

PAULINE MAIER, MERRITT ROE SMITH, ALEXANDER KEYSSAR, & DANIEL J. KEVLES



A History of the United States

INVENTING AMERICA

Volume

1



Inventing America

A HISTORY OF THE UNITED STATES

VOLUME 1: TO 1877

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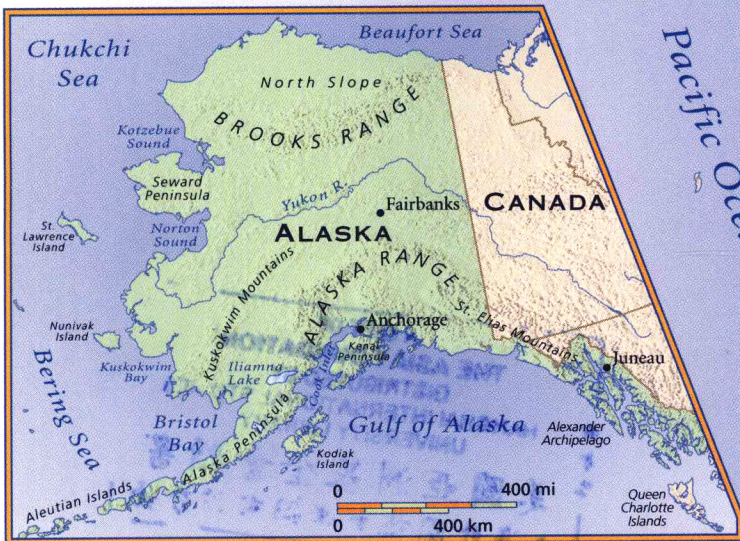
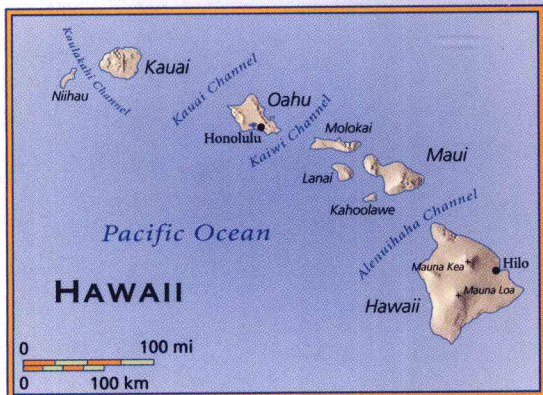
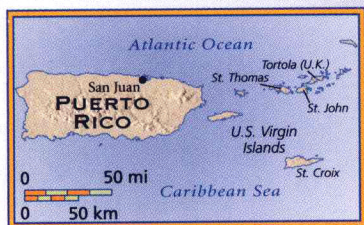
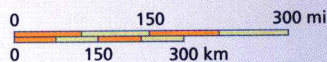
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Physical/Political Map of the United States





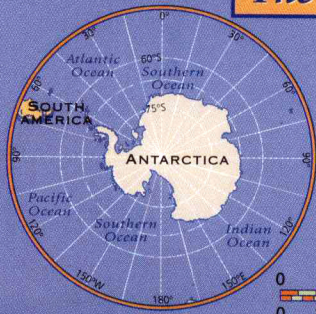
Political Map of the World

Scale at equator

0 750 1,500 mi
0 750 1,500 km



The Poles





For Eleanor Smith Fox (1908–2001), mother, guiding light, friend. —Merritt Roe Smith

*For Anne Kevles, who so much wanted to cast her vote in the next election;
Eric F. Goldman, who shepherded a young physicist into American history;
Bettyann, partner in all things; and Jonathan, Beth, David, and their children
here and to come, shapers of the new century. —Daniel J. Kevles*

*To the memory of my parents, Alexander and Grace Atkinson Keyssar, who
made many things possible. —Alexander Keyssar*

*For my parents, Irvin L. and Charlotte Rose Rubbelke; my children, Andrea,
Nicholas, and Jessica, and also Corinne Maier (b. 2000), who will help make
American history in the twenty-first century. —Pauline Maier*

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Preface

Inventing America is a new history of the United States whose unifying theme is innovation. It aims to integrate into a compelling narrative the persistent inventiveness of Americans in devising new political institutions and practices, economic arrangements, social relations and cultural motifs, adaptations to the natural environment, and exploitations of science and technology.

Americans have repeatedly resorted to experiment in the face of changing circumstances, drawing on ideas and practices from abroad or from native soil. They have long considered this penchant for innovation a distinguishing feature of their culture and history. The willingness of Americans to remake their world has run from the adaptations the colonists made to survive in an unfamiliar environment to the New Deal's try-anything response to the Depression; from the adoption of a radically redesigned corporation as a distinctive and powerful economic institution to the establishment of regulations intended to bind industry to the public interest; from the forging of an African American culture by slaves to the resourceful efforts of women to find ways of combining family and career. And since the late nineteenth century, Americans have sought to remake their position in the world, mixing pragmatism with evangelism, drawing from the experience of failure as well as success.

Our text is concerned throughout with the bold experiment in popular self-government that characterized the birth of the United States and continues in our politics and society. While writing a national narrative, we weave together numerous stories on the ground, tales of regions, institutions, businesses, social groups, and individual men and women. We place renewed emphasis on national and state governments; both have often acted as powerful agents of social and economic change, and the states have provided laboratories of political innovation. We also recount the transforming dynamism of business enterprise and its effects throughout society.

We are acutely aware that a good deal of the American story does not merit celebration. It has entailed retreat as well as advance, conflict as well as consensus, and the use of government to block change as well as to advance it. We probe the gap—originally wide and, in many respects, ongoing—between the promise of the United States and the real-

ity of its practices, including slavery, the brutal treatment of Native Americans, the discrimination against women, immigrants and minorities, political and economic inequities, and the degradation of the environment. Yet we are also concerned with how Americans have narrowed that gap by enlarging the scope and meaning of the nation's founding ideas and ideals.

The most original aim of this text is the treatment of science and technology as integral elements of American history. Technical innovation has been important from earliest times, when, in a remarkable feat of plant breeding, pre-Columbian peoples cultivated primitive grains into maize. With the arrival of Europeans, Americans began importing knowledge, technology, plants, and animals from abroad, a process that mirrored the import of capital, people, and culture, and they established themselves as members of a global exchange. They adapted the imports to their own needs while developing an indigenous capacity for innovation that produced its own, increasingly transforming effects. The activities of naturalists and scientific societies in eighteenth-century America contributed to the creation of an American identity. The technological and organizational innovations of the nineteenth century changed the ways Americans worked, lived, and spent their leisure. And at least since the nation's centennial, in 1876, science and technology have been crucial to its security, economy, health, and quality of life.

Despite the enormous importance of technology and science in American history, most texts do not come to grips with it. Our book seeks to remedy that neglect, while refraining from giving technological change undue weight in the overall narrative. We have introduced science and technology as parts of mainstream history, recounting their broad social and economic consequences—how electricity lit up the urban night, for example, or how domestic innovations changed the daily lives of women. At the opening of the twenty-first century, the enormous impact of science and technology on the world is beyond dispute. Our text seeks to explain to students how they came to exercise so much influence and power in the United States, emphasizing that both are the products of human agency rather than of forces beyond human control. We have found that such a

focus provides students in survey courses with a recognizable bridge to periods in the past when science and technology were also transforming the world. Students respond to accounts of these changes and readily acknowledge their importance.

Readers will find that the integration of science and technology into the story enriches and, in certain respects, reconfigures our understanding of familiar events. For example, antebellum reform movements take on new meaning when seen as intersecting with the technological changes that were helping to spread their messages. In the late nineteenth century, inventors, entrepreneurs, and then corporations began drawing on the boundless frontier of scientific laboratory knowledge to supplement the resources of the closing physical frontier. In the nineteenth and twentieth centuries, technologies such as moving conveyor belts and electrically driven cutting tools made industrial production more efficient but also fostered unrest among workers. And advances in communications such as radio contributed to the emergence of the United States as a world power, as did the new understanding of yellow fever, which protected the crews building the Panama Canal.

Our attention to science and technology sheds new light on the impact of war on U.S. history. War and preparedness have incubated or accelerated social, economic, and technological change. The War of 1812, for example, emerges as a watershed in American economic history. It created the conditions in which entrepreneurs were able to establish the first successful integrated textile factory—at Waltham, Massachusetts. Moreover, as a direct result of the war, the U.S. Army collaborated with arms manufacturers to pioneer the development of interchangeable parts. Both developments were critical to the nation's early industrialization.

Before World War I, the armed services encouraged the new technologies of radio and aircraft, and their development was whirled ahead by mobilization for the conflict. World War I also opened new opportunities for women and blacks and other minorities, and so even more dramatically did World War II, which also stimulated vast migrations across regions and fueled economic recovery and expansion around the country. Further, World War II established the federal government as the dominant patron of scientific research and produced the atomic bomb, microwave radar, electronic computers, jet aircraft, and antibiotics. Under the goad of the Cold War, federal patronage stimulated compara-

ble innovations and provided industry with the knowledge that, in the last quarter of the twentieth century, made possible the creation of biotechnology, personal computers, and the information economy.

Each of the coauthors took responsibility for drafting different sections of the text: Maier, Chapters 1–8; Smith, Chapters 9–16; Keyssar, Chapters 17–22 and 24; Kevles, Chapters 25–33; and Kevles, Maier, and Smith, Chapter 23. However, all of us fully collaborated from the beginning of the project, jointly developing its themes and an outline of the book, and then reading and critiquing each other's chapters with the aim of achieving consistency in approach throughout.

We have made every effort to produce a history that is fully accessible to students, including those who are new to American history. We consider it essential to guide students through the discussions, taking care to facilitate their understanding of the material. We use anecdote and vignette to bring the narrative to life. We also include boxed inserts of primary source materials throughout. Called “American Journal,” this feature is intended to illustrate commonplace life as it was shaped by science and technology. Under titles such as “What’s for Dinner?” and “What if You Get Sick?,” the Journal entries speak directly to the broader themes of the text, and, perhaps more important, are fun to read.

The design and pedagogy of the text are also meant to support student readers throughout. Each chapter opens with a Chapter Outline and a set of Focus Questions on the key subjects that students need to address. The Focus Questions then reappear in the running heads of the chapter to help students keep sight of the main issues in play. The chapters end with Chronologies and brief lists of further readings. (More extensive lists of the sources on which the book rests are provided in the Bibliography on the Norton website for the text.)

With innovation as our main theme, we saw an opportunity to introduce a new dimension to the traditional survey book. Even the most vital prose falls short of conveying, say, the din of the weave room at the Lowell mills when the machinery was operating at full speed, but a palpable, sensory experience of history can be gained from archival audio and visual materials. Digital technology has for some time promised the integration of audio and video materials with print text, and with the support of the Alfred P. Sloan Foun-

dation, *Inventing America* attempts to achieve that goal. Packaged with each new copy of the print text is a CD-ROM (two with the hardcover edition) that contains archival and original multimedia materials designed to enhance the discussion in the text itself. (Icons in the print text signal the corresponding multimedia materials on the CD.) Students reading about the Lewis and Clark expedition, for instance, will be able to listen to audio readings from their journals recorded by studio professionals. The CD includes a wealth of materials ranging from readings from the court records of the Salem witch trials through recordings of slave spirituals to a video of Franklin Roosevelt's "Day of Infamy" speech. It also contains multimedia teaching/research units on the following subjects:

slavery and Washington's Mount Vernon, the Lowell mills, Ellis Island, and the Hanford Nuclear Reservation on the Columbia River. The CD was researched and composed by Robert Martello, of Olin College. We hope that the combination of CD and print text makes *Inventing America* a valuable innovation in the survey course.

DJK
AK
PM
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