the space below.

latin cross. (In churches) a plan form in which one arm (the nave) is longer than the other three (the transepts and chancel).

lintel. A beam that supports the weight above an opening in a wall.

live load. The load carried by structural members other than their self-weight; that is, arising from the occupancy, wind, seismic, and snow loads.

loggia. A roofed open gallery overlooking an open courtyard.

lunette. A crescent-shaped or semicircular opening in a wall.

maquette. (In sculpture) a preliminary model of a larger work.

monolithic. An architectural element made of a single block of stone.

mullion. A vertical member dividing components of a window or opening.

nave. (In churches) the central principal space, extending from the narthex (entrance) to the chancel (sanctuary).

obelisk. A tall, tapering shaft of stone, usually monolithic, square, or rectangular in section, crowned with a pyramid.

oculus. A circular or oval (eye-shaped) window, or an opening at the top of a dome.

off-form concrete. Concrete left unfinished except for the impress of the formwork on its surface.

Palladian. A style of Classical architecture widely spread in Britain and her colonies inspired by the work of Italian, Andrea Palladio (1518–1580).

parterre (*de broderie*). A geometrical ornamental garden with paths between beds of low planting.

pediment. (In Neo-Classical architecture) a triangular or arched gable over a portico, often used on a smaller scale over doors and windows

pendentive. A concave, triangular-shaped structure which supports a circular dome over a square compartment.

piazza. An open square (Italian). The English and French equivalent is “place”; Spanish, “plaza”; and German, “platz.”

pilaster. An attached rectangular column (not necessarily structural) projecting slightly from a wall surface.

pile. A timber, steel, or reinforced concrete column driven into the ground to carry structural loads through weak soil to the stratum capable of supporting them.

piloti. A structural stilt that raises a building, allowing the ground level (undercroft) to be left open.

polychromy. (In architecture) a term used to describe styles that employ multiple colors.

portico. A roofed area, open on one or more sides, typically supported on one side by the façade of a building and on the others by columns or arches.

Queen Anne style. A late-nineteenth-century style of (usually) domestic architecture incorporating an asymmetrical plan, a variety of roof types, porches, and bay windows.

quoin. The contrasting treatment defining the corners of masonry buildings.

refectory. A dining hall in a monastery, college, or other institution.

repoussé. A technique for producing a relief design by pressing or hammering the inside or backside of a metal surface into a “negative” mold.

reveal. The inner surface of a door or window opening, between the edge of the frame and the outer surface of the wall at right angles to it.

rubble. (In masonry) rough, irregular stone fragments used in wall construction; may be laid in courses or not (random or uncoursed rubble); often used as infill between ashlar faces.

rusticated. (In masonry) stonework comprising regular or irregular blocks with roughly dressed faces, separated by wide, recessed joints

sacristy. (In churches) a room where sacred vessels and vestments are kept or meetings are held.

sally port. (In defenses) a gate through which soldiers could “sally forth” to counterattack.

sanctuary. (In churches) the space at the extreme east end, where the altar is located.

soapstone. A soft, easy-to-carve stone with a soap, aka steatite.

spandrel. (In Historical architecture) an irregular, triangular wall segment adjacent to an arched opening. (In Modern architecture) a panel between the

top of one window and the sill of another window on the story directly above it, that masks the underfloor spaces.

(Spanish) mission. A style of (generally) domestic architecture incorporating elements of Spanish architecture (e.g., terracotta roof tiles, rendered walls, and arched openings).

stainless steel. A rust- and corrosion-resistant steel alloy containing chromium, and sometimes nickel or molybdenum.

stringer, string course. A projecting course of bricks or some other material forming a narrow horizontal strip across the wall of a building.

stucco. A material consisting of cement, sand, and lime, applied as a hard covering to exterior walls.

suspension bridge. A bridge in which the main structural cables are draped from towers and restrained by anchorages on either end; the bridge deck is suspended from the cables by vertical connections.

swag. (In Neo-Classical architecture) a sculpted garland of flowers or fruit hanging in a curve between two points.

tensile strength. The ability of a structural material (e.g., steel) to withstand a load when being pulled apart.

terrazzo. A flooring finish of marble chips mixed with cement mortar, the surface is ground and highly polished.

tessera. Small pieces (usually cuboids) of marble, glass, or metal used in mosaic work.

tracery. (In Neo-Gothic architecture) ornamental stone window framing.

transept. (In churches) the transverse arm of cruciform plan church, intersecting the nave and chancel at a right angle.

triglyph. An ornamental module of a Doric frieze, consisting of a rectangular slab with two complete grooves in the center and a half-groove at either side.

truss. A triangulated assemblage of structural members forming a rigid framework for a column, beam, or roof framing.

Tuscan. A relatively plain architectural order developed in the Italian Renaissance, aka Roman Doric.

vara. A Spanish/Portuguese unit of linear measure, varying from 32 to 43 inches. Also a square vara, as a unit of area.

vault. An arched masonry structure of various types forming a ceiling or roof.

vernacular. In architecture, relating to the common building style of a culture (literally, “home-grown”).

vousoir. A wedge-shaped brick or stone, a component of an arch or vault.

wainscot. Timber paneling applied to the lower portion of a internal wall.

widow’s walk. A railed rooftop platform, typically on a coastal house, originally designed to observe vessels at sea; (aka roof walk).

wind load. A transverse load on a building resulting from wind pressure and/or suction.

wrought iron. A tough, malleable, relatively soft form of iron, suitable for blacksmithing.

ziggurat. A type of step-pyramid temple first built by the Sumerians.

Selected Bibliography

- Bergeron, Louis, and Maria Teresa Maiullari-Pontois. *Industry, Architecture, and Engineering: American Ingenuity, 1750–1950*. New York: Abrams, 2000.
- Blumenson, John J. G. *Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600–1945*. Nashville, TN: American Association for State and Local History; New York: Norton, 1981.
- Conn, Steven, and Max Page, eds. *Building the Nation: Americans Write about Their Architecture, Their Cities, and Their Landscape*. Philadelphia: University of Pennsylvania Press, 2003.
- De Long, David G., Helen Searing, and Robert A.M. Stern, eds. *American Architecture: Innovation and Tradition*. New York: Rizzoli, 1986.
- Faherty, Duncan. *Remodeling the Nation: The Architecture of American Identity, 1776–1858*. Durham, N.H.: University of New Hampshire Press; Hanover, N.H.: University Press of New England, 2007.
- Fitch, James Marston. *The Architecture of the American People*. New York: Oxford University Press, 2000.
- Gelernter, Mark. *A History of American Architecture: Buildings in Their Cultural and Technological Context*. Hanover, N.H.: University Press of New England, 1999.
- Hafertepe, Kenneth, and James F. O'Gorman. *American Architects and Their Books to 1848*. Amherst: University of Massachusetts Press, 2001.
- Harris, Cyril M. *American Architecture: An Illustrated Encyclopedia*. New York: W.W. Norton, 1998.
- Heyer, Paul. *Architects on Architecture: New Directions in America*. New York: Van Nostrand Reinhold, 1993.
- Howard, Hugh. *Dr. Kimball and Mr. Jefferson: Rediscovering the Founding Fathers of American Architecture*. New York: Bloomsbury, 2006.
- Kennedy, Roger G. *Architecture, Men, Women and Money in America, 1600–1860*. New York: Random House, 1985.
- Packard, Robert T., and Balthazar Korab. *Encyclopedia of American Architecture*. New York: McGraw-Hill, 1994.
- Poppeliers, John C., and S. Allen Chambers. *What Style Is It?: A Guide to American Architecture*. Hoboken, N.J.: John Wiley, 2003.

- Roth, Leland M. *America Builds: Source Documents in American Architecture and Planning*. New York: Harper & Row, 1983.
- Roth, Leland M. *American Architecture: A History*. Boulder, CO: Icon Editions/Westview Press, 2001.
- Scully, Vincent Joseph. *American Architecture and Urbanism*. New York: H. Holt, 1988.
- Twombly, Robert C. *Power and Style: A Critique of Twentieth-Century Architecture in the United States*. New York: Hill and Wang, 1996.
- Upton, Dell. *Architecture in the United States*. Oxford; New York: Oxford University Press, 1998.
- Whiffen, Marcus. *American Architecture Since 1780: A Guide to the Styles*. Cambridge, MA: MIT Press, 1992.
- Wilson, Richard Guy, and Sidney K. Robinson, eds. *Modern Architecture in America: Visions and Revisions*. Ames: Iowa State University Press, 1991.
- Wiseman, Carter. *Twentieth-century American Architecture: The Buildings and Their Makers*. New York: Norton, 2000.

Index

- Adams, Abigail, 528
Adams, Howard, 318
Adams, Julius Walker, 53–54
Alamán, Lucas, 21
Alamo, 1; construction of a stone church, 9; historical background and origins, 7–10; as historical *vs.* popular culture event, 2; making of an icon, 3–7; nature of, 2–3
Alamo, Battle of the, 16–19; *mythos* about, 2; in popular culture, 4–6; site of, 2; three men as “pantheon of frontier gallants,” 13–16
Alamo, The (film), 5–6
Alamo Canal, 213
Alarcón, Martín de, 8
Alcatraz (island), 25; as fortress, 27–29; Native Americans and, 43–45; the years when little happened, 26–27
Alcatraz (prison), 25, 26, 45; Al Capone at, 35–37; as America’s version of “Devil’s Island,” 26, 33–34; beginnings, 29–31; closure, 42–43; escape from, 42; films about, 26; “getting the treatment,” 39–41; life in, 37–39; “positive” aspects, 41–42; Robert (“Birdman”) Stroud and, 33–34; as “Rock of Despair,” 34–36; Upper Prison and Lower Prison, 29–30; wardens, 41–42 (*see also* Johnston, James)
Allan, Stanley Nance, 343
Allen, William C., 425–26, 429, 435
American Committee of the Statue of Liberty, 377, 386–90
American Institute of Architects (AIA), 94; awards, 95, 472; on most influential buildings, 94; Philadelphia Chapter, 271; survey of America’s favorite architecture, xvii, 73, 117, 164, 234
American Revolution, 308–9, 433–34.
See also Independence, American
“America’s Favorite Architecture,” xvii–xviii. *See also* American Institute of Architects
Andersen, Kurt, 472–73, 491
Anderson, Brian, 549
Anderson, Marian, 298–300
Anglin, Clarence, 42
Anglin, John, 42
Arad, Michael, 558–59
Architectural determinism, doctrine of, 536
Architectural icons, nature of, xvii, xviii
Architectural ideas, transmission of, 525
Architecture: history of Western, 287–88; nature of, xvii, xviii
Arizona, USS. See USS *Arizona*
Arizona Memorial Museum Association (AMMA), 448, 449, 463–64
Art, 383
“Art Deco” style, 78
Arthur, Chester, 531, 536
Astor, William Waldorf, 80–81
Ayala, Juan Manuel de, 27, 117

Babcock, Elisha Spur, 236–41, 243–44, 251–52
Bacon, Henry: architecture, 294, 301–2; background, 287, 301; Lincoln Memorial and, 286–91, 294, 302
Balcom, Homer Gage, 83, 89
Balcom and Associates, H. G., 83, 89

- BankSA Heritage Icons List, xv
- Barclay, James Turner, 319–20
- Barr, Alfred, Jr., 409
- Bartholdi, Frédéric Auguste: background and life history, 379–82; “Progress,” 380, 383; Statue of Liberty and, 376, 379–85, 387, 389–92
- Bates, Sanford, 32
- Baum, L. Frank, 247
- Beatty, John C., 212–13
- Beaux-Arts architecture and fashion, 173, 287
- Bedloe’s Island, 381, 385, 387, 388, 390, 392
- Beiswanger, William L., 317
- Bergstrom, Bennett, and Haskell, 333
- Bergstrom, George Edwin, 332–34, 336, 337, 343; on architecture, 333
- Blackwel, Olin G., 42
- Blackwells Island, 53
- Blades, John, 186
- Blum, Betty J., 360
- Borah, William E., 399–400
- Boulder Canyon Project, 214
- Boulder Canyon Project Act, 214, 215
- Boulder City, 218–20, 223
- “Boulder Dam,” 215, 228. *See also* Hoover Dam
- Boutelle, Sara Holmes, 196, 198
- Bowen, Catherine Drinker, 266–67
- Bowie, James Zezin (“Jim”), 13, 14
- Bowling, Kenneth, 522
- Brandt, Forrest, 487–88
- Brandt, Randal, 116
- Bridges, 65. *See also* Brooklyn Bridge
- British, 500–501; invasion of White House, 529–30; U.S. Capitol burned down by, 433–34. *See also* American Revolution; Independence, American; War of 1812
- Brooklyn Bridge, 55–57, 60–63; aesthetic criticisms of, 66–67; before the, 50–51; a bridge with no name, 53–55; construction, 57–63; costs, 63–64; “the crowning glory of an age,” 63–64; design, 53–57; as eighth wonder of the world, 64–67; engineers, 53, 55, 57, 60 (*see also* Roebing, Emily); “the man in the window,” 60; prospect of, 51–55
- Brown, Glenn, 284, 429–30
- Brown, J. Carter, 485
- Brownell, Charles, 507
- Bryan, William Jennings, 322, 323
- Buildings: becoming icons, 258; most influential, 94
- Bulfinch, Charles, 435, 441–42
- Bullard, E. D., 128
- Burnham, Daniel H., 171, 174, 283, 286
- Burns, Ken, 103–4
- Byrd, Robert C., 399–400
- Cabrillo, Juan Rodriguez, 234–35
- Caesar, Julius, 290
- Cantor, Eric, 306
- Capitol. *See* United States Capitol
- Capone, Alphonsus Gabriel (“Al”/“Scarface”), 36–37
- Carhart, Tom, 484, 486
- Casey, Hugh J. (“Pat”), 332, 334, 335, 340
- Catholic Church, 2, 3; missions, 2, 7–10
- Causici, Enrico, 517
- Chaplin, George, 460
- Charles, Robert, 273, 274
- Chicago, 354–55; as architect magnet, 352. *See also* Sears Tower
- “Chicago construction,” 356
- Chicago skyscrapers, early, 416
- Childs, David, 560
- Chrysler, Walter P., 78, 79
- Chrysler Building, 78, 79
- Chu, Jonathan, 272
- Citizen Kane* (film), 187–89
- Civil rights March on Washington of August 1963, 298, 300–301
- Civil War, 29
- Clark, Edward, 437–38
- Clarke, Gilmore D., 335, 337
- Cleveland, Grover, 391
- Clinton, Bill, 361–62
- Cockburn, Alexander, 186, 201
- Cohen, Roger, 542
- Colorado River, 210–11; European exploration, 211–12; irrigation from, 212–13; taming the, 212–14. *See also* Hoover Dam
- Colorado River Compact, 214
- Congres Internationaux d’Architecture Moderne* (CIAM), 408
- Congress, 265–67; cities in which it has gathered, 426–27
- Congress House, 425. *See also* United States Capitol
- Connors, Joseph, 108

- Constitution, U.S., 258, 266–67
 Cook, Jody, 143
 Coolidge, Calvin, 533
 Cooper, Merian, 72
 Coronado, 234–36. *See also* Hotel del Coronado
 Coronado Beach Company, 236–38
 Cortissoz, Royal, 293, 294, 296, 297
 Council on Tall Buildings and Urban Habitat (CTBUH), 353
 Cret, Paul Philippe, 336–37
 Criminals, 31–32, 45; “cruel and unusual punishment,” 45. *See also* Alcatraz (prison)
 Crockett, David (Davy), 13–16, 18
 Crowe, Frank T. (“Hurry-up”), 217–19, 221, 225–27
 Cullen, John T., 249, 250
 Cummings, Homer, 32
 Curtain walls, 415–18
 Cusack, Victor, 104–5
- Daughters of the American Revolution (DAR), 271, 298–99
 Daughters of the Republic of Texas (DRT), 3, 4
 Davies, Marion, 192–95
 Davis, Arthur Powell, 213, 214, 216, 217
 Davison, Michael S., 485–86
 DeBoer, Saco, 219
 Declaration of Independence, 258, 266, 272, 276, 501
 de Laboulaye, Édouard, 378, 379, 381, 382, 385, 386
 Delano, William Adams, 533
 de la Peña, José Enrique, 17–18
 de las Piedras, José, 13
 Delgado, James P., 448
 Dinsmore, James, 317
 Donovan, Christine, 251
 Doubek, Robert, 479
 Downtown-Lower Manhattan Association (DLMA), 543
 Dudley, George, 410–11
- Eastern Orthodox Christianity, icons of, xvi
École des Beaux Arts, 173, 287
 Ehrman, Merrill G., 148, 159–60
 Eisenhower, Dwight D., 460
 Eken, Andrew J., 84, 86, 90
 Elkinah, Watson, 252, 253
- Ellicott, Andrew, 427–28, 522
 Ellis, Charles Alton, 124, 125
 Emery, Murl, 218–20
 Empire State Building, 71–73, 79–80; airships docking at, 81–82; architects, 81, 83, 88–89; contractors, 74, 84, 86, 89; as “Empty State Building,” 87–88; high steel workers (“sky boys”), 85–87; Hollywood and, 72–73; as lighthouse of Manhattan, 80–81; as “paragon of efficient building construction,” 83–86; as “strangest story ever conceived by man,” 72; structural engineer, 83, 89; as tallest building, 72; vacancy rates and difficulty finding tenants, 87–88
 Empire State Corporation, 79–81
 Enchanted Hill, The. *See La Cuesta Encantada*
 Estcott, Colin, 143
 Eubanks, Bill, 153
 Evans, Diane Carlson, 492
 Evarts, William, 390
- Fallingwater, 93–95, 104–5; building materials, 106, 107; falling down, 110–13; furniture, 107; in harmony with nature, 100–103; in the media, 94–95; mischaracterized as “Wright’s gentle nod to the international style,” 108–10; naming of, 104, 105; “nonpublic” parts of house, 107–8; speed-design as “most celebrated act of architectural creativity,” 103; voted best work produced by American architect, 94; as “work of art beyond any ordinary measure of excellence,” 105–8, 113. *See also* Wright, Frank Lloyd
 Farías, Valentín Gómez, 12
 Fillmore, Millard, 436
 Flynn, John, xvi
Four Books of Architecture, The (Palladio), 312, 314
 “Freedom Tower,” 560–61
 Freemasons, 12, 101, 334, 379, 391, 509–10
 French, Daniel Chester, 291–92, 295–96
 Fulton, Robert, 51
 Furbringer, Max, 148, 159, 160
- Gangewere, R. Jay, 94
 Gaziz-Sax, Joel, 34–35
 Gebhard, David, 536

- Germany, 358. *See also* World War II
- Gettysburg Address, 294
- Gilliam, Terry, 166
- Giordano, Ralph, 316
- Glanz, James, 542
- Glassberg, David, 376–77
- Goldberger, Paul, 67, 109–10, 180–81, 371, 560
- Golden Gate Bridge, 115–17; as art, 134–35; awards and honors, 116–17; as “biggest thing of its kind that man could build,” 116; color, 125; earthquakes and, 130–31; engineering, 116, 122–25; feasibility, 121–22; finances, 121–24; historical background and origins, 117–20; labor in building, 126–29; in movies, 117, 133–34; opening, 129–30; origin and development of the idea of, 119–21; resistance to the building of, 120–23; safety practices during construction of, 128–29; Schweigardt as “the man who built,” 123–24; suicide from, 131–33. *See also* San Francisco Bay
- Golden Gate Bridge and Highway District Act*, 121
- Golden Gate Bridge Suicide Deterrent System Study, 132–33
- “Graceland” (Paul Simon), 158
- Graceland Mansion, 139, 140, 154–55; architects, 148, 159–60; before Elvis, 148–49; Elvis and Gladys phase, 151; finances, 154–55; Gladys and, 151, 152; from a Meditation Garden to a Mecca, 152–53; in popular culture, 156–58; purchased by Elvis, 143. *See also* Presley, Elvis
- Graham, Bruce J.: background and life history, 359–60; guided by “simple statements of the truth,” 360; Sears Tower and, 360, 366–72
- Grand Central Depot, 168–70
- Grand Central Terminal, 163–67, 180–81; air rights, 172, 179; architecture, 170–74, 177, 181; buildings near, 177; construction, 176; designated historic building, 178; as gateway to New York City, 175–76; historical background and origins, 167–68; Main Concourse, 174–75, 178, 180; Master Plan and “revitalization” program, 179–80; opening, 176; in popular culture, 165–67; reasons for iconic status, 164, 180; Reed & Stem and, 171, 175, 181–82; Terminal City, 172, 177
- Grant, Ulysses S., 511, 531
- Gratz, H. Tucker, 460
- Graves, Michael, 515
- Great Fire, 355
- Greek architecture, 289–90
- Green, Robert Miller, 94
- Greiff, Constance, 269, 271
- Grenadier, Bernard, 152
- Grimold, Charles L., 478
- Gropius, Walter, 357–58
- Groves, Leslie Richard, 339, 343
- Gubler, Friedrich T., 408
- Guérin, Jules Vallée, 294–95
- Guerrero, Vicente, 12
- Guinness, Desmond, 536
- Guthmann, Edward, 131, 132
- Gyure, Dale Allen, 352
- Hadfield, George, 432–33
- Haigh, J. Lloyd, 61
- Hall, Dennis, xviii
- Hall, Susan Grove, xviii
- Hallet, Étienne Sulpice (Stephen), 429–32, 439–40, 524
- Hallidie Building, 416
- Halloran, Richard, 345
- Hamilton, Andrew, 260–61, 521
- Handwerker, Haim, 559
- Handy, Bruce, 538
- Hansen, Oskar J. W., 224–25
- Hardenbergh, Henry Janeway, 81
- Hardin, Stephen L., 2, 19
- Harding, Warren G., 291, 294, 297
- Hargrove, June, 382
- Harmon, Arthur Loomis, 83, 89
- Harris, Charles M., 426
- Harrison, Wallace Kirkman, 409–11, 417
- Hart, Frederick: “Three fighting men,” 490–93
- Hass, Kristin Ann, 485
- Hearst, George, 190, 191, 195
- Hearst, Marion, 188, 189, 192–95, 199, 204, 205
- Hearst, Phoebe Apperson, 190–92, 197
- Hearst, William Randolph, 186, 195–96; background and life history, 190–94; biographies of, 187, 189–90, 194; *Citizen Kane* and, 187–89; death, 189, 194; Julia Morgan and, 197–203;

- as larger than life, 189–95; social life, 204–5
- Hearst Castle, 185–87; architecture, 205–6 (*see also* Morgan, Julia); in *Citizen Kane*, 187–89; as Gilded Age house, 186; historical background and origins, 195–96; Orson Welles and, 188–89; social lives of prominent people and, 204–5. *See also* *La Cuesta Encantada*
- Hearst Corporation, 193–95
- Hearst Ranch, 195–96
- Hegel, Georg Wilhelm Friedrich, 52
- Helleu, Paul César, 175
- Hennessey, Gregg R., 227
- Henry Hudson Hotel, 405
- Hewitt, Abram Stevens, 53, 60
- Heyer, Paul, 546
- Hidalgo y Costilla, Miguel, 10–11
- Hine, Lewis Wickes, 85
- History *vs.* myth, 2
- Hitchcock, Alfred, 397
- Hitchcock, Henry-Russell, 409
- Hitler, Adolf, 338
- Hoban, James: background and life history, 524; Capitol and, 431, 432; as “Washington’s man,” 524; White House and, 524–26, 528
- Hoffman, Donald, 105
- Hoover, Herbert C., 214, 229, 533
- Hoover Compromise. *See* Colorado River Compact
- Hoover Dam, 209, 210; architecture and engineering, 215–18, 222–25; building, 220–22; building materials, 221; finances, 217, 225; housing the workers, 218–20; naming, 214, 215; in popular culture, 227–28; as “symbol of American ingenuity,” 210; type of dam, 215–18; as wonder of the industrial world, 229; “working stiff” at, 225–27
- Horsley, Carter B., 561–62
- Hotel del Coronado, 233–34, 239–44, 251–52; changes, 244–46; Crown Room, 242–43, 246–47; designers, 239–42, 252–53; finances, 244–46; as “gorgeous structure of Oriental magnificence,” 239–44; historical background and origins, 234–36; Kate Morgan and, 249–51; in popular culture, 247–49; Tent City (Camp Coronado), 253–54; transporting workers across the water, 238–39; wealthy patrons, 246–47
- Houston, Sam, 16, 18
- Huckel, Samuel, Jr., 170, 171
- Hughes, Robert, 556–57
- Hunter College, 405–6
- Hyde, Henry, 484
- Ickes, Harold, 215
- “Iconic architecture,” xviii
- “Iconic,” use of the term, xv–xvi
- Icon(s): meaning of, xv–xvi; nature of, xvii, xviii; original use of the term, xvi
- Ielpi, Lee, 556
- Independence, American, 264–67. *See also* American Revolution
- Independence Hall, 257, 258, 270; and “aspirations for justice and freedom,” 258; Assembly Room, 267–70, 276; designated World Heritage Site, 258; history, 272; naming, 270; place in popular culture, 258–59; restoration and refurbishing, 270–71; transmutation from state house to national shrine, 267–73. *See also* Liberty Bell; Pennsylvania State House
- Independence Hall Association, 271
- Independence National Historic Park, 271–72
- Inouye, Daniel K., 461
- “International architecture,” 409
- International Congress of Modern Architecture, 408
- International Exhibition of Modern Architecture, 108–9
- I quattro libri dell’ architettura (The Four Books of Architecture)*, 312, 314
- Iron, 355–56
- Jackson, Andrew, 508
- Jefferson, Martha, 307, 309
- Jefferson, Thomas, 306; as architect, 311–19, 322, 324; background and life history, 306–11; Capitol and, 425–32, 523; dictum, 536; Latrobe and, 528–30; Mills and, 506; White House and, 523–24, 526, 528–30. *See also* Monticello
- Jenkins, John H., 19
- Jenney, William Le Baron, 355, 357
- John Hancock Center, 371–72
- Johnson, Andrew, 511, 530

- Johnson, Donald Leslie, 109
 Johnson, Lyndon B., 475
 Johnson, Philip, 409, 418
 Johnson, Troy, 44–45
 Johnston, James A., 34, 36–39, 41
 Jones, Inigo, 312, 313
 Jones, Walk C., Sr., 159
- Kammen, Michael, 503
 Kanai, Noburo, 459
 Kane, Charles Foster, 187. *See also* *Citizen Kane*
 Karpis, Alvin, 37–38, 40–41
 Kaufman, Edgar, Jr., 102–3, 113
 Kaufman, Edgar Jonas, Sr., 106, 107, 111–12; background and life history, 99–102; Fallingwater and, 94–95, 101–4; as “merchant prince,” 99–100; Modernist art and design promoted by, 102; philanthropy, 100, 112–13; Wright and, 94, 99–104, 106, 107, 111, 112
 Kaufman, Liliane, 94, 99–100, 102–4, 107, 108, 112
 Kaufman, Lloyd, 554, 555
 Kaufman, Louis G., 79
 Kaufmann, Gordon B., 223–24
 Kaufman’s Summer Club, 101–2
 Keiler, Allan, 299
 Keller, Helen, 88
 Kempsey, Rita, 555
 Keyes, Frances Parkinson, 296
 Khan, Fazlur Rahman, 359, 368, 371, 372; as “Einstein of structural engineering,” 360–62
 Khedive, Ottoman, 380
 Kimball, Sidney Fiske, 311–12, 314, 324, 506–7, 525
 Kimmelman, Michael, 559
 Kindig, Thomas, 307
 King, David H., Jr., 387, 390–91
 King, Martin Luther, Jr., 277; “I have a dream” speech, 300–301
King Kong (film), 72
 Kingsley, William C., 54
 Kingwell, Mark, 79, 80, 87–88
 Kirkpatrick, Jeanne, 409
 Kopple, Robert, 546–47
 Kostof, Spiro, 106
 Kramer, Lloyd, 269
 Kuper, Theodore Fred, 323
- Labor, slave, 432, 526–27
 Labor disputes, unions, and strikes, 226–27
La Casa Grande, 196, 200–204
La Cuesta Encantada (The Enchanted Hill), 186, 193, 199–204. *See also* Hearst Castle
 Lady Liberty. *See* Statue of Liberty
 Lafayette, Marquis de, 269, 320
 Laing, Suzaan, 155–57
 Lamb, William Frederick, 81, 89, 336, 337
 Lamperti, John, 465
 Landmarks Preservation Law, 178, 179
 Latrobe, Benjamin Henry: Capitol and, 433–35, 440–41, 530; Jefferson and, 318, 506; Mills and, 506–7; Washington Monument and, 507; White House and, 528–30
 Latrobe, John H. B., 306
 Lawrence, M. Larry, 245
 Lazarus, Emma, 377–78
 League of Nations, 399–401, 455; failure, 401
 Leal, John O., 10
 Leavy, Patricia, 453
 Le Corbusier, 397, 408–11, 417
 Leepson, Marc, 307
 Leinster House in Dublin, 525
 L’Enfant, Pierre Charles: background and life history, 427, 521–22; Capitol and, 425, 427–28, 521–22; George Washington and, 427, 521, 522; Jefferson and, 425; McMillan Commission and, 283–84; unified vision for national capital, 283–84; Washington Monument and, 503; White House and, 522–23, 532
 “L’Enfant-Washington” proposal/plan, 427–28, 521–23
 Levy, Jefferson Monroe, 321–23
 Levy, Rachel, 320
 Levy, Uriah Phillips, 320, 321, 323
 Liang, Ssu-Ch’eng, 409
 Liberty Bell: changing role, 275–77; historical background and origins, 261, 262, 269, 273–74; as icon within an icon, 273–75; naming, 277
 Liberty bells, miniature, 259
 Liberty Island, 381. *See also* Statue of Liberty
 Libeskind, Daniel, 558, 560

- Lie, Trygve, 406, 409, 411
 Lin, Maya Ying, 481–86, 488–91
 Lincoln, Abraham, 282, 531;
 assassination, 282
 Lincoln Memorial, 281, 282, 288–89;
 aesthetic confusion and
 misunderstanding history, 289–91;
 architecture, 286–89; artists behind,
 295–96 (*see also specific artists*);
 dedication to, 296–97; events that
 changed the iconic meaning of, 298–
 301; French's portrait of Lincoln in,
 291–93; "Getting to Know Mr.
 Lincoln," 293; iconic significance,
 296–301; murals, 294–96; "quality of
 universality," 284, 286–88; symbolized
 salvation of the Union, 294, 296–98;
 symbolizes equal rights for all, 298–301;
 writing on the walls, 293–94
 Lincoln Memorial Commission, 285–87,
 294, 297
 Lipton, Eric, 542
 Littleton, Maud, 322–23
 Lockley, Walt, 181
 Loewen, James, 292
 Low, Frances, 81, 85–86
 Lowe, David Garrard, 173–74, 387
 Lower Manhattan Development
 Corporation (LMDC), 557–58
 Lowry, Beverly, 293
 Lupu, Yonatan, 343
 Lutz, William, 329
- Mabe, Joni, 156
 Madigan, Paul J., 41, 42
 Madison, James, 529, 530
 Mailer, Norman, 329
 Mall. *See* National Mall
 Manhattan: transportation in, 167–68.
 See also New York City
 Manhattan Trust building, 79
 Mankiewicz, Herman J., 188
 March on Washington of August 1963,
 298, 300–301
 Marian Anderson Easter concert, 298–300
 Marling, Karal Ann, 149–50, 159
 Marsh, David, 147
 Marsh, George Perkins, 512–13
 Marshall, George C., 331
 Marshall, John, 503, 504
 Martin, James, 133, 134
- Martinez, Daniel A., 458
 Matyszczyk, Stephanie, 3–4
 McBride, Dennis, 220, 229
 McCullough, David, 51, 52, 54, 55, 59–60
 McDonald, John D., 458
 McDonnell, Janet, 341
 McKim, Charles Follen, 171, 197, 283,
 286, 287, 532, 533
 McKim, Mead, and White, 171, 177
 McLemore, David, 5
 McMillan, James, 283, 284, 286
 McMillan Commission: and changes to
 the capital, 283–85, 532; White House
 and, 532
 McNichol, Tom, 131
 Meigs, Montgomery C., 436–37
 Metcalf, Gordon, 366, 368
 Metro-North Commuter Railroad Division
 of MTA, 179, 180
 Metropolitan Transportation Authority
 (MTA), 179, 180
 Metzger-Richardson, 111
 Mexican-American War, 27, 195, 236
 Mexican independence, 10–12, 118, 195,
 235
 Meyer, Ernest L., 194
 Meyer, Jeffrey, 297
 Mies van der Rohe, Ludwig, 358, 370,
 408, 418
 Miller, Mark Crispin, 153–54
 Mills, Robert: Capitol and, 435; death,
 511; design, 505–6; Independence Hall
 and, 268, 271; life history, 506–9; other
 Washington Monument of, 515–17;
 Washington Monument and, 499, 505,
 509, 512, 513
 Mizota, Sharon, 542, 563
 Model, F. Peter, 407
 "Modern architecture: international
 exhibition," 409
 Modernist art and design, 102, 108–10,
 222–23; "with the plainness taken off,"
 223
 Moisseiff, Leon, 124, 125
 Monroe, James, 435
 Monticello, 305–6; American Revolution
 and, 308; building, 311–17; building
 materials and labor, 317; critiques of,
 318; from "essay in architecture" to
 national shrine, 319–24; finances,
 319–23; how spaces in the house were

- disposed and used, 316; as Jefferson's "essay in architecture," 311, 318 (*see also* Jefferson, as architect); Jefferson's retirement to, 309–11; landscapes and gardens, 318–21; restoration and refurbishment, 324; rooms, 314–17; from 1768 to 1784, 314–15; from 1796 to 1809, 315–19
- Moore, Ruth Brown, 148
- Moore, Tom, 345
- Morfi, Juan, 9
- Morgan, Julia, 199–203; as architect, 196–99; background and life history, 196–99; death, 199; overview, 196; as "revolutionary in a flowered hat," 196
- Morgan, Kate, 248–51
- Morgan, Thomas, 248, 249
- Morris, Frank, 42
- Morrison, Harry W., 217, 218
- Morrow, Gertrude Comfort, 125
- Morrow, Irving Foster, 125
- Moses, Robert, 406, 407
- Mosher, 103–5
- Moss, Roger W., 260
- Moton, Robert Russa, 296–97
- Mumford, Eric Paul, 410
- Mumford, Lewis, 412, 413
- Murphy, Cullen, 426
- Murphy, Henry Cruse, 54
- Muschamp, Herbert, 557, 559
- Museum of Modern Art (MoMA), 409
- Mussolini, Benito, 288, 338
- Myth *vs.* history, 2
- Nachman, Gerald, 166–67
- Nasaw, David, 189, 193
- National Mall, 283–84, 288, 290, 301, 337, 498
- National Vietnam Veterans Memorial. *See* Vietnam Veterans Memorial
- Native Americans: at Alcatraz, 43–45. *See also* Alamo
- Neill, James Clinton, 16
- New York Bridge Company, 54, 55, 60–62
- New York City, 165. *See also* Grand Central Terminal; Manhattan
- New York City Building, 406
- New York Landmarks Preservation Commission (LPC), 178, 179
- Ngo Dinh Diem, 473–75
- Ngo Dinh Nhu, 473–75
- Niemeyer, Oscar, 410–11
- 9/11. *See* September 11, 2001 terrorist attacks
- "9/11 Truth" movement, 552
- Nixon, Richard M., 476
- Normandin, K., 409
- Norris, Isaac, 273, 274
- Norton, Joshua, 120
- Norton, Paul F., 435, 440–41
- Nusbaum, Aaron, 364
- Oakes, Richard, 43–44
- Oddy, Jason, 329
- O'Dwyer, William, 406, 407
- Olszewski, George J., 513
- Onassis, Jacqueline Kennedy, 179
- Osborne, Vesper, 306
- O'Shaughnessy, Michael M., 120–21
- Otis, Elisha Graves, 75–76
- Ouroussoff, Nicolai, 561
- Pack, Kevin, 554–55
- Palladian architecture, 312–14, 525
- Palladio, Andrea, 312–14, 525
- Pan American Airlines Building, 177
- Parker, Tom, 460
- Parthenon, 289–90
- Pass, John, 274
- Pataki, George, 561
- Patterson, Bradley, 520
- Peale, Charles Willson, 268, 270
- Pearl Harbor, 448–49, 456–58, 465; historical background, 454–56; in popular culture, 449–53; remembering, 464–65
- Pearl Harbor* (film), 452–53
- Pearman, Hugh, 103, 110
- Peevers, David, 202, 205–6
- Penn, William, 274
- Pennsylvania State House, 259–62, 265; style and source, 262–64; transmutation to national shrine, 267–73. *See also* Independence Hall
- Pennsylvania Station ("Penn Station"), New York, 165, 177–78
- Pentagon, 327–29, 344–46; aesthetics, 337–39; architects and architectural design, 332–46; as bombing target, 337; building, 328, 339–46; building materials, 342; as "concrete behemoth," 328; Department of War and, 328–29, 331, 332; finances, 335, 339–41, 344; historical background and origins,

- 328–33 (*see also* World War II); location, 332, 335–36; racial segregation and, 342; September 11, 2001 terrorist attacks and, 347–48; urgency about completion of, 334, 341–43
- Pentagon Renovation Program (PENREN), 346–48
- Perot, H. Ross, 484
- Petermann, M., 409
- Pevsner, Nicholas, xvii
- Philadelphia State House. *See* Pennsylvania State House
- Piccirilli, Giuseppe, 292
- Pitch, Anthony S., 434
- Platt, Charles C., 411
- Polk, James K., 20
- Pollack, Sydney, 398
- Pope, John Russell, 286, 337
- Pope, Thomas, 51
- Powell, John Wesley, 212
- Preis, Alfred, 461–62, 465–67
- Presidio San Antonio de B exar, 8
- Presley, Elvis, 140, 145–46, 150, 460; in army, 144; awards and honors, 147–48; death, 146–47, 152, 154; and the Elvis myth, 158; home, 149–50; in Las Vegas, 146; life history and career, 140–43; marriage, 144; memorabilia, 156–58; movies, 144–46; Red Phase (1973–77), 150, 153–54; return from the army, 144–45; Swingin’ Bachelor Phase (1964–68), 150–52; on television, 144–45. *See also* Graceland Mansion
- Presley, Gladys, 140, 142, 144, 150, 151
- Presley, Lisa Marie, 144, 146, 154, 155
- Presley, Minnie May, 150, 152, 154
- Presley, Priscilla, 144, 150, 154
- Presley, Vernon Elvis, 140, 150, 152, 154
- Price, George, 485
- Pricola, Jennifer, 66
- Pulitzer, Joseph, 388–89
- Pulizzi, David, 158
- Rand, Ayn, 95, 99
- Randolph, Asa Philip, 300
- Randolph, Martha Jefferson, 319
- Raskob, John Jacob, 79–82
- Reclamation Act, 213
- Reed, Charles A., 171, 175, 181
- Reed, William, 432
- Reed & Stem, 171, 175, 181–82
- Reid, James William, 239–42, 252, 253
- Reid, Merritt J., 239, 240, 242, 252, 253
- Reimer, Stephen R., 152–53
- Rhodes, Thomas L., 321
- Rich, Frank, 560
- Richardson, William, 118
- Riley, Edward M., 273, 275, 276
- Robertson, Leslie, 546, 548
- Rochefoucauld-Liancourt, Duc de la, 317
- Rockefeller, David, 543–44
- Rockefeller, John D., Jr., 407, 409–10
- Rockefeller, Nelson, 407, 544
- Roebbling, Emily Warren, 57, 62, 63; as “surrogate chief engineer,” 59–60
- Roebbling, John Augustus, 52–57, 61, 63
- Roebbling, Washington Augustus, 55, 57, 59, 60, 62–64
- Roebuck, Alvah Curtis, 362–64
- Rogers, T. Mellon, 271
- Roman Empire, architecture in, 290–91
- Roosevelt, Eleanor, 299
- Roosevelt, Franklin Delano: “Day of Infamy” speech, 464–65; Hoover Dam and, 215, 222; Pentagon and, 331, 336, 337, 342; United Nations and, 401; White House and, 521, 533, 535; during World War I, 331
- Roosevelt, Theodore, 213, 285, 521; White House and, 531–33
- Rosenbaum, Ron, 560
- Rosenthal, A. M., 405
- Rosenwald, Julius, 364–65
- Ryan, William, 536
- Rybczynski, Witold, 328
- Sales, Nancy Jo, 552
- San Antonio de Valero, 9, 10
- San Carlos*, 117
- Sandage, Scott, 301
- San Francisco, 119
- San Francisco Bay: expeditions to find, 117–18; naming of the entrance to, 118. *See also* Golden Gate Bridge
- Santa Anna, Antonio L opez de, 13, 21; Battle of the Alamo and, 17, 18; fall of, 19–21; rise of, 11–12
- Sausalito, California, 118, 119
- Savage, John, 216
- Schulze, Franz, 358–59
- Schumer, Charles E., 415
- Schuyler, Montgomery, 66
- Scott, Pamela, 437, 438
- Scruggs, Jan Craig, 479–81, 485, 487

- Seale, William, 520, 523, 526
- Sears, Richard Warren, 362–65
- Sears Merchandising Building Tower, 364
- Sears, Roebuck, and Company: catalogues, 363–66; history, 362–66; as largest retailer, 366; a new home for, 366–70 (*see also* Sears Tower)
- Sears Tower, 351, 352, 366, 370; aesthetics, 356–57; architects/engineers, 357–59, 370 (*see also* Khan, Fazlur); architecture, 354–57, 366–70; building materials, 355–56; critical reception, 369–70; finances, 367; historical background and origins, 354–57, 366; “The Nation’s Wish Book” and, 363; Second Chicago School and, 357–59; “shop at Sears and save,” 362–63; size, 352–54, 369, 370; as “the most distinctively American thing in the world,” 354; tourism, 352; Wright and, 353–54
- Sears Watch Company, R. W., 363
- Seldes, George, 194
- September 11, 2001 terrorist attacks, 347–48, 453, 515, 542–43, 549–52; conspiracy theories regarding, 552; documentaries and movies about, 552, 555; impact on New York City, 556–57; memorial/monument for, 556–62; memorial services, 551–52; and popular perception of WTC, 554–55; souvenirs and merchandise related to, 556; what happened to Twin Towers in, 552–53
- Shackleton, Robert, 262
- Shepherd, Roger, 517
- Shreve, Richmond Harold, 81, 88–89
- Sidey, Hugh, 485
- Silberman, Robert, 155
- Silverstein, Larry, 557, 560, 561
- Simon, Paul, 158
- Skidmore, Owings and Merrill (SOM), 543
- Skilling, John, 546, 548
- Skyscraper(s), 357; early Chicago, 416; first building to be called a, 355; historically considered, 74–76; in New York, 76–77; style, 77–78; tallest, 72, 78–79, 352–54, 369, 514, 545–49
- Slackman, Michael, 461
- Slave labor, 432, 526–27
- Smith, Alfred E. (“Al”), 79–80, 82, 87
- Smith, Carl, 354–55
- Smith, G. E. Kidder, 171
- Smith, Henry, 16
- Smith, Perry Coke, 411
- Smythe, William, 254
- Sofarelli, Michael, 472
- Somervell, Brehon Burke, 332–40, 345; as “dynamite in a Tiffany box,” 331–32
- Spain, 211; Alcatraz and, 27. *See also* Alamo; Mexican independence
- Spalding, Matthew, 502
- Speer, Albert, 338
- Spreckels, John Diedrich, 244, 246
- “Stalinist architecture,” 339
- Starr, Kevin, 119, 121, 134–35
- Starrett, Paul, 84, 90
- Starrett, William, 74, 84, 85, 354
- Starrett Brothers construction company, 84
- State House. *See* Pennsylvania State House
- Statue of Liberty, 375–78; American Committee of, 377, 386–90; Bartholdi and, 376, 379–85, 387, 389–92; changes made in 20th century, 392; Dedication Day, 390–91; design, 382–84; face of Lady Liberty, 384; finances, 377, 387–89; historical background and origins, 378–84; immigration and, 377, 378; location, 381; in popular culture, 392–93; purpose, 384; realization, 385–86; sources for the face of, 384; successive political meanings, 376–77
- Steelworkers, 85–87, 126–29
- Steinberg, Theodore, 210
- Stem, Allen H., 171, 175, 181
- Sterling, Christopher, 522
- Stern, Robert, 164
- Sterritt, David, 6
- Stimson, Henry, 331, 337
- Stoddert, Benjamin, 528
- Story, Hampton L., 236–38, 240, 241, 244
- Stow, John, 274
- Stranahan, James, 52, 61, 64
- Strauss, Joseph Baermann, 116, 121–25, 128–31
- Strickland, William, 269, 275
- Stripped Classical architecture, 338
- Stroud, Robert Franklin (“Birdman”), 33–34
- Sullivan, Ed, 143
- Sullivan, Louis, 77, 174, 352, 357
- Swanberg, William A., 190
- Swerdlow, Joel, 486–87
- Swope, Edwin, 41
- Symbols, xvi

- Tafel, Edgar, 103, 104
 Taft, William Howard, 285, 294, 297, 533
 Taliesin, 97, 98, 109
 Taliesin Fellowship, 98–99
 Texas: conflict between Mexican government and, 12–13, 16; independence, 18, 19. *See also* Alamo
 Thornton, William, 430–33, 438–39
 Tobin, Austin J., 542, 544, 547
 Toker, Franklin, 102–4
 Tomlinson, Ebenezer, 260–62
 Tourism, 352, 422–23
 Tozzoli, Guy F., 545
 Trachtenberg, Alan, 65–67
 Trachtenberg, Marvin, 378–79
 Travis, William Barret, 14, 17, 18
 Troost, Paul Ludwig, 338
 Trueman, Chris, 455
 Truman, Harry S., 403–4, 412, 534–35
 Tuck, Jim, 11, 21
 Turner, Charles, 463
 Turner, George, 429, 430
 Turner, Reuben B., 30
 Turtle Bay area, 406–7
 Twain, Mark, 511
- United Nations (UN): Board of Design, 409–11; history, 401–4; League of Nations and, 401–3, 409; in popular culture, 396–98; structure, 402
 United Nations Headquarters (UNHQ), 395, 396; additions to UN complex, 414; buildings, 412–13; conflict with the critics, 411–13; design, 408–13; finances, 406–7, 412; Gift Centre, 398; international organization, style, and architects, 407–11; as “international symbol of neglect,” 414–15; in New York, 404–7; opening, 412; renovation and refurbishment plans, 415; search for and debate over location of, 404–6; symbolism, 409
 United Nations Headquarters Committee, 406
 United Nations Relief and Rehabilitation Administration (UNRRA), 403
 United States Capitol, 421, 422, 426, 428–30, 438, 523; architects, 438–43 (*see also specific architects*); architectural style and design, 428–31; beginnings, 426–28; building, 431–38; burned down by British, 433–34; as “cathedral of our national faith,” 422; “conference” design, 431; Hollywood architectural stand-ins, 424–25; jealousy of architects, 430–31; levels, 422; “most approved plan” for, 428–30; name change, 425–26; in popular culture, 423–25; restoration, 434–35; visitors, 422–23
 USS *Arizona*: life and death of, 458–59; symbolism, 449
 USS *Arizona* Memorial, 447–49, 460–65; authorization of the creation of, 460; completion of, 463; publications about, 449; symbolism, 449. *See also* Preis, Alfred
- Vanderbilt, Cornelius, 168
 van Doren, Carl, 258
 Van dyke, Theodore S., 236
 van Zanten, David, 357
 Vietnam veterans, 477–78
 Vietnam Veterans Memorial, 471–73, 478–81, 487–88; dedication, 486–87; elements, 472; Frederick Hart’s “The Three Soldiers,” 490–91; as a vision of Jan Scruggs, 479
 Vietnam Veterans Memorial Commemorative Plaque (In Memory Plaque), 491
 Vietnam Veterans Memorial Fund (VVMF), 478–81
 Vietnam Veterans Memorial Wall (The Wall), 472, 478, 487–88, 490–91; compromise, 485–86; orthodoxy and opposition, 484–85
 Vietnam War, as a different kind of war, 473–77
 Vietnam Women’s Memorial, 492–93
 Vietnam Women’s Memorial Project, 492
 Viollet-le-Duc, Eugène Emmanuel, 77, 78, 356, 385
 Vizcaíno, Sebastián, 195, 235
 Vogel, Steve, 334, 336
 von Eckardt, Wolf, 481
- Wagner, Robert F., 544–45
 Waldorf-Astoria Hotel, 80–81, 84, 89, 405
 Walker, Peter, 558–59
 Walter, Thomas Ustick, 436, 442–43
 War Department. *See* Pentagon
 Warner, Charles Dudley, 511
 Warner, John W., 480, 485
 War of 1812, 529–30

- Warren, S. Whitney, 165, 171–72, 174–77, 181, 182
- Warren & Wetmore, 171–72, 174–77, 182
- Washington, George: apotheosis of, 502–3; blending “stupendousness with elegance,” 502–6; Capitol and, 427, 430–32 (*see also* “L’Enfant-Washington” proposal/plan); and establishment of federal capital, 521; L’Enfant and, 521, 525 (*see also* “L’Enfant-Washington” proposal/plan); life history, 499–502, 520; “President’s Palace” and, 523; surveyor, soldier, planter, president, 499–502; White House and, 520, 521, 524
- Washington Monument in Baltimore, 515–17
- Washington Monument in Washington, D.C., 497–99, 503–6, 512–15; blending “stupendousness with elegance,” 504, 505; building materials, 513–14; construction, 512–14; dedication, 514; finances, 504, 509–12, 515; foundation-laying ceremony, 509–10; foundations/cornerstone, 509–11; historical background, 498; ownership, 511–12; plans and proposals for, 503–6; restoration projects, 514–15; Robert Mills and, 499, 505, 509, 512, 513, 515–17; visitors, 513
- Washington National Monument Society (WNMS), 504
- Watt, James, 484, 485
- Wayne, John, 5
- Webb, James, 484
- Webb & Knapp, 407
- Weems, Mason Locke, 520
- Weingardt, Richard, 361
- Welles, Orson: as icon maker, 187–89
- Wells, Camille, 154
- Wetmore, Charles D., 171–72, 174–77, 182
- Weymouth, Frank, 216
- Wharton, Clarence, 19
- Wheeler, Joel, 321
- White House, 519–21; architectural design and style, 522–26, 528, 530–31, 536; British invasion of, 529–30; construction, 526–28; Executive Mansion, 520–21; finances, 523–24, 528, 534, 535; as icon or illusion, 536–37; interior decoration, 531; Leinster House and, 525; location, 523; making it into a home, 531; names for, 521; in popular culture, 537–38; refurbishment, renovation, and reconstruction, 531–37; structural problems and dangers, 534–35; a “style proper for the chief magistrate,” 523; symbolism, 530, 537, 538; third floor, 533; Truman balcony, 534; West Wing, 533
- “White House Complex,” 520
- Whitney, Gleaves, 287
- Wien, Lawrence Arthur, 546–47
- Wilbur, Ray Lyman, 214, 215, 217
- Wilder, Billy, 248
- Wilgus, William J., 170, 171
- Wilkins, James, 120
- Williams, Morgan Stuart, 193
- Williams-Ellis, Bertram Clough, 95–96
- Willis, Bailey, 130
- Willson, Millicent, 192, 193
- Wilson, Mark, 196
- Wilson, Richard Guy, 224
- Wilson, Woodrow, 399–400
- Winslow, Lorenzo Simmons, 533, 535
- Winthrop, Robert C., 509, 512
- Witmer, David Julius, 332, 333
- Wodehouse, P. G., 203–5
- Wolner, Edward, 83
- Wood, Robert Elkington, 365–66
- Woodiwiss, Michael, 32, 33
- Woodrum, Clifton A., 332
- Woolley, Edmund, 260–64
- World Trade Center (WTC), 72, 541, 542; architectural design, 543–48; construction, 547–48; criticisms of, 547; design, 543; finances, 543; history, 543–45; in popular culture, 553–55; structure, 547–49; symbolic meaning, 549; as tallest building, 545–49. *See also* September 11, 2001 terrorist attacks
- World Trade Center (WTC) Site Memorial Competition, 558–62
- World War I, 331, 398–99
- World War II, 328–31, 343, 455; United Nations and, 401–4. *See also* Pearl Harbor
- Worsley, Giles, xviii
- Wren, Christopher S., 415
- Wright, Frank Lloyd, 174; as architect and icon, 95–99; on architecture and aesthetics, 174; on architecture and

- collaboration, 411–12; background and life history, 96–99; death, 95; Edgar Kaufman and, 94, 99–104, 106, 107, 111, 112; European Modernism and, 108–10; Fallingwater and, 94, 95, 100–108, 110–12; Fallingwater as “gentle nod to international style” from, 108–10; on Lincoln Memorial, 290; Sears Tower and, 353–54; self-assessment, 95–96; on skyscrapers, 354; on UN Headquarters, 411–12
- Wyeth, Nathan C., 533
- Yamasaki, Minoru, 542, 545–47, 549, 562–64
- Young, Kevin R., 2
- Young, Robert, 177
- Young, Walker R. (“Brig”), 217–19
- Zeckendorf, William, 177
- Zeckendorf, William, Sr., 406–7
- Ziamba, Stanley, 367, 370

About the Author

DONALD LANGMEAD is an adjunct professor at Louis Laybourne Smith School of Design, University of South Australia. Now retired, his primary training is as an architect, although he has spent most of his professional life in academia. He holds postgraduate qualifications in city planning and the history of architecture. Langmead has published nine books in the field (four as joint author) in Australia and the United States, as well as many articles in Australian and overseas journals.