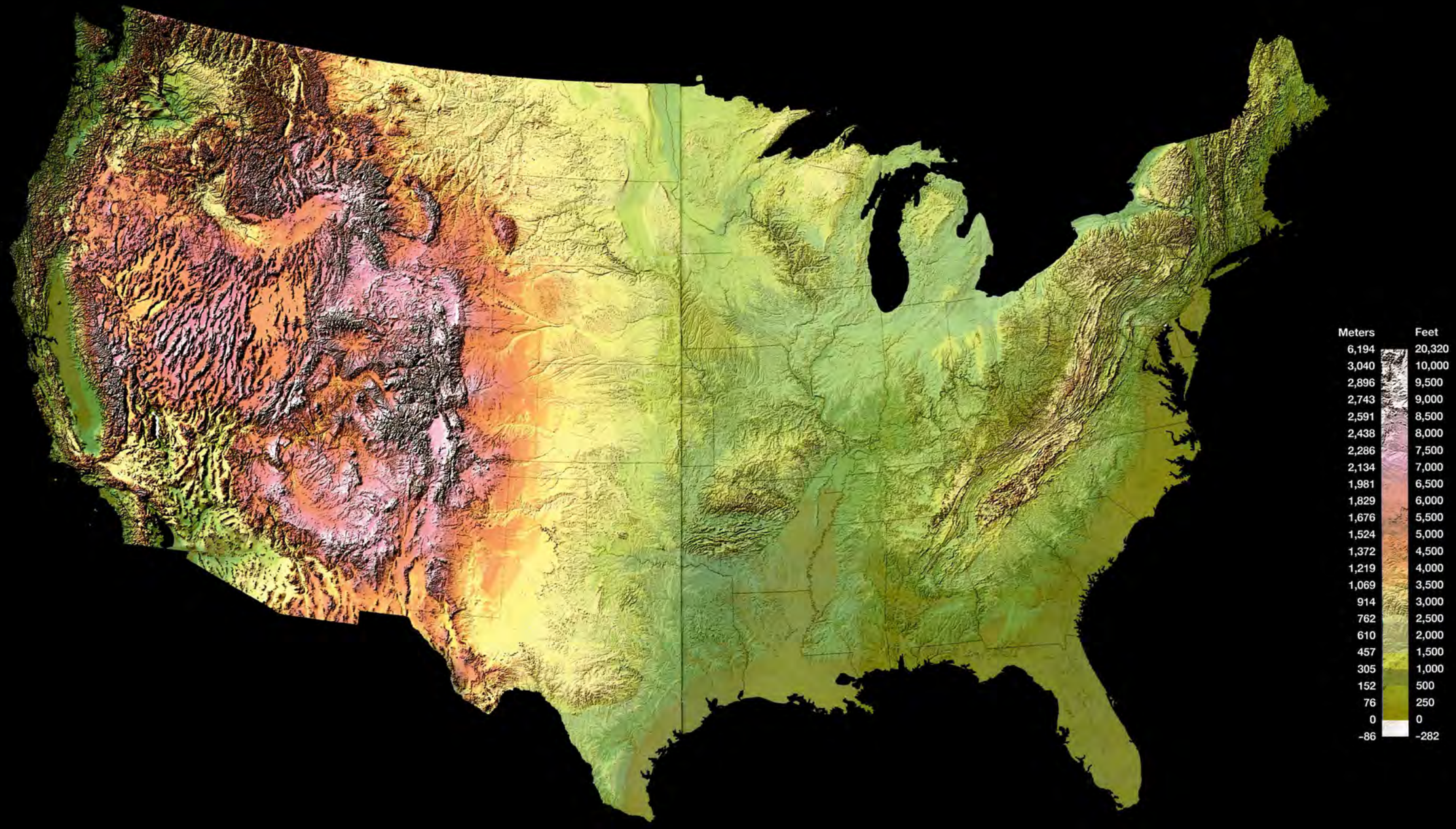
Second Edition

The *Making* of the AMERICAN LANDSCAPE

Edited by Michael P. Conzen

The MAKING of the AMERICAN LANDSCAPE

America's natural landscapes at the continental scale



This map of topographic relief represents the most powerful single factor in shaping the nation's natural habitat, and can be considered emblematic of its ancient landscapes before they were colonized and altered by humans.

Turn to the back for a contrasting view of America's cultural landscapes

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The MAKING of the AMERICAN LANDSCAPE

SECOND EDITION

Edited by

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University of Chicago

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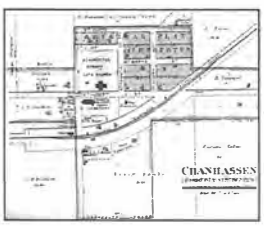
Cover image

This painting, *Evening, Chanhassen*, by Stanford Fenelle (1909–1995), documents a small street village in Carver County, Minnesota, as it looked in 1939. By then, modernity had appeared in the form of electricity and telephone lines, cars, and trucks. But the historic "look" of Chanhassen was still signaled by the steeple of St. Hubert's church (1887), the gable-end homes, and the false-front store near the intersection with Main Street.

Stanford Fenelle studied at the Minneapolis College of Art and Design, and at the St. Paul School of Art, where he later taught. During the 1930s he supervised the applied and fine arts projects of the WPA in Minnesota. After that, he had a long career as a commercial artist, painting hunting dogs in the field for the calendar company Brown & Bigelow.



Chanhassen, 20 miles southwest of Minneapolis, was founded in 1887 and as a hamlet survived largely untouched until an F4-rated tornado hit in 1965, taking out some old buildings. In later years, metropolitan expansion completed the reduction of the village core, and although the church still stands it is now marooned among strip mall businesses and highway improvements. In addition to this historic core, Chanhassen has been home to the recording artist Prince (and still contains his recording venue, Paisley Park Studios), as well as the Minnesota Landscape Arboretum, the Chanhassen Dinner Theater, and the Eckankar Spiritual Campus.

Preface to the Second Edition

THE APPEARANCE of a second edition of this book only after a first lasting 20 years needs some explaining. Nowadays, most books aspiring to interpret a subject from a compelling new vantage point either beget new editions with some alacrity or gather dust on library shelves as noble experiments without a sustained audience. In the present case, the rapid consolidations that occurred in the publishing world during the 1990s saw this collection reissued in rapid succession under three different corporate imprints, and only in the custody of Routledge did the book settle into a steady period of supply and critical acclaim. And, in truth, the editor was approached fairly early in Routledge's management about a new edition, but kept deferring the matter because of over-commitments elsewhere. But, with substantial and accumulating evidence that the book was meeting a genuine need, he finally agreed to undertake a revised edition.

It is important to locate this work within the large, interdisciplinary arena that might be called American landscape studies. Ever since the continent was colonized by Europeans, there have been recorders, interpreters, and critics of American landscapes. In the realm of scholarship, long traditions have developed in the writing of art history and literary criticism intrigued by social and individual perceptions of landscape in America, as well as commentary from designers concerned with the practical and creative needs of land use planning and landscape architecture. But these fields, concerned primarily as they are with perception and practice, have touched only incidentally on the broad and complex historical forces that have shaped whole landscapes themselves. It is in the work of architectural historians, cultural geographers, archaeologists, and folklorists that most direct writing about the actual provenance of cultural landscapes in the United States is to be found. And, not wishing to slight the valuable contributions of any cognate field, it is nevertheless in the literature of cultural and historical geography that a consistent commitment is found to interpreting cultural landscapes as comprehensive, intertwined, regionally distinctive material expressions of human settlement history on the ground. This

literature is what has made this book feasible, although a quick glance at the notes and bibliography will demonstrate how completely interdisciplinary is the contributors' appreciation for and dependence on all relevant historical research.

This book has its roots in the fertile bicontinental traditions of landscape study nurtured by William G. Hoskins and John Brinckerhoff Jackson, and it was written at the outset in the belief that nothing quite like it yet existed in the American literature, and that there was a place for it. But its intellectual genealogy is as gnarled and sinewy as the weatherbeaten oaks that cling to the windy Cheviot foothills of England's Northumbria where the editor grew up. When he began serious exploration of the countryside and small market towns of his native region, first with his father and then on his own, Hoskins' *The making of the English landscape* was a brand new book. As time passed, that volume became, for this editor, a classic statement of the humane interest all civilized souls should have in their surroundings, reaching within an historical framework for a judicious blend of understanding and appreciation of the varied ways people have marked and shaped the lands they have called home.

Discovery of, and eventual commitment to, life in America involved the editor in a strenuous encounter with the American landscape, not immediately through formal study but through a geographer's awareness of and interest in its significance. With Hoskins in the blood, as it were, the overly socioeconomic emphasis of graduate training struck him as ultimately somewhat narrow, and J. B. Jackson's pungent writings on the visible American scene came as a wholly welcome native infusion, reflecting as they did the pulse and robustness of this continent and its people. However, during the 1970s no one seemed ready to write the kind of overview of the historical forces that had shaped the cultural landscapes of the United States in the disciplined sort of way Hoskins had done for England. Transatlantic ties tugged further. An invitation from the editor of the *Geographical Magazine* of London to conceive and guest edit a twelve-part series of short articles on the American landscape provided the editor with the necessary impetus, and the "Fashioning of the American landscape" series, featuring contributions from a dozen American geographers, duly appeared in that journal each month between October 1979 and October 1980.

Despite the subsequent appearance of interesting interpretations by John Stilgoe, Walter Sullivan, and the contributors to an anthology on vernacular architecture edited by Dell Upton and John Vlach, there remained at that time, it seemed, a need for a concise but systematic treatment of the major historical themes in the making of the American landscape. And so, at the—again transatlantic—behest of a British publisher who sensed the broadening scholarly interest in landscape in the United States, this wholly new, more ambitious, and more integrated collection became our attempt to fill the gap.

In a critical appraisal of the style and influence of Hoskins and Jackson in English-language landscape study that appeared in *The interpretation of ordinary landscapes* (1979), Donald Meinig drew attention to the contrast and complementarity between the two writers: Hoskins' emphasis on history, documentation, and the longevity of many landscape features; Jackson's preoccupation with landscape in terms of the way we live in it, and with change and the modern scene, approached through the power of intuitive thinking. It is hoped that this book's authors represent collectively at least some fusion of these virtues.

The major focus is on the 48 contiguous states of the union, although Hawaii and Alaska, while in many respects worlds unto themselves, are included implicitly to the extent that they reflect the diffusion to those distant shores of a number of classic American cultural landscape interventions. We harbor no illusion that the volume treats the grand topic comprehensively or in the only plausible way. The authors, including some veterans from the magazine series, were given wide latitude to contribute original chapters that strongly display their individual perspectives shaped by years of field and archival work. The editor makes no apology for limiting the authorship in this particular book to historical geographers, because that has resulted in a certain valuable consistency of outlook and premise, notwithstanding the diversity of formal training and employment, and the irrepressible individualism apparent in the writing. The cardinal concern in involving them has been their ability not only to look, but to see.

The book aims at an unabashedly evolutionary interpretation of the American landscape. It draws attention to remnants from the past embedded in today's scene (to counter the oft-encountered cliché that obsolescence leads quickly to replacement and effacement). And it carries themes roundly to the present, where appropriate. To these goals the editor has added further purpose: a bias in the illustrations towards modern views that remind the reader how detectable historical forms can be in today's landscapes, and an insistence on documentation that carries arguments beyond mere assertion and opens them to assessment and further reformulation. The editor is pleased to acknowledge the inspiration of W. G. Hoskins through the title of this book and, in this otherwise truly American initiative, that of J. B. Jackson, who contributed a closing chapter to the first edition.

Revisions for this second edition sought to broaden even further the range of themes addressed, especially those important in the last half-century of landscape evolution. The table of contents hints at these concerns. The deaths of two authors prompted some rethinking about coverage and balance, some re-shuffling of assignments and the welcome addition of Charles Aiken, Susan Hardwick, Joe Wood, and Bret Wallach to the volume. Each has written extensively on their respective themes, but not with the sweep, brevity, and punch asked of them here. In addition to expanding and updating coverage of the

unique transformation of Southern plantation landscapes, it seemed imperative to create individual and complementary chapters covering landscapes of civil society and religious expression. The editor tried to adhere to the rule that authors could contribute only one chapter, but Wilbur Zelinsky's recent major study of religion in the urban landscape, together with his career-long record of tramping through countless rural cemeteries, made him the odds-on favorite for the new chapter on religion. While the urban and automobile chapters deal with large modern structures, the editor felt a new chapter on megastructures and the widespread theming of consumption was warranted. As a replacement for Brink Jackson's highly personal chapter on the nature of the American house in the first edition, Bret Wallach's new reflections on the conflicted utopian strivings of Americans as revealed in their contemporary landscapes provides perhaps an even more appropriate coda for this edition.

Debts intellectual and practical are owed in this effort as in all others. Acknowledgement of scholarly stimulus we confine to the Notes for individual chapters. It is impractical in a multi-authored work such as this to record all debts of a practical nature, but those to a crucial few must be mentioned. The editor is grateful for the unstinting help given for the revised edition by research assistants Diana Rehfeldt and Daphne Yin with library checking, word processing, and color-image clean-up during editorial work on the manuscript. Kathleen Neils Conzen has lived with this book in various ways for over 20 years and offered countless comments and suggestions along the way; to her the editor's deep appreciation for her interest and knowledge. David McBride, former Senior Editor at Routledge, and Stephen D. Rutter, Social Sciences Publisher at Routledge, gamely endured all the complications that a long-gestating book like this can throw up, and through it all maintained, at least for the benefit of the editor, an amazing confidence in the ultimate success of the venture. To both for their faith and creativity we are deeply indebted. Had Stephen realized how the enticing offer of color illustrations would challenge and complicate the contributors' and editor's revisions, he might have withdrawn it for a faster completion. But we are glad he did not, and hope the end product justifies his extraordinary patience.

Michael P. Conzen
Chicago, Illinois, 2009

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Sources for other illustrations

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The following figures are the work of the editor in collaboration with the respective chapter authors: Figs. 3.1, 4.1, 4.2, 4.5, 7.1, 7.9, and 10.1.

Contents

Foreword to the First Edition

THIS IS an important book about ourselves. It is a searching look at the home we have made, and are continually refurbishing, on this continent. It is focused on our visible surroundings, on that which we live amidst—on the landscapes we have created.

For most Americans such a book may require some adjustment of vision, some change in common ways of looking and thinking about their immediate world. It may require a considerable stretching of their usual sense of the key term: *landscape*. Americans need help with that word because it still most likely brings first to mind one of its more limited uses: the decorative design of formal parks or gardens, or the plot of ground in front of the house; or vaguely appreciative views of attractive countrysides; or a popular form of artistic rendition of such scenes. To ask us to accept, as this book does, that *landscape is comprehensive and cultural*; that it encompasses everything to be seen in our ordinary surroundings, and that virtually all that can be seen has been created or altered by human intervention, is to open up a challenging and rewarding way of thinking about our everyday world. To ask us, moreover, to see *landscape as history* adds a further dimension and enrichment, for it asks us to see that every landscape—not just those with "historic sites"—is part of a vast, cluttered, complex repository of society, an archive of tangible evidence about our character and experience as a people through all our history—if only we can learn how to read it.

One of the great virtues of landscape study is that it lies open to us all, it is accessible, everywhere, every day. Anyone can look, and, of course, we all need help to understand what we are looking at, but we can readily learn more and more and make ever better sense of what we see. Landscape study can be a lifelong education and pleasure. William G. Hoskins, one of the godfathers of this work, was wont to liken the English landscape to a symphony and to urge the importance of moving beyond a general esthetic response to a beautiful mass of sound to the point where one could clearly recognize the various themes, how they become woven together, the new harmonies that emerge, and all the subtle variations that enrich the work. It is an attractive metaphor in that

it suggests an immense range of works extant, the unlimited possibilities for appreciation, the intricate relationships to be understood—and, we should also acknowledge, the fact that we may not always like what we encounter.

The making of the American landscape provides an unprecedented introduction to an immense composition. It sketches the general structure, describes the main themes, and offers commentary upon a great many details, dynamics, and variations. It has much to offer those already attuned to the topic, for we have never had such a comprehensive treatment, and we must hope that it will be an attractive guide to those who have never given much attention to such matters. For surely it is desirable for Americans to learn about and reflect upon this continuous shaping of their surroundings. As the metaphor of *home* suggests, it must bear, directly and subtly, in ways beyond measure if not beyond dispute, upon the quality of American life. So far we seem only dully or incoherently aware of such things. We may cry out in protest of direct threats to our own surroundings, but in general so much of our response to landscape and history seems almost pathologically crippled: a people unable to discern, or care about, the difference between a theme park and the real thing—and ready to turn the real thing into a theme park at the slightest prospect of profit. No book can cure such severe cases, but one would like to think that this one especially, and others in the burgeoning literature on landscape, might begin to provide some antidote to our long-apparent tendency to live "a life of locational and visual indifference." But I hasten to add that this book is not primarily a prescription. It is neither a critique nor a celebration of what Americans have done to their surroundings; it is, rather, a fascinating story of the building and rebuilding, the continuous tinkering and refurnishing, of their home in North America. Once one begins to look at landscapes through the help of these historical geographers, any idea that even the most ordinary and familiar parts of the American scene are too simple, shallow, and monotonous to be given serious attention should be banished forever.

Michael Conzen tells something of the lineage of the book in his Preface. I would like to add just this. Half a century ago his father, M. R. G. Conzen, crossed the narrow seas and brought a Germanic thoroughness to the detailed analysis of English town morphology, with enduring effect upon a whole field. A generation later the son, steeped in the tradition of English landscape studies, crossed the broader seas to continue his academic training at the premier center for historical geographic study in North America. Given that lineage, that particular combination of heredity and environment, it is perhaps no surprise that Michael Conzen soon emerged as one of our most original and penetrating geographical interpreters. It is altogether appropriate that this fine book should bear his name, but I am not sure that "editor" gives the right impression; we might better think of Michael Conzen as the

commissioner, inspirer, part composer, arranger, and conductor of a grand "symphony" on the American landscape.

D. W. Meinig
Syracuse University

Introduction

> Life must be lived amidst that which was made before. Every landscape is an accumulation. The past endures.
>
> (D. W. Meinig 1979, p. 44)

> Landscape is not merely the world we see, it is a construction, a composition of that world. Landscape is a way of seeing the world.
>
> (D. E. Cosgrove 1984, p. 13)

LANDSCAPES FASCINATE us because they speak through the language of visual observation of the age-old relationship between human beings and their environment. Our collective sensibility toward landscape, however, appears to be a relatively modern development in history, emerging among the European elite during the Renaissance. The idea of landscape took a long time to crystallize, during which it represented a wide range of political, social, and moral tenets expressed through painting and literature, becoming accepted by the 18th century as a notable aspect of taste. Although it declined in the late 19th century, when the divergence between science and art and the advent of photography removed it as a central cultural concept, it has continued to be important as an avenue of scientific inquiry—especially in geography—as an approach to physical planning, and, across a broader social spectrum, as a source of personal enjoyment.[1]

Landscapes interest people in various ways. Most would acknowledge an elementary regard for "reading" the landscape in order to navigate through it. We live in physical space and our need to traverse it requires at least a fleeting attention to avenues and structures, their arrangement, and their interrelations in terms, as it were, of a road map. For many that is also the limit of their interest. For others there is curiosity about the landscape as an embodiment of the cumulative evidence of human adjustment to life on earth. In this sense, landscape holds an intellectual interest in offering a palimpsest of signs for "decoding" and analyzing our human use of the globe. And third, landscape can be a powerful force in shaping the individual's emotional world of sensations and moods, thus contributing an affective dimension to those of function and intellect.[2]

What exactly do we mean by landscape? The ambiguity of the word is both its strength and weakness. Historically, the term dates from the Middle Ages when it denoted "a district owned by a particular lord or

inhabited by a particular group of people."[3] The modern word stems from the 16th century when Dutch and Italian painters used it to mean a representation of scenery, either in general or with respect to a particular view.[4] In common parlance, landscape as a generic term can be understood to encompass all the visible world. A particular landscape is that characteristic portion of the world visible by an observer from a specific position. Implicit in these notions is the dual nature of landscape: as object and subject. This has caused no end of difficulty for both scientific and everyday use, since objective and subjective study employ methods usually distinct and largely incompatible. Another source of ambiguity lies in the need to distinguish between the area covered in the "scene" and its actual contents—the landscape's spatial extent and configuration, and the material features contained therein. Yet another ambiguity lies in the possibly different meanings given to landscape by those who live in it and those who see it with detachment—the dichotomy between insider and outsider.[5] A final ambiguity is introduced when we try to reconcile individual responses to landscape with collective ones. Although it is not the direct purpose of this book to examine or resolve these intriguing issues at any length, a few points deserve mention.

Landscape is grasped initially through its visible elements, a composition of material features in space, but its study is by no means limited to them; interpretation draws from the outset on cultural expressions and related factors that may not be at all visible.[6] Whether a landscape is studied for its own sake—as a thing "out there" to be explained—or as a means to understanding the society or societies that have produced it, relevant nonmaterial phenomena such as language, moral values, and social power come readily to mind.

Landscapes are commonly distinguished as natural or cultural. This is a useful distinction for historical purposes, but in practice few landscapes in economically advanced regions have escaped some degree of human modification.[7] This is not to say that nature has lost power in shaping the visible pattern of the land, even in the modern age; rather, that the human imprint is by this stage so deep that even natural elements, such as forests and rivers, have not remained untouched in their extent or composition by human occupance. So in many areas, even in the United States, there are few localities that can legitimately be considered still natural or wild, and this elevates the emphasis on human factors in their transformation. The cultural landscape is, in truth, then, a composite of the historical interaction between nature and human action. Nevertheless, there has long been a tendency in much writing on cultural landscapes to ignore or denigrate the role of physical forces;[8] the scope for interpretation, it is argued, is compelling enough even when limited to the form and arrangement of settlements, the pattern of fields, roads, and other transport routes, crops, other extracted resources, and so forth.

These formal elements—the raw material of landscape study—need, certainly, to be regarded as appropriate in themselves for morphological study, but not without recognizing a more holistic, symbolic significance. The cultural meanings attached to these forms by those who created and maintained them need drawing out, for in practice they are seldom self-evident.[9]

There are several cardinal approaches to landscape study apparent in writing on the American scene and they are worth distinguishing, for they will make the choice of content and arrangement of the chapters in this book more apparent. Donald Meinig, in a delightful essay entitled "The beholding eye," has offered a shortlist of perspectives by which people may view a landscape.[10] He distinguishes "ten versions of the same scene" in which different observers of the same prospect might see the landscape before them, depending on their proclivities, as representing *nature* (stressing the insignificance of humankind), *habitat* (as humankind's adjustment to nature), *artifact* (reflecting humankind's impact on nature), *system* (a scientific view of interacting processes contributing to a dynamic equilibrium), *problem* (for solving through social action), *wealth* (in terms of property and possession), *ideology* (revealing cultural values and social philosophy), *history* (as a record of the concrete and the chronological), *place* (through the identity that particular locations have), and *aesthetic* (according to some artistic quality possessed). Such a compendium is a valuable reminder that the eye sees what it wants to see, and this leads, even in terms of these succinct categories, to a veritable ocean of literature. How to navigate a brisk course through it that does not become distended by every local current and breeze? If we can fill our sails with writings in which landscape appears as an explicit concept and a central concern, we may group the resulting interest under four general mastheads.

There is, first, a long and honorable tradition of American landscape study that reflects what might be considered as environmental awareness. This encompasses the whole field of what we still know as natural history, in which the identification of rocks, plants, and animals, as individual elements and as associations, lies at the core of the subject. Even though the modern disciplines of geology and biology and their subfields have produced extensive documentation and theory to explain the conditions of nature, a lively industry in general interpretation feeds the lay interest in the nature around us.[11] The unification of many such themes under the rubric of ecology has excited similarly widespread interest, including even syntheses that link ecology and regional political history.[12] Ecology brings in the human element, for environmental awareness includes people's regard for their own relations with nature, and as such has attracted interest from anthropologists and environmental psychologists as well as geologists, biologists, and geographers.[13] In Meinig's terms, nature, habitat, artifact, and system are all represented in landscape studied as a dimension of environmental awareness.

Rudimentary and scientific awareness of the landscape is quickly matched by a subjective, judgmental dimension based on image, symbol, and representation. From early times, painters and writers have captured the essence of particular American landscapes in picture and word, invariably colored by their vision of what they were seeing. Paintings and writings in the American pantheon were shaped not just by personal technique but through selection and interpretation of evidence, reflecting assumptions about the purpose of humans in the landscape and their relations, ideal and actual, with nature. Every picture and book served as implicit recorder not merely of the visual facts of the landscape but of what they symbolized for the artist or writer. Here aesthetics mingle with ideology, whether in celebration or criticism of what is contained in the scene.[14] From the Hudson School to the archetypes of Western art, from the New England transcendentalists to the regional novelists of the Middle West, representations of landscape reflect changing descriptive skills and taste, and especially changing attitudes toward the works of humankind in nature.[15] This tradition of landscape study is upheld primarily by art historians and literary analysts, but contributions have come also from cultural historians and geographers.[16]

The physiognomy of landscape can be explored not only through symbolic representation, however; it can also be considered from the practical perspective of design. Equivalent to Meinig's category of "problem," this defines landscape as something that needs managing, since in every age people who add features to the landscape face choices over which design to favor. Furthermore, past choices become subject to social criticism on both aesthetic and pragmatic grounds. Hence, there is a large literature on the American landscape as a focus for normative thought—that is, about what it ought to be. Strong critiques have been mounted from the ranks of architects, landscape architects, and planners, usually decrying the depredations of the modern period.[17] Much of this writing is deeply subjective and anecdotal, but in recent years there has been a movement to codify aesthetics, spurred by increasing government involvement in landscape management, producing a substantial literature on landscape assessment.[18] Not surprisingly, a consensus has yet to emerge regarding the methods for measuring human reactions to the physical and cultural landscape, let alone to the policy initiatives which they produce.

If the present condition and future direction of the cultural landscape in America stimulates lively debate, so does its history. In some ways, this is the least developed of the four principal approaches to landscape study in America.[19] To be aware of the landscape as an external context, to endow it with symbolism, and to evaluate it against some system of ideals—these are all approaches essentially independent of time. But since we exist in time we must also incorporate it in our view of landscape. Therefore to view the landscape historically is to acknowledge

its cumulative character; to acknowledge that nature, symbolism, and design are not static elements of the human record but change with historical experience; and to acknowledge, too, that the geographically distinct quality of places is a product of the selective addition and survival over time of each new set of forms peculiar to that region or locality. This broad approach considers landscape both as history and as place (referring to Meinig's last remaining categories), and has been nourished by scholarship in geography and history, particularly the subfield of historical geography.[20] The approach has been more cultivated in Britain than America, although interest in American landscape history has been on a steady rise.[21]

Landscape history gives precedence to time as the key element in landscape formation. Each generation has inherited a landscape shaped in certain ways, and has added its own distinguishing traits while modifying or removing others as it is succeeded by the next generation. The aim of the landscape historian, then, is to distinguish the threads woven into this complex, changing fabric and account for their respective appearance, arrangement, and disappearance. Landscape elements vary widely in the speed of their formation and change, and time plays an important role in how historically composite a landscape may become. This idea underlies the contributions to this book.

Much has been written in one way or another about the collective history of American cultural landscapes, but no one has attempted to cover the ground, however cursorily, in a single volume. The most ambitious interpretation to appear in print so far is John Stilgoe's *Common landscape of America, 1580 to 1845*, but no matter how wide-ranging it is the book considers developments only through the early national period and applies to less than half the country. J. B. Jackson's *American space: the centennial years, 1865–1876* covers a single, albeit significant, decade. John Fraser Hart's slim volume, *The look of the land*, looks at some rural, but not urban, landscape features in America (and elsewhere) in varying degrees of historical depth.[22] Allen Noble's *Wood, brick, and stone: the North American settlement landscape* focuses on houses and farm buildings alone, although his extensive treatment is set within a suggestive evolutionary regional framework. Anthologies abound, but even those of national scope are collections of disparate topics.[23] Books about regional cultural landscapes are beginning to give their historical evolution some attention, such as Richard Francaviglia's *The Mormon landscape*, but the majority remain in this respect cursory and anecdotal.[24]

Most other treatments are conceived along different lines. In principle, the subject can be considered topically, regionally, or thematically, or through some combination of these modes. Stilgoe favors the "object" approach, devoting chapters to such elements as roads, canals, crops, cow pens, sawmills, camp meetings, fences, and furnaces, reminding us in David Lowenthal's words of the long-standing American interest

in "individual features emphasized at the expense of aggregates."[25] The whole period under review is treated syncretically, with topical categories such as agriculture, community, and national design shaping the architecture of argument. Historical periods and regional variations peep through as inflection, not structure. Jackson, on the other hand, viewed the landscape changes that occurred immediately after the Civil War in strongly regional terms, stressing partly processes such as pioneering, reconstruction, and reform, and partly changes evident in particular settings—either general types such as woods, towns, or the countryside, or specific localities such as Boston, Chicago, Buffalo, and Kansas. Noble offers a third recipe: a richly genetic view of cultural expression and its diffusion over space through examining a highly restricted set of artifacts in the landscape, namely houses and farmyard buildings.[26] A growing subgenre of landscape studies in historical geography explores the imagery landscape has evoked in various social categories of human actors, such as tourists, and the effects of landscape on perceptions, as well as the reciprocal effect they have had on landscape development.[27] In theory, one could incorporate all these approaches in a unified study. That would present a severe challenge to include the whole country in a single volume, as indeed it would even for an individual region.[28]

This book aims to draw on some of the strengths of these earlier works, and to combine ideas and evidence according to yet another principle: themes about clusters of related landscape processes set in a broadly historical and regional framework. Such a notion proceeds from the premise that the continent's landscapes were shaped most profoundly of all by the early colonizing peoples who affected, on the whole, rather different regions. That some groups prevailed in the course of time over broader territory sets the scene for a shifting of geographical focus, as major new landscape-molding forces came to prominence and modified regions in varying ways. While no sequence of chapters can maintain a perfect logical progression when trying to deal simultaneously with topics, regions, and periods, there is a perceptible if uneven movement within the book from early forces to late, from eastern regions to western, and from rural-agrarian themes to urban-industrial and post-industrial ones.

In the beginning there was the land. No exploration of American cultural landscapes, however oriented to the question of human impact, can ignore the majestic force of the natural environment in presenting human colonizers with certain givens. The presence of mountains, coastal configurations, long rivers, climatic regimes, and major soil and vegetation associations, and their complex interaction in a geographical matrix of relative location, define inescapable factors bound up in the evolution of basic routes of human migration and networks of economic activity. The opening chapter lays out the very minimum we should know about these things in order to make any sense of the

cultural shaping that came with human occupance.

Amerindian populations have occupied North America for 15,000 years. No logic of latter-day spatial dominance by Euro-Americans can alter the impact that these "first families" had over the millennia in occupying the territory of what became the United States and altering in numerous ways—some fundamental—the environment which white people would eventually penetrate and come to terms with in their own way. The second chapter therefore paints with broad brushstrokes a picture of the aggregate effect that Amerindian settlement had at its zenith and what consequences this had for Euro-American succession.

The next four chapters turn attention to the major colonizing cultures from the European Old World that laid claim to large portions of American territory. The Spanish and French occupied at first discrete segments of the continent, so their direct legacy in today's regional landscapes is fairly apparent, if greatly diminished in modern times (Chs 3 and 4). The British quickly secured the Atlantic seaboard of what is today the United States, and proceeded to establish a series of landscape traditions that reflected demographic variety and regional ecology. It is suggested that the traditions that carried the most influence nationwide in later landscape-forming trends emerged in the Northeast—more particularly New England and southeastern Pennsylvania (Ch. 5), while the different agricultural and social systems that produced the plantation necessarily expanded throughout the South (Ch. 6). Both these broad, adaptive Anglo-American landscape traditions crystallized first along the eastern seaboard and spread essentially westward in their respective latitudinal zones.

After political independence, however, a growing economy pushed the settlement frontier west far beyond the Appalachian barrier and required a colonization policy that, because of its geographical scale and rigid geometry, had profound impact on the ordering of the American landscape. The land survey system served as the tangible, visible symbol of a national settlement strategy that had no counterpart anywhere in the world (Ch. 7). Extension of this landscape system, however, meant traversing three different ecological realms: the eastern forests, the interior grasslands, and the western arid lands. While the survey grid and its associated laws supplied the landholding framework for an agricultural attack on these environments, the ways in which human modification took hold in each case receive individual consideration (Chs 8, 9, and 10).

This continental infilling with people was far from socially uniform. It is appropriate, therefore, to reconsider in an essentially 19th-century context the variety of cultural baggage migrants brought with them as it influenced the types of settlements they built. Chapter 11 revisits the ethnic theme, and assesses the extent to which ethnicity found material expression in the new landscapes, and under what conditions it has survived or disappeared. A special component of cultural difference

is the religious orientation of groups, and given the freedom accorded to religious observance in the American social contract, the following chapter (Ch. 12) takes a close look at the landscape impact of voluntary religious institutions.

With these issues exposed, the following two chapters take up various facets of what might be termed the advent of modernism in America, as expressed in the processes of industrialization and urbanization. The rise of large-scale manufacturing, aided by several transport revolutions that redefined distance in America, created brash new industrial landscapes (Ch. 13) and fed an unprecedented growth of towns and cities. Cities were not new to America, but cities in 19th-century America quickly gained a character quite distinct from those in other world regions (Ch. 14).

Coursing through the veins of American history for the last 200 years, and intimately related to questions of modernism, has been the constant tension between public and private interests. Naturally, such struggle is faithfully reflected in the landscape. This theme underlies the next three chapters, which explore landscapes created through the visible hand of government (Ch. 15), and those created by private effort. The private realm speaks hugely of the American national experience. Building thousands and thousands of new communities across the land meant creating and re-creating the basic institutions and structures of a civil society well beyond those assigned to formal government (Ch. 16). The spectrum of wealth in America since at least the middle of the 19th century has been as wide as anywhere in the world, and the landscapes of the rich, distinctive in their individual scale and opulence, sit like islands amid an ocean of more ordinary residential and recreational landscapes. Their capacity to appropriate significant land areas—often the choicest scenic spots—and embed ostentation in them simply cannot be ignored (Ch. 17).

While canal and railroad innovations underwrote much earlier national economic expansion and dramatically enhanced American mobility, the development of the automobile in the 20th century perhaps even more profoundly reshaped the lineaments of the American landscape by putting families and individuals, quite literally, in the driver's seat (Ch. 18). The re-etching of the land this has wrought has committed Americans to a runaway dispersal of settlement patterns that carries the most profound geographical implications for resource sustainability and lifestyle in the future. Coupled with this has been the rise of mass consumerism, the rise of mega-corporations, and the re-scaling of designed environments for everything from shopping to leisure activity, vacationing, and commerce. American landscapes show the impact of this quantum rise in construction scale, marketing, and theming of environments (Ch. 19).

Do these trends bring Americans closer to the utopia promised in the proverbial American Dream? The final chapter takes a singular look

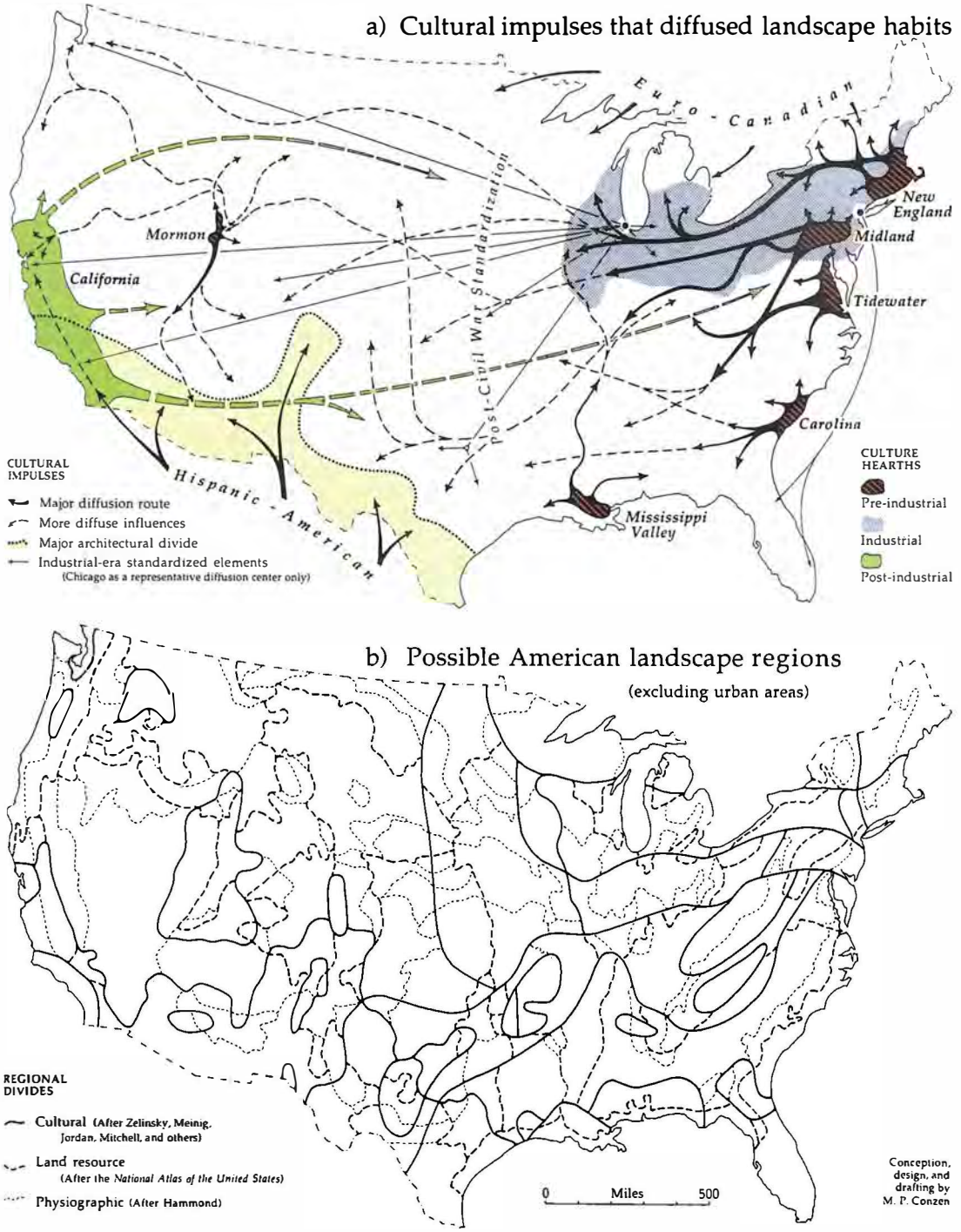


Figure I.1 A geographical view of American Landscape processess and their regional outcomes.

at a number of landscape artifacts and practices and poses this central question. And will the ease with which vast development projects can now refashion great swaths of urban and rural terrain in ultimately monotonous and generic designs lead to the loss of identity for places that historically have long excelled in reflecting regional diversity and unique human interest? From the geographer's point of view, this is the ultimate question: will the geographical variety of America's landscapes bleed away into a continental-scale generic sameness psychologically no less like lobotomy than mountaintop-removal in coal country, or will it survive through the creative emergence of new forms of regionally distinct cultural expression? The two maps offered here (Fig. I.1) are intended as a challenge to further thought and investigation on this particular human–environmental theme.

Chapter one
Recognizing Nature's bequest

STANLEY W. TRIMBLE

North America is a large continent, spanning fully 115 degrees of longitude and about 75 degrees of latitude. That size is sometimes difficult for Europeans to quite comprehend. The story is told, no doubt apocryphal, that the outcome of the Second World War was manifest to German prisoners of war only after five days of continuous rail travel had failed to deliver them from the east coast to the west coast.

The continent is also one of contrasts. It spans tropics to tundra, searing heat to bitter cold, mild marine conditions to severe continental effects, continual wetness to permanent desiccation, mountains to almost featureless plains, absence of plant life to vegetative abundance. Perhaps, also, North America has had its physical environment transformed more rapidly at the hands of people than any other large part of the world. Generally within less than 200 years, near-primeval land has sprouted farms and cities, forests have been removed or changed, and severe hydrologic and geomorphic disruptions have sometimes ensued.

No understanding of these profound transformations can be gained without first considering the nature of the stage upon which the human drama has unfolded. This opening chapter sketches an outline portrait of the physical environment of mid-latitude North America. The continent's size, internal contrasts, and complexity can only be hinted at, and the reader is encouraged to read further, particularly with the aid of a good atlas that will complement the few illustrations that can be offered here.[1] This portrait lays out the composition of the continent's natural regions through the broad brushstrokes of climate, landform, vegetation, and soil.

Climates

Since the dawn of time on this planet, life at the surface has been conditioned by the continuous interaction of the earth's internal forces

with the enveloping atmosphere. Dynamic and historically volatile, this interaction has produced periods of apparent equilibrium in which, from the perspective of human experience, characteristic patterns of climate seem to emerge.

Many things conspire to give North America the climate it has, as one should expect for a continent so large and diverse. The first of these is the continent's very mid-latitude location. This means that the noon sun angle is low in winter, ensuring receipt of limited solar energy at that time. Also, the latitude places much of the continent in the path of the Westerlies wind belt and thus in the paths of mid-latitude cyclones or "storm-tracks." These cyclones, together with air masses, control the genesis of much of the weather over the continent.

A second climatic circumstance is the presence of source regions for varied air masses which converge upon and interact in the traveling cyclones. Because these air masses tend not to mix, their common boundaries mark the cold and warm fronts of the mid-latitude cyclones. Four air masses affect America. There is maritime tropical air, which is warm and moist and originates in the South Atlantic and Gulf of Mexico, but also comes from the Pacific Ocean off the coast of California and Mexico. Maritime polar air, cool and moist, comes primarily from the North Pacific, and also from the North Atlantic. Continental polar air masses, which are cool to cold and dry, form in central to northern Canada and move south to southeasterly across the continent. Continental tropical air masses round out the symmetrical quartet, and these are warm and dry, forming over the desert of north Mexico.

The very size of the continent, itself, also conditions climate by creating a "continental" effect. Temperatures over central Canada can range from over 100°(F) in summer to perhaps –50° or below in winter. At the same time, the atmosphere over the ocean on either side has a much smaller range. The continental effect also creates a monsoon, or seasonal wind, although not nearly as strong as that found in Southeast Asia. The cold winter air of the continental interior, being denser, produces a thermally induced high-pressure zone so that the general flow of air, in conjunction with the upper Westerlies, is to the south and east. No topographic barriers exist in the mid-continent, so the polar continental air can often move to the Gulf of Mexico. Texans often joke that the only barrier between them and the Arctic Ocean is a barbed-wire fence. Summer finds a reversal of flow with tropical maritime air drawn from the Gulf of Mexico and South Atlantic into the continental interior.

Ocean currents provide another control. The cold California Current flows southward along the west coast and can have an effect some distance inland. The warm Gulf Stream flows northward along the southeast coast as far north as North Carolina. Meanwhile, the cold Labrador Current flows southward along the northeast coast, sometimes slipping in between the coast and the Gulf Stream as far south as Virginia and chilling local weather.

Another climatic influence is the wind and pressure system. The Westerlies carry with them the endless stream of mid-latitude cyclones that attract the air masses, and create much of the weather for the continent. At the surface, these Westerlies bring the marine atmospheric conditions of the Pacific Ocean onto the coast from Alaska to Oregon, and seasonally (in winter) to California. Meanwhile, there is a large subtropical high-pressure cell that has a semi-permanent position over the Pacific Ocean off the coast of Mexico; this keeps much of northwestern Mexico dry and seasonally (in summer) keeps California dry. Because there are no prevailing winds blowing onto the east coast, maritime influences are usually restricted to the coastline. Severe continental conditions of heat and cold thus prevail across the interior almost to the east coast. The inland suburbs of Boston, for example, record extreme winter temperatures almost as cold as those at Milwaukee, Wisconsin, at the same latitude but far inland.

Some low-pressure systems affecting the continent are destructive. Tropical cyclones, or hurricanes, form over the South Atlantic or Gulf of Mexico in late summer and autumn and move most often into the Gulf or northward along the east coast. The destruction along the coast from their wind, tides, and rain is well known, but once they move inland, they are less destructive and bring heavy rains, often breaking the late-summer droughts that sometimes grip the Southeast. Thus, their constructive effects offset the destructive ones to some degree. Such hurricanes also form in the Pacific and affect the Southwest, but are less common. Tornadoes are destructive cyclones caused by severe atmospheric instability (high moisture and environmental lapse rates) and occur in the eastern half of the continent during the warm season. Oklahoma and Kansas are the tornado kingdoms of America, as one will recall from the *Wizard of Oz*.

Mountains strongly affect climate. The chain of high mountains extending the entire length of the west coast effectively blocks most moisture from penetrating into the continental interior. Thus, the windward (western) sides of these mountains are wet while the leeward (eastern) sides are dry. Coastal mountains in Oregon get as much as 100 inches of rain annually while eastern Oregon gets as little as one-tenth of that. This process leaves the central part of the continent with little moisture; the only other source of moisture is occasional maritime tropical air from the Gulf of Mexico. Because the distances are so great and the prevailing winds blow eastward, not much of this air reaches the mid-continent, so it is relatively dry. Further east there is a greater probability of getting such air and so there is more annual rainfall. With these genetic processes in mind, it is now possible to understand the characteristics and distribution of climates (Fig. 1.1).

The humid subtropical climate is controlled by maritime tropical air during the summer and an alternation of that with polar continental air in winter, when mid-latitude cyclones are common. Summers are

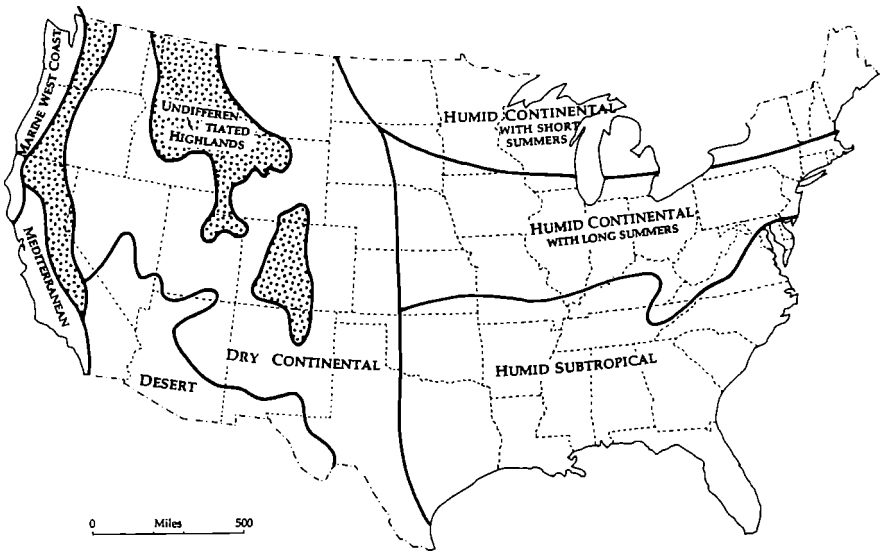


Figure 1.1
Major climatic regions in the United States.

hot and humid, much like the wet tropics, while the winter weather alternates between cool and warm spells with frequent cyclonic rain. Very cold temperatures are then possible. Americans from the North tend to perceive Alabama, for example, as "tropical," but Alabama has experienced temperatures as low as –20°. Precipitation may be heavy in individual storms and the area averages 40–80 inches per year.

The humid continental climate with a long summer is a cooler version of the first climate. The winter is longer, the coldest month will average below 32°, and more snows and colder extremes are possible. Snowfall usually totals on the order of 20–40 inches. St. Louis, for example, has a January average temperature of 20°, but extremes of –22° are possible. The summers have more cyclonic (frontal) activity and have slightly cooler average temperatures, but the temperature and humid extremes will be as high as in the humid subtropical climate further south. At least one geographer has called this zone "the misery belt," and notes that this is the perfect climate for growing corn—long summer days at mid-high latitudes, plenty of rain, warm temperatures—"but for anyone whose aesthetic requirements transcend those of a cornstalk, the climate is pretty darned miserable, winter or summer."[2]

The humid continental climate with a short summer has cyclonic rainfall all year, but summer brings some great convectional thunderstorms. Although the summer temperature may be cool, that results from the averaging of some very cool days when polar continental air dominates, and some very hot and humid days (perhaps over 100°) when tropical maritime air dominates. Mercifully, this is not too common. Winter, on the other hand, is brutal and *long*. Temperatures may go below –50°, snow may be on the ground for several months, and spring may not arrive until May, with hot temperatures often coming in June. Rain may

average 20–40 inches and there is a decided maximum during the long days of summer.

In the dry continental climate, mountains curtail moisture from the west while the prevailing upper Westerlies and the great distances from the Gulf limit the supply of tropical maritime air. Annual average rainfall ranges from about 10 inches in the west to about 20 inches in the east. There are great seasonal temperature contrasts. Winter temperatures to the north are more severe where there are frequent incursions of polar continental air, while the summers there are shorter and milder. Snow is possible over much of the region and may remain a month or more.

The desert, located in the Southwest, is cut off from moisture on all sides. It is also influenced by the Pacific subtropical high-pressure cell. The net result is a large region receiving on average less than 10 inches annual precipitation. Although summer temperatures may reach 115° or more, the winters can be quite cool and snow is possible.

The so-called Mediterranean climate is also known as dry-summer subtropical. The summer dry season is controlled by the northward shift of the Pacific high-pressure cell whereas the winters see a southward shifting of the Westerlies with their mid-latitude cyclones and fronts, all producing winter rainfall. Cold temperatures and frost are uncommon in winter, while the summers are hot inland but greatly moderated nearer the coast. Normal rainfall is about 12–20 inches. An unpleasant weather feature here is the Santa Ana wind, a distant cousin of the Mistral and Sirocco. It occurs when a large high-pressure air mass stalls over Utah or nearby areas. The clockwise circulation blasts hot tropical continental air into southern California, creating discomfort and tension.

The marine west coast climate is controlled by the Westerlies, importing the marine conditions of the North Pacific onto land. Winters and summers are mild and there is a small range in annual temperature averages, extremes being rare. Average annual precipitation is moderate (20 inches) with no relief, but more than 100 inches may be experienced on windward mountain slopes. Thunderstorms and downpours are uncommon.

Various remaining highland areas have such a diversity of climates depending on elevation, exposure, and other factors that it is impossible to differentiate them in this overview. Small areas within these regions may vary from subtropical to arctic and humid to desert.

Patterns of annual precipitation, then, are reasonably simple. The wettest areas are the northwest coast and the East, especially the Southeast. The dry area is the western half of the continent and the driest is the extreme Southwest. More important than the amount of rainfall, however, is the availability of water. This balances the receipt of rainfall against the losses from direct evaporation and transpiration of plants. Potential losses to evapotranspiration are a function of temperature, relative humidity, and wind, and so are greatest in the Southwest

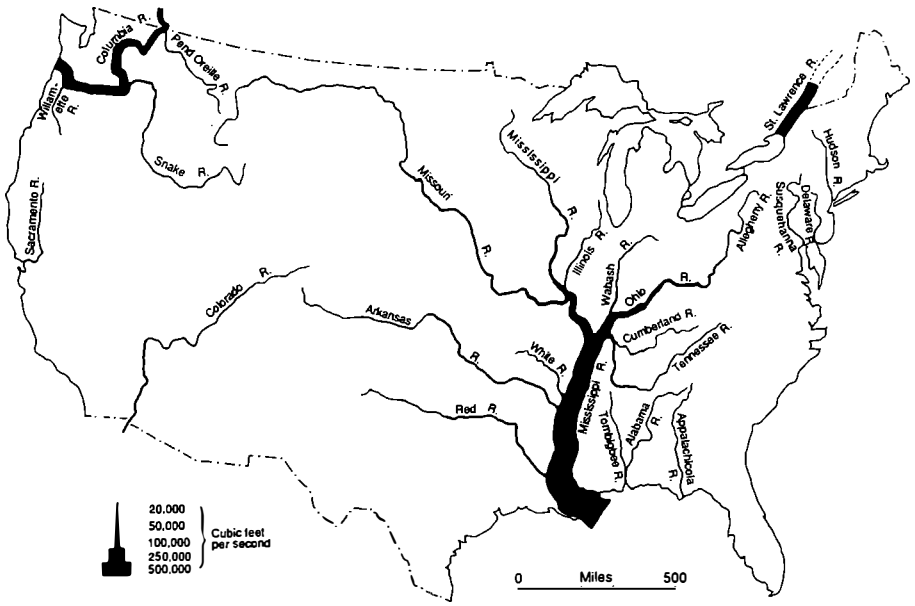


Figure 1.2
Average discharge of large rivers in the United States. Rivers shown are those with an average flow at their mouths of 19,000 cubic feet (538 m^3) per second or more.

where the rate may be over 80 inches per year. Thus, the highest natural demand for water is just where Nature has been her most stingy. The Southeast has a fairly high potential rate but Nature usually provides ample moisture and, usually, an excess of it. Minimum potential rates are found to the northwest and northeast, both humid areas, so there is surplus water found there. One sign of surplus is the amount of streamflow for the major rivers of the U.S. and southeast Canada (Fig. 1.2). The southeast coast also has much runoff but the individual rivers there do not compare in this respect with the nation's largest.

Today's climates and their causes have not always been so. During the Pleistocene epoch, approximately 1 million to 10,000 years ago, there were at least four distinct cold periods when there was a surplus of freezing water over melting water, producing continental glaciers. These glaciers advanced as far as a line from New York City southwestward down the Ohio River, thence up the Missouri River and over to Seattle. At the same time, alpine glaciers extended southward in the mountains of the West to at least the southern end of the California Sierra Nevada. The last advance of the glaciers was called the Wisconsin stage (known as Würm in Europe), which ended abruptly about 10–15,000 years ago.[3] It is this most recent stage which left behind many of the landform features of North America. The last 10,000 years or so, the Holocene epoch, has been a period of relatively warmer and more stable temperatures. Throughout this period, and especially over the past 1,000 years, there have been cycles of warmer and colder temperatures lasting 20–100 years. The early 19th century was a period of cold while the first half of the 20th century was abnormally warm. Coinciding with the warmer

weather, at least in some parts of the continent, there was also wetter weather. The discharge of the Colorado River was gauged during this wet cycle, and based on this record annual flow was allocated to the states along its banks. Now that the flow has returned to what is thought to be "normal," there is insufficient water to satisfy current human expectations.

The physiographic layout

All of North America lies on what in geotechtonics is called the American Plate, except for a strip of the Southwest, which sits on the Pacific Plate. The two plates join at the San Andreas Fault, a transform fault which runs from north of San Francisco to the Gulf of California. It has been the scene of many severe earthquakes, and stresses appear to be building again. Further north, from Oregon to Alaska, the Pacific Plate is subducting, or slipping, under the American Plate and a major result is the range of volcanic Cascade Mountains, part of the Pacific "Rim of Fire."

The continent may be generally described as having mountain chains roughly parallel to each coast (Fig. 1.3). In the West, the singular mass in Canada bifurcates southward, one branch remaining within 250 miles of the west coast, while the other branch, the American Rockies, extends through the west-central part of the U.S. to Mexico. In the East, the Appalachian Highlands extend from the Gaspé Peninsula to central Alabama. A low, mountainous outlier in the south center is the Ozark–Ouachita Highlands.

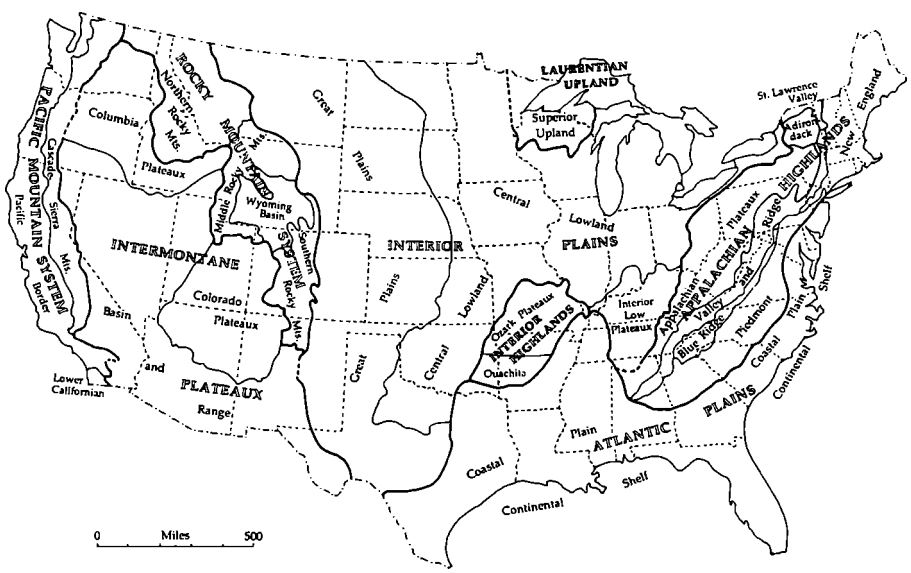


Figure 1.3
Landform regions of the United States, as conceived by N. M. Fenneman in 1928.

The physiography of mid-latitude North America is complex, but it may be simplified by grouping physical traits into regions representing composite associations between topography, soils, and vegetation (Fig. 1.3).[4] What follows can only serve as a brief introduction.

Natural regions

The Far West

The Pacific Ranges are in the shape of a long, narrow "H" (Fig. 1.4). Southward from British Columbia are the coastal ranges, clothed in the luxuriant rain forest of that mild, moist climate. Southward, they yield to the increasingly longer dry season and are more likely to be covered with chaparral or grass. In southern California, these coastal ranges step easterly in echelon and actually trend almost east–west north of Los Angeles. The lowlands of that area are increasingly covered with exotic vegetation grown under irrigation, while the rapidly expanding cities are often islands of lush tropical plants. To the northeast, the volcanic Cascades, covered with a rich growth of Douglas fir, extend from Canada almost to California. Mount St. Helens is now the most famous member of this group, but Mounts Lassen, Baker, Hood and Rainier are also restless. Many others are dormant—presumably

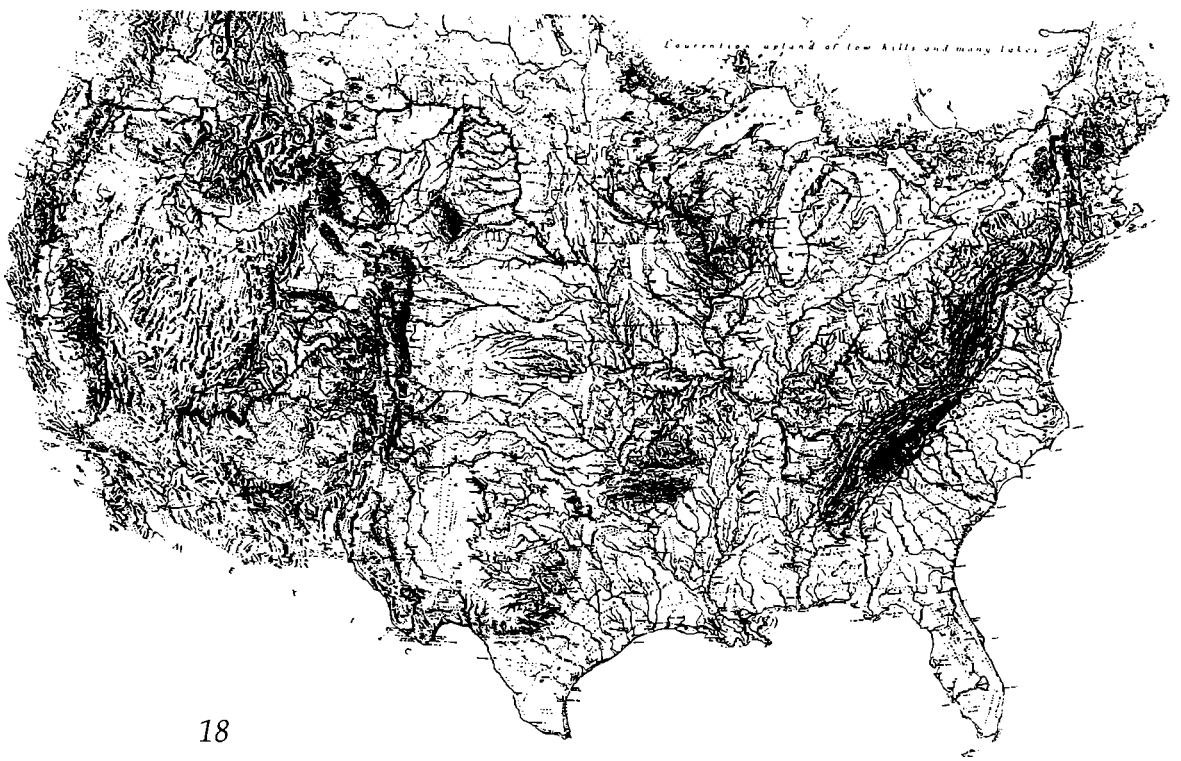


Figure 1.4 Physiographic diagram of the United States.

Figure 1.5
The gorge of the Columbia River through the Cascade Mountains west of Hood River, Oregon, looking west. A vineyard huddles on a spur of land, left, while clouds brush Dog Mountain and Cook Hill, Washington, on the opposite bank in the center distance.

so. The Columbia River has cut an impressive gorge through the Cascades (Fig. 1.5). Joining the Cascades to the coastal ranges are the Klamath Mountains; from there the magnificent Sierra Nevada trends southeastward. This mass is a huge block of granite tilted west so that the east face is extremely steep. Here is found Mt. Whitney (14,500 feet), the highest peak in the contiguous United States. This ridge is the High Sierra, a spectacular area of peaks, glaciers, and lakes. On the gentle west slope are great forests of redwood but, to the north, parts of the deeply entrenched river valleys have been filled with gravel, the result of hydraulic mining for gold during the last century.[5] The Pacific Ranges have extensive forests of Douglas fir, spruce, and redwood. This is the most prolific supply of lumber for the continent, but the rate of cutting often exceeds regrowth.

Between the coastal ranges and the Cascades is the Puget Sound Lowland–Willamette Valley, an area of good harbors, agriculture, and increasing population density. The Great Valley of California is composed of sediments of the coastal ranges and the Sierra Nevada, between which it lies. With its even surface, sunshine, and available irrigation

Figure 1.6
The Grand Canyon, Arizona, at sunset from Mather Point on the South Rim, looking toward the formations known as Brahma Temple and Zoroaster Temple.

waters, it is one of the great agricultural regions of the world, growing almost every imaginable commercial crop. A major environmental impact from agriculture is that groundwater levels have been dropped as much as 1,000 feet from overpumping, thus allowing the ground surface to subside as much as 25 feet.

The Intermontane Plateaux extend from Canada south into Mexico. In the north, the Columbia Plateau is a hardened sea of lava through which the Blue Mountains and other elevated points emerge as islands. The Columbia and Snake rivers have cut gorges through this plateau, the Snake River gorge being especially deep (4,000–6,000 feet) and spectacular. In central Washington, the climate and excellent basaltic soils have given rise to wheat growing and orchards. The Colorado Plateau is actually several plateaux separated by escarpments or canyons. The most spectacular of these is the Grand Canyon, over 5,000 feet deep, which gives a good cross-section of the geologic sequence (Fig. 1.6). The main industry of this arid region is tourism, since here are located such famous national parks as Bryce Canyon, Cedar Breaks, Zion Canyon, Monument Valley, Dinosaur Park, the Petrified Forest, Mesa Verde, and, of course, the Grand Canyon. The last inspired the composer Ferde Grofé to write his *Grand Canyon*, one of several suites inspired by the American landscape. In the plateau area as well as elsewhere in the Southwest, there has been a severe problem with stream channel erosion or "arroyos," which began in the 19th century. Both climatic

changes (dryer or wetter) and increased grazing (compaction of soil, replacement of perennial plants with annual plants) have been blamed, but whatever the cause, many of these arroyos have begun to fill and stabilize since about 1940.[6] The Basin and Range province extends from Oregon to Texas. It is composed of block mountains, lifted or tilted chunks of the earth's crust, surrounded by erosional debris. To the north, drainage is interior, with ephemeral lakes often covering large areas. There, runoff has never been adequate to overflow the region and cut through channels to the outside. To the south, drainage is primarily via the Colorado River and Rio Grande.[7] Vegetation ranges from short grass in the north to desert shrubs in the south. However, where water and talent are available the area can bloom, as shown by the "Mormon Garden" around Salt Lake City.

The Rocky Mountains comprise two zones, the Northern and Southern Rockies. The northern branch extends from Canada to the Wasatch and Uinta Mountains of Utah. It contains several ranges, often divided by deep and long valleys useful to transportation and communication. Most of these mountains were heavily glaciated and the grandeur can be seen in Glacier Park, in Montana. The Southern Rockies extend from Wyoming to Santa Fe, New Mexico. On the east flank, the Laramie-Park Range presents a formidable barrier and the peaks are impressive even when seen from the 5,000-foot elevation of the Great Plains. To the west and parallel to these two ranges lie the Medicine Bow, Park, and Wasatch Ranges. Within the area bordered by these five ranges are large, basin-like areas called "parks," which are used for ranching (Fig. 1.7). Pioneers studiously circumnavigated the massive Southern Rockies: the Oregon Trail went around the north end while the Santa Fe Trail passed around the south.

The Central Interior

The Interior Plains make up the largest of the physiographic divisions and include the Great Plains, the Central Lowland, and the Interior Low Plateaux. The Great Plains extend from Canada to Mexico. They slope from elevations of 3,000–5,000 feet along the edge of the Rockies to about 1,500–2,000 feet at the edge of the Central Lowland, a border often marked by a rugged escarpment called the "break of the plains." The eastern border also approximates the 20-inch annual rainfall boundary and the region generally has less than this amount. The plains are crossed west to east by the Missouri River and its tributaries, the Yellowstone, Cheyenne, Platte, and Republican rivers. Further south are the Arkansas, Cimarron, Canadian, and Pecos rivers. The Black Hills create a conspicuous relief feature in South Dakota. Short grass is the dominant natural vegetation of the Great Plains and many pioneer houses were built of the sod. The expansiveness of this region was eloquently recorded by a pioneer:

Figure 1.7
A "park" in the southern Rocky Mountains, near Montrose, Colorado.

> the long-expected valley of the Platte lay before us . . . It had not one picturesque or beautiful feature; nor had it any of the features of grandeur, other than its vast extent, its solitude, and its wildness. For league after league, a plain as level as a lake was outspread beneath us: here and there the Platte, divided into a dozen thread-like sluices, was traversing it, an occasional clump of wood rising in the midst like a shadowy island.[8]

Most agriculture other than grazing requires irrigation and this has greatly depleted the regional water source, the Ogallala Aquifer. Expansion of non-irrigated agriculture into the southern Great Plains during the humid weather of 1917–1920 ended in the disaster of the Dust Bowl of the 1930s when a dry cycle again occurred (Fig. 1.8). Dust clouds covered up to 1.5 square miles and were carried by the Westerlies well out into the Atlantic.

The Central Lowland is big, extending from the Great Plains to the Appalachians and from Canada to central Texas. The region was glaciated as far south as the Ohio and Missouri rivers and melting glaciers, in fact, helped determine their present courses. Glacial features include troughs (Lake Michigan, Green Bay, and Lake Superior); various types of moraines (ground, end, recessional, and interlobate); old lake floors, eskers, drumlins, and outwash plains. Perhaps the greatest heritage of

the glaciers was that the regional limestones were ground up and left in the glacial till as "time-release pills" of soil ameliorants. Moreover, an excellent prairie soil (a type of mollisol) fortuitously developed over much of this area. In order to improve the habitat for buffalo, it appears that the Indians kept the area burned during the centuries preceding European settlement. This was done both to drive buffalo for the hunt and also to improve the grazing habitat. Fire not only encouraged new growth from the tall grasses (prairie), but also suppressed the forests because young undergrowth plants and seedlings were particularly vulnerable to fire. Even in the area peripheral to the prairie, most trees were more fire-resistant ones such as oak and hickory. Buffalo proliferating in this habitat further suppressed trees by browsing the leaves from young forests. The prairie, thus allowed to remain for many centuries, eventually influenced the soil by concentrating in it basic nutrients and organic materials. Thus Corn-Belt farmers can thank the Indians for helping create an enriched soil. These circumstances, together with the climate and with an unusually intelligent and industrious rural populace, have combined to create the landscape synergism known as the "Corn Belt," a wonderland for corn, soybeans, hay, and other crops.[9] A more fortunate combination can hardly be imagined.

To the south and east, forest was the dominant pre-settlement vegetation, but most has been cleared for agriculture. To the northeast, near the border of the Great Plains, both wheat and corn are grown on large farms scattered across the rectilinear landscape (Fig. 1.9). In southwestern Wisconsin and extending into adjoining states is the "Driftless Area," which, for some yet unknown reason, escaped at least the last glacial advance. Here, one may see a remnant of the pre-glacial landscape, a partially dissected plateau with level uplands and steep slopes. In the period circa 1800–1935, agricultural erosion was rampant

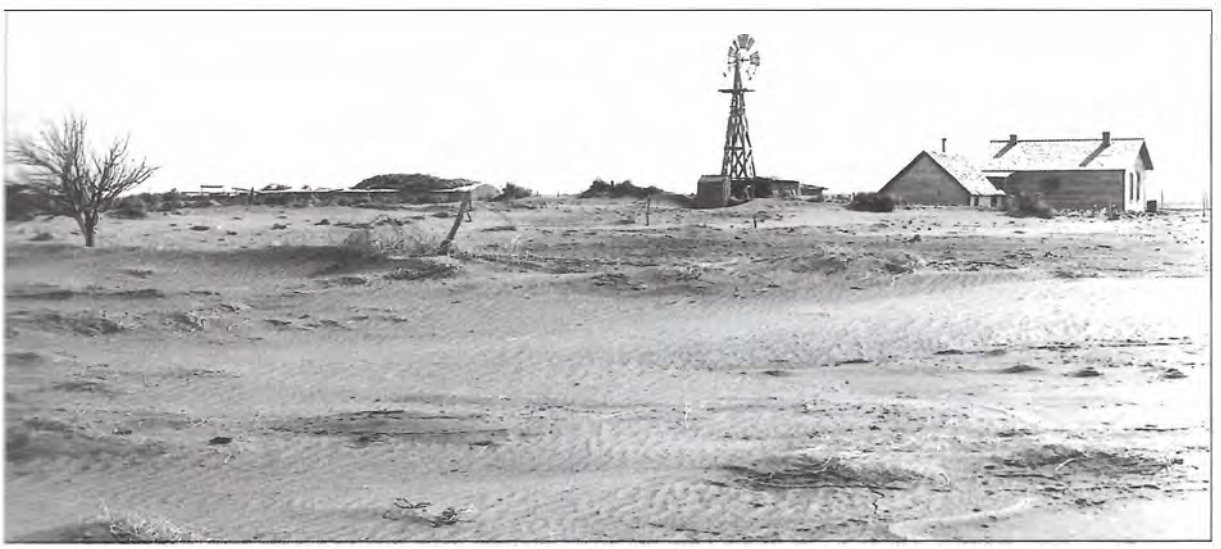


Figure 1.8
The Dust Bowl, Cimmaron County, Oklahoma, 1939. House and farm have been abandoned (USDA photo).

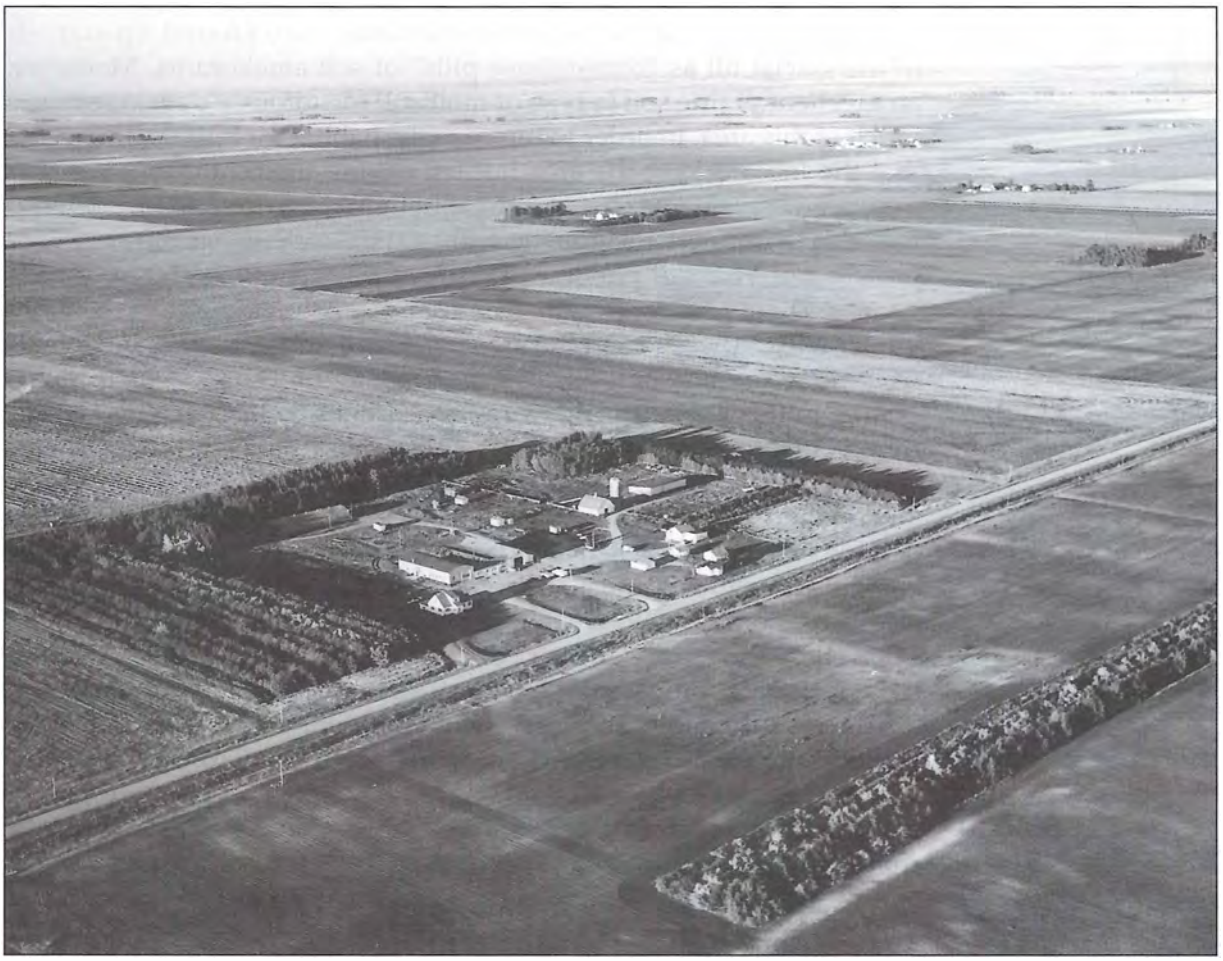


Figure 1.9
The western interior lowlands. A glaciated plain of rich soil in Clay County, Minnesota, used for growing corn and spring wheat. Note the rectilinear field and property pattern and the farmsteads nestled into windbreaks, scattered at regular intervals across the landscape.

here and valleys have been buried with up to 15 feet of sediment.[10] The good news is that, because of improved land use (Fig. 1.10), erosion has been checked and tributary streams have been greatly improved (Fig. 1.11).[11] For this, the landscape here and elsewhere in the eastern U.S. has been transformed from rectilinear or irregular shapes into one of contour strip cropping where soil conservation crops like grass are alternated with erosive crops like corn (maize). Such techniques were not necessary in Northwest Europe with its mild west-coast marine climate. But the control of erosion and continued productive agriculture in the U.S. was contingent on such practices introduced only in the 1930s. The unglaciated salient of the Central Lowland extending from the Missouri River to central Texas is generally less productive land than the glaciated area.

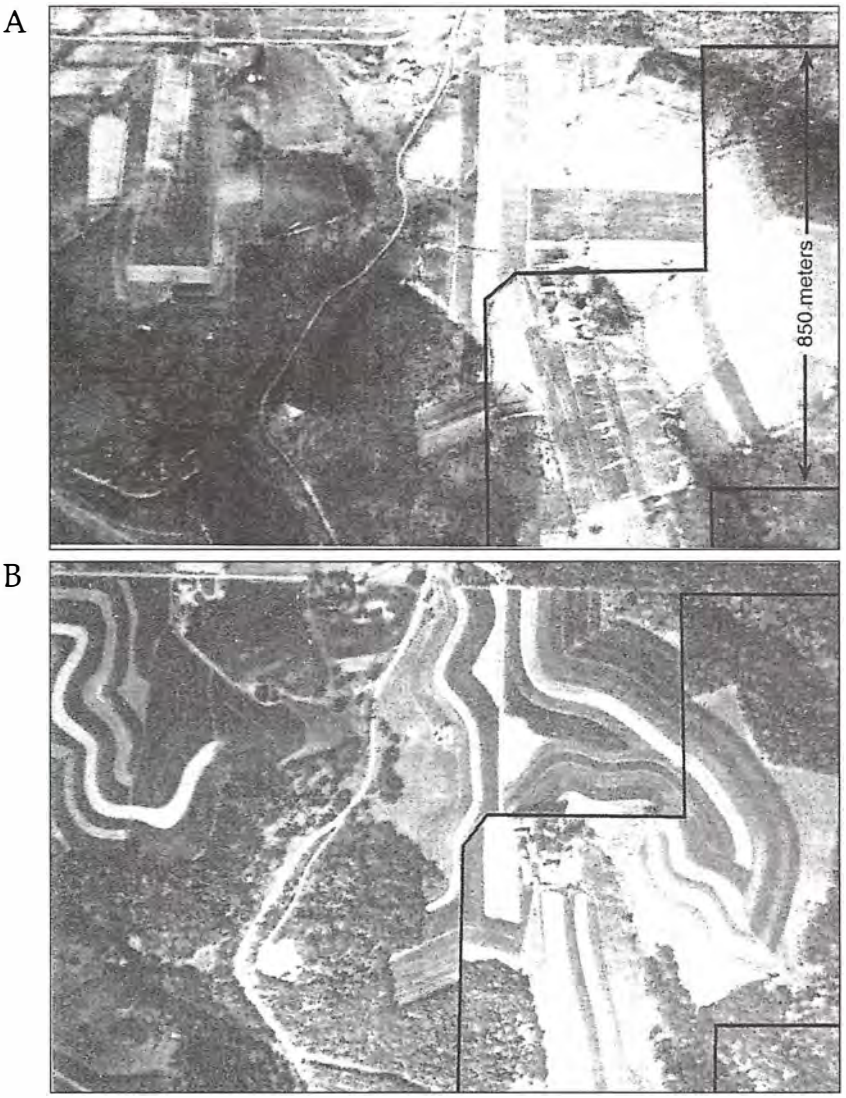


Figure 1.10
Transformation of the U.S. agricultural landscape, here shown near Coon Valley, Wisconsin. A: Early 1934. Note the rectangular fields (relict from the rectilinear land survey based on the Land Ordnance of 1787) and gullies extending into the agricultural fields. B: 1967. Note contoured and strip-cropped fields. Although these visible conservation methods are striking, those not seen, such as crop rotation and stubble mulching, have just as much impact.

The Great Lakes are among the largest freshwater lakes in the world, but they are mere remnants of much larger lakes formed during the Pleistocene. Besides navigation, their chief influence is on climate. Areas east of the lakes have their temperatures moderated but the price they pay is more cloud cover and much more snow.

The Interior Low Plateaux extend from north Alabama to southern Indiana. The two garden spots of this region are the "Blue Grass" basins

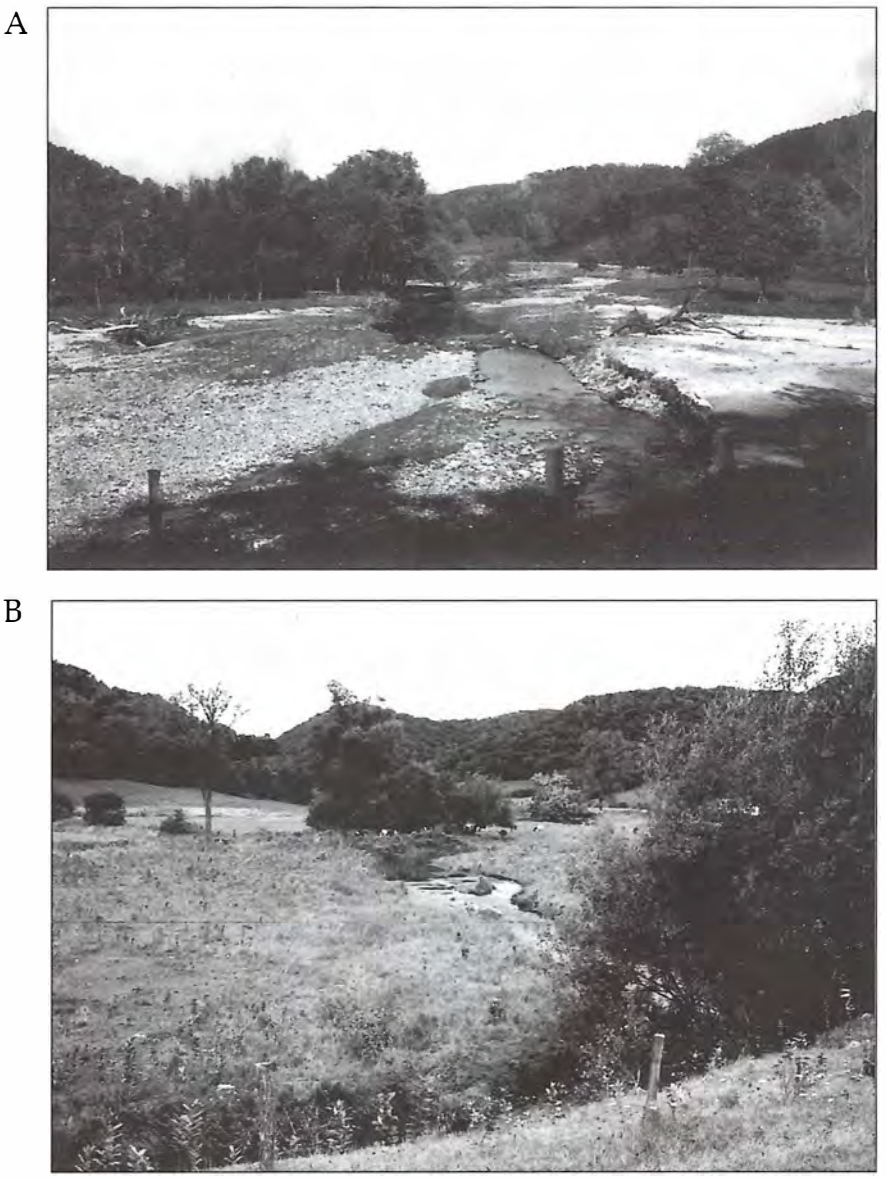


Figure 1.11
Improvement of tributary stream conditions following soil conservation near Coon Valley, Wisconsin. A: 1940. Note wide, unstable stream with coarse sediment and cut banks, the whole stream resembling a gravel road. The only game fish that could survive these conditions was the German brown trout (*Salmo trutta*). B: 1974. Note narrow stream with grassy banks. By the 1990s, benthologic conditions had improved to the point that the original brook trout (*Salvelinus fontinalis*) could once again not only survive but also reproduce!

around Lexington, Kentucky, and Nashville, Tennessee. Good soil attracted settlers;[12] both basins have rich soils from the same Ordovician limestone and both are known for being the centers of prosperity, power, and talent within these states.[13] The small area of the Nashville Basin,

for example, has furnished two U.S. presidents (Jackson and Polk), and many others of talent including Matthew Fontaine Maury, the geographer of maritime fame. This Tennessee basin, known locally as the "Dimple of the Universe," is one of the few American landscapes to have inspired poetry. One poem begins:

> O, the glorious Middle Basin
> The rose in nature's wreath;
> with her purpling sky and her hills on high
> And her blue grass underneath.[14]

Interestingly, both basins are rimmed by lands which, in some areas, are among the poorest in these states. A case in point is the western highland rim of Tennessee. Along the often sharp boundary between the two regions, elegant antebellum mansions and tumbledown hillbilly cabins are literally within sight of one another.[15] Between the two basins is the sinkhole-pocked Pennyroyal Plateau, beneath which is the Mammoth Cave system, one of the world's great networks of limestone caverns.[16]

The Ozark–Ouachita Highlands is a region composed of two divisions, the Ozark Plateaux and the Ouachita Mountains (Fig. 1.3). The former is a partially dissected plateau with poor, thin soils quite analogous to the Appalachian Plateaux to the east. To the south across the valley of the Arkansas River are the Ouachita Mountains. These are folded sedimentary mountains with local relief of 2,000–3,000 feet and are similar to the folded Appalachians.

The East

The Appalachian Highlands extend from the Gaspé Peninsula to mid-Alabama, comprising sub-areas known as the Appalachian Plateaux, Ridge and Valley, Blue Ridge, Piedmont, and New England (Fig. 1.3). The Appalachian Plateaux contain poor, thin soils and hardwood forests extending from central New York to central Alabama.[17] Lying at about 2,000–2,500 feet elevation, the plateaux have a recognizable escarpment on all sides, but the east scarp facing the Ridge and Valley zone is the boldest. In its northern reaches, the region is highly dissected and often called the Allegheny Mountains. The north end was glaciated, producing the "Finger Lakes" among many other glacial features in New York. The southern portion is less dissected and is termed the Cumberland Plateau. Upper strata of the plateaux contain abundant coal, and mining has heavily defaced the slopes and streams of the region.

The Ridge and Valley, or Folded Appalachians, is a mostly lowland zone. The eastern part, the Great Valley, runs almost continuously from Québec, Canada, to Birmingham, Alabama, and is known, depending on local drainage, as the (Lake) Champlain Valley, Hudson Valley, Kittatinny Valley, Shenandoah Valley (Fig. 1.12), and Coosa Valley. It has

Figure 1.12
A Great Valley landscape near Culpepper, Virginia. Note contour strip farming.

always been an important north–south transportation corridor. Several rivers such as the Delaware, Susquehanna, Potomac, and James have cut gaps through the region, which allow easy east–west movement. From Pennsylvania to Alabama, the region broadens and the western area contains many more ridges. Generally, the valleys are fertile, agriculture is productive, especially in the middle states, and many towns and cities line this region.

The Blue Ridge and Piedmont are known as the Older Appalachians. Similar to those of the Canadian Shield and the New England province, these older crystalline rocks (granites, gneisses, schists) constitute the "core" or basement of the North American Plate. The Blue Ridge, with its northern hardwood forests, extends from northern Georgia to southern Pennsylvania. The northern part is ridge-like, but broadens in the south to about 60 miles where the old, well-rounded mountains are the highest in the east (5,000–6,000 feet). The Piedmont is a semi-dissected plateau that extends from New Jersey to Alabama. It slopes from elevations of about 1,500 feet along the Blue Ridge to about 500 feet at its eastern terminus, the Fall Line. The latter is head of navigation on the many rivers flowing across the Piedmont and is thus the location of many cities including Philadelphia, Baltimore, Washington, and Richmond. From Virginia southward, the Piedmont was long used for growing tobacco and cotton.[18] The bare fields, steep slopes, and intense

rains led to disastrous erosion of the deeply weathered soil, and entire stream valleys have been buried (Fig. 1.13). Because of the poor and eroded soils, most cultivated fields have reverted to pasture or forest, and erosion has been checked. The original forest, mostly hardwood, is now largely pine regrowth. Ironically, this forest regrowth, found from Texas to New England,[19] transpires more water than crops and thus has decreased streamflow.[20]

The New England province is similar to the Older Appalachians. The major difference is that New England was glaciated so that features have been muted and many natural lakes were created, including Thoreau's famous Walden Pond. The stony, infertile hillsides offer so little opportunity for agriculture that Carl Sauer once remarked that, had America

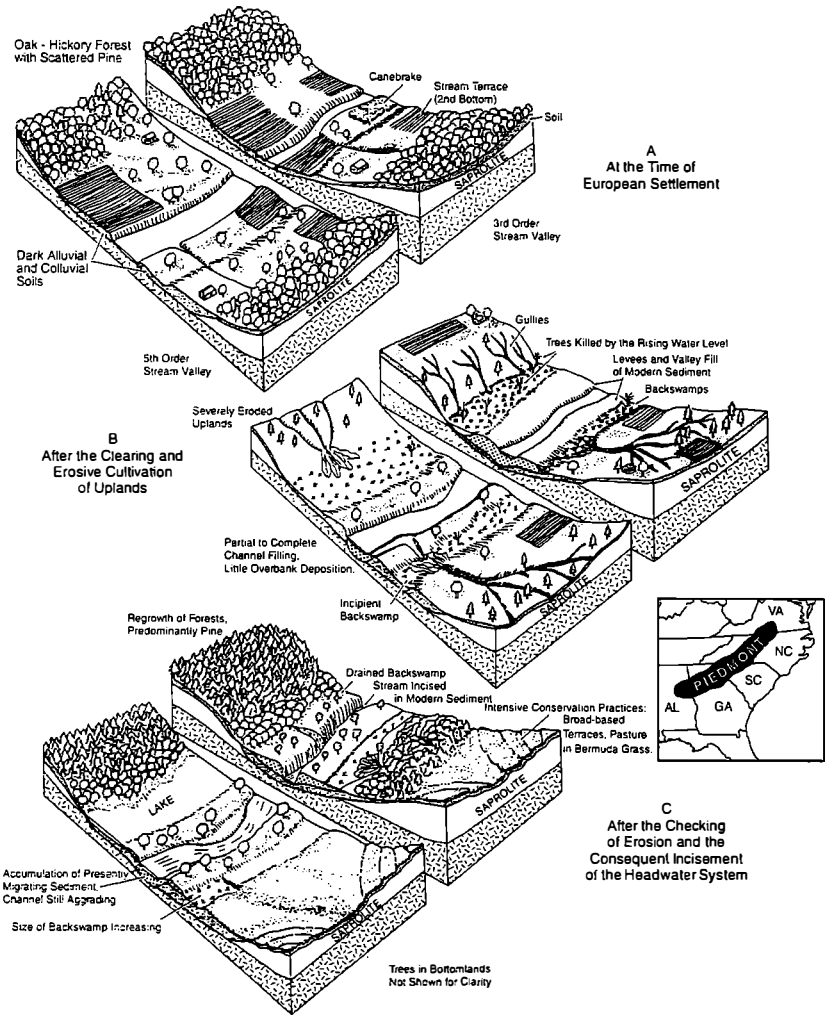


Figure 1.13
Block diagrams showing the evolution of the southern Piedmont riverine landscape, 1700–1970. Note landscape changes, soil erosion, and the downstream migration of historic sediment and concomitant morphologic–environmental changes. The stream in the upstream block might drain 10–20 square miles while the downstream block might drain 50–100 square miles. Such historic sediment is known as legacy sediment.

been settled from the west instead of the east, New England would never have been occupied. Nevertheless, these intelligent and hard-working people *did* wrestle a living from the soil during the 18th and 19th centuries and the relicts of that time—the graceful buildings, the literature, the music, and the forms of government—all attest it was a period of high civilization. The erstwhile cropland has now reverted to forest, the farmers having gone west, but endless fences of stone, painfully hauled to the margins of those former fields, still remain beneath the forest canopies (Fig. 1.14).[21]

The Laurentian Upland, also known as the Canadian Shield, is covered by northern coniferous or hardwood forest, and extends from northern Minnesota, Wisconsin, and Michigan across Canada north of the Great Lakes where it contacts the St. Lawrence Valley. Although many consider the Shield and New England to be similar, the Shield generally has less relief and even poorer and thinner soil. The Adirondack Mountains in upstate New York are sometimes considered part of New England, but lithologically belong to the Shield. Both the Shield and New England have a severe problem—acid rain. The acidic lithology, vegetation, and soil give no buffering capacity and, tragically, many of the beautiful lakes are biologically dead or dying.

Figure 1.14
Forest, resplendent with fall colors, now covers the land east of Mt. Mansfield near Stowe, Vermont, except for an occasional meadow.

The Coastal Plain extends from Cape Cod, Massachusetts, to southern Texas. The natural vegetation is Southern pine to the southeast, but oak-pine and even oak-hickory are dominant in the Gulf and Midland areas. Cape Cod, Martha's Vineyard and Long Island, New York, are primarily terminal moraines from continental glaciation. The remainder southward is recently emerged oceanic sediments, often with the edges of strata facing landward, creating rows of low ridges parallel to the coast. At the inner edge of the Coastal Plain next to the higher interior regions is a discontinuous lowland, often formed on soft limestone. Examples are the "Black Belt" of Alabama and the Black Prairies of Texas. The former is the richest agricultural land in Alabama and has historically been a center of power and wealth in the state. From Virginia northward, the Coastal Plain is partially submerged, creating estuaries of river valleys. The chief example is Chesapeake Bay and its tributaries, but soil erosion from tobacco farming in the 18th and 19th centuries has partially filled many such estuaries, leaving some early ports as inland ghost towns. Southward and around the Gulf of Mexico, the coast is often buffered by barrier islands in the shallow offshore waters. The peninsula of Florida is created by an elongated arch. Underlain by limestone, the central part of Florida is marked by lakes and huge springs, the waters of which may come all the way from Georgia. The Mississippi River Valley is a wide alluvial plain created by the meandering river, which is about twice as long as the 600 miles from southern Illinois to the Gulf of Mexico. By cutting channels through the necks of meander loops, men shortened the river considerably in the 19th century. The rate of shortening was so great it prompted Mark Twain to speculate that in 742 years, the river would be 1¾ miles long, so that New Orleans and Cairo, Illinois, could join their streets!

New Orleans was founded on the natural levee of the Mississippi River.[22] Later growth of the city could only be on lower areas away from the levee. Some of this area was below sea level and protected only by dikes and pumps. In September 2005, Hurricane Katrina exceeded that protection with well-known results.

This, then, is the grand stage upon which the drama of human settlement and resettlement has been enacted on the North American continent over the last millennium or so. As awesome and visually spectacular though the continent as shaped by Nature is, its endless reshaping by human agency—often pleasing, often problematic—is no less intricate and absorbing a subject. That theme shapes the remainder of this book.

Chapter two

Retrieving American Indian landscapes

KARL W. BUTZER

North America was not a sparsely populated "virgin land" when the French and English first settled Québec, Plymouth Rock, and the James River estuary in the early 1600s. As generations of colonists slashed their way through the eastern forests and pushed back the "savages," their introspective and ethnocentric view excluded native Americans from the cherished image of a new European landscape. Frontiersmen and later frontier historians saw Indians as outsiders, people without legitimate claim to the land they lived in and, not surprisingly, Indians were excluded from the new society that emerged. The Spanish, who came earlier, had a very different vision. The de Soto expedition, pillaging through the Southeast in 1539–1542, noted mortuary temples as a potential source of loot, and Coronado, who explored the Southwest in the same years, described pueblos such as Cibola. Whatever their motives, Spaniards "saw" the indigenous cultural landscape, and they ultimately sought to assimilate its people into their own world.

These very different visions of North America are also reflected in two traditions of cultural and historical geography, the first emphasizing the indigenous roots, the second the European contributions. But America did not begin on the banks of the James River, rather, when Asian peoples began to cross the Bering Straits to Alaska about 15,000 years ago. Their descendants settled the continent and, over many millennia, adapted their hunting and foraging ways of life to different combinations of resources, reflecting North American environmental diversity. Later they created farming towns, following an independent trajectory of agricultural origins during what in Europe were Roman times and the Dark Ages. The farming frontier in most areas was pushed to its ecological limits, while on the west coast alternative ways of life were developed that could support surprisingly large populations by fishing and intensified plant collecting. In the period when Gothic cathedrals were erected in medieval Europe, many thousands of native Americans built impressive towns in the Southwest and the Mississippi Basin, sites now visited by tourists from both continents.

There is, then, a pre-European cultural landscape, one that represented the trial and error as well as the achievement of countless human generations. It is upon this imprint that the more familiar Euro-American landscape was grafted, rather than created anew.

Adapting to new environments

The first peopling of the New World remains the subject of controversy. The earliest immigrants arrived from Asia via the Bering Straits, to confront the problems of an inhospitable environment, a frigid water body, and bleak mountain ranges with oscillating glaciers. The persistently sparse archaeological record of eastern Siberia, Alaska, and northwestern Canada also hinders our interpretation of this movement.

By contrast, the environmental context of this early migration is reasonably well understood. During the last Ice Age, withdrawal of oceanic waters to feed the great continental glaciers left most of the Beringian continental shelf exposed as dry land, connecting Europe and Asia about 65,000–13,500 years before the present (BP).[1] However, the modern straits are ice-covered in winter, and the actual crossing from Siberia to Alaska never posed a fundamental problem. Fossil animal remains and pollen indicate a low-nutrient tundra-steppe dominated the vast, unglaciated tracts of Ice Age Alaska and the emergent continental shelf, while large concentrations of herbivores provided potential subsistence for hunting peoples with the necessary technology to cope with the cold and to take advantage of big game.[2] A final issue is physical access to the temperate and tropical parts of the New World via the eastern flanks of the western Cordillera, where the Laurentide ice sheet periodically approached coalescing tongues of mountain ice. Views about the exact route vary, but at the very least it would have been difficult to find and negotiate a passable and attractive way through the MacKenzie Valley and along the eastern front of the Rocky Mountains during the apogee of the last Ice Age, about 30,000–13,500 BP.[3]

It was technically possible for prehistoric hunters to pass from Asia into more productive regions of the New World for tens of millennia prior to 30,000 BP. But the coeval record of prehistoric settlement in eastern and northern Asia is scanty, and there still is no convincing record of such antiquity in Canada or the United States. The earliest documented site in Alaska is from about 14,000 BP, and in the United States the oldest is found in the Paisley Caves of south-central Oregon, with human coprolites dating to 12,300 BP (radiocarbon years).[4] Findings at these sites include small, narrow stone "blades," an early form of hunting technology similar to that used in East Asia since about 20,000 BP. About 11,500 BP, there was a veritable explosion of more conspicuous archaeological sites in the continental United States (Fig. 2.1) and to a lesser degree in Alaska and South America. This dramatic influx of these Paleoindians

represents a highly successful human adaptation to big-game hunting.[5] The Lithic hallmark is a large, "fluted" or pressure-flaked stone projectile point, hafted to the end of a thrusting spear. Similar innovations are first documented at archaeological sites in Japan and the Kamchatka around 14,000 BP. Within 2,500 years, the Paleoindian people had settled much of the United States, and not long thereafter they appeared at the other end of South America, near Tierra del Fuego.

The Paleoindians evidently were highly mobile, efficient, and adaptable. But within the United States their site concentrations suggest a preference for relatively open environments with a high animal population: the pine-grass parklands of the High Plains and incipient Prairie Peninsula, the pine-sagebrush parkland of the western Great Basin, and the then assembling deciduous woodlands of the east-central and mid-Atlantic United States (Fig. 2.1).[6] The classic Paleoindian sites on the High Plains represent the ephemeral encampments of bison hunters. Although there also are a few associations with bones of now-extinct mammoth, mastodon, and camel, the case for a human role in the late glacial extinction of a large array of large mammals remains equivocal.[7] In the eastern woodlands archaeological bone is poorly preserved, but white-tailed deer may have been the major game species. As the Paleoindians fanned out and penetrated further north and east, towards the margins of the retreating ice sheet, they hunted caribou.

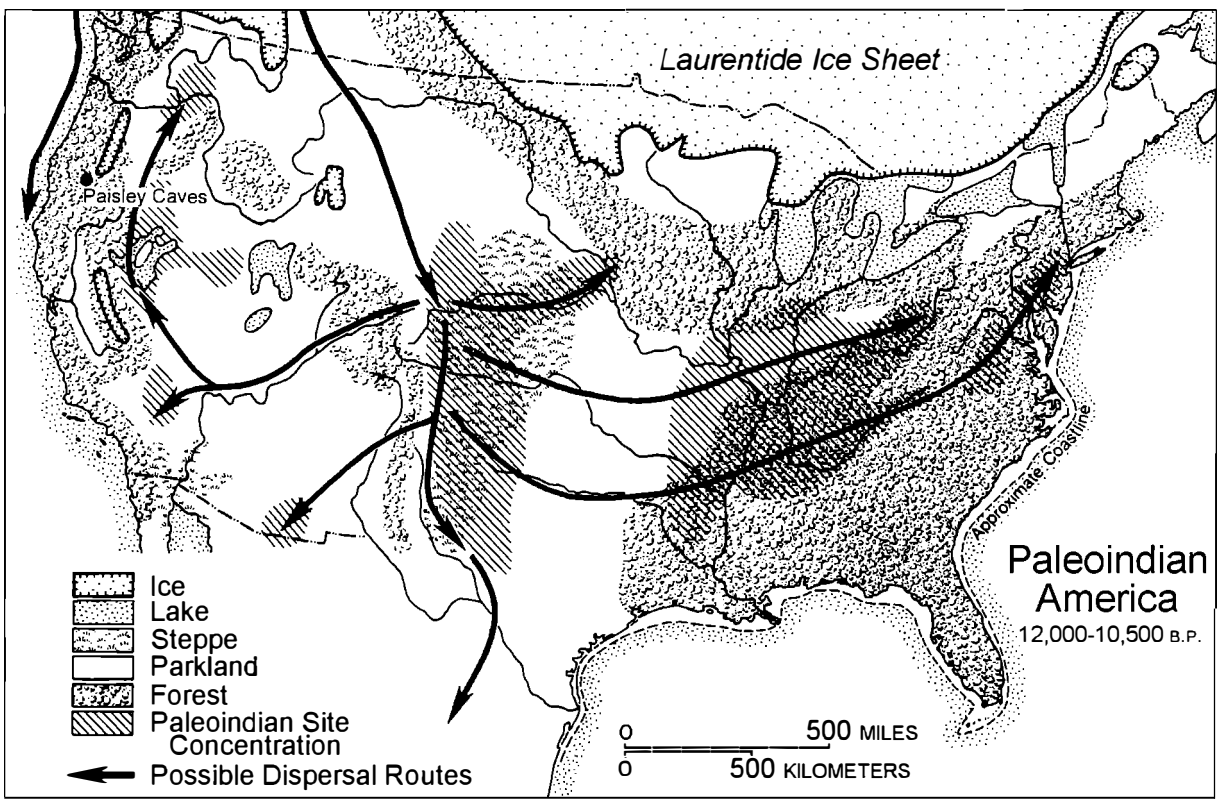


Figure 2.1
The Paleoindian entry into North America after about 12,000 BP. Ice margins and proglacial or pluvial lakes represent their maximum extent about 12,000–11,000 BP.

Most Paleoindian sites are small, with comparatively few artifacts, even where large numbers of animals had been killed, but the fine projectile points were carefully husbanded in the course of a mobile, seasonal schedule. Not long after Paleoindian dispersal into most American environments, changes in shape and size of projectile points become apparent in different areas, reflecting an adaptation to specific prey as well as the emergence of regional stylistic differences.

This transition is first apparent in the Mountain West, where once-deep lakes disappeared or were reduced to their modern shorelines no later than 10,000 BP.[8] As aridity became the rule, big-game hunting gave way to a less spectacular but more frugal foraging for nuts, seeds, berries, starchy roots, small mammals, and invertebrates. A similar, semi-nomadic way of life persisted in the marginal subdeserts of Nevada, Utah, and the Snake River plains into historical times. This is but one example of the many Archaic adaptations (after about 10,900 BP) that replaced Paleoindian traditions about 10,000–8000 BP. In the forest–prairie transition zone emerging on the eastern margin of the Great Plains and the Prairie Peninsula, there was a shift to deer and smaller forest game, with increasing consumption of wild plant foods. Only on the High Plains did the big-game tradition persist longer, but settlement shifted to the moister parts, where hunting remained a mainstay, despite greater attention to wild plants.[9] In the more bountiful Mississippi and Ohio valleys, emphasis was increasingly directed to intensive gathering of wild plants and exploiting of aquatic resources such as fish, shellfish, and water fowl. Walnuts, pecan, hickory nuts, and acorns were systematically collected and seeds gleaned from wild grasses, complementing the food needs of people living in larger encampments along the river valleys.

After 5000 BP, finding food in the Late Archaic focused more specifically on exploiting a limited range of resources, a trend apparent in different environments of North America. In the Pacific Northwest, finds of barbed antler harpoons point to the increasingly effective use of marine and river-derived food such as salmon, while the existence of larger and more numerous documented sites may imply seasonal settlement. In the Mississippi, Ohio, and Tennessee drainage, manipulation of weedy seeds gradually led to domestication of marsh elder (sumpweed, *Iva*) and maygrass (*Phalaris*) by 4000 BP.[10] The native squash (*Cucurbita*) was domesticated and generally available about 3000–2000 BP, while the bottle gourd (*Lagenaria*), a tropical cultigen of Mexican origin, was introduced before 4300 BP and was widely cultivated by 2500 BP. In the Southwest, domesticated maize (*Zea*) of Mesoamerican origin indicates the presence of supplementary agriculture about 3000–2500 BP, but sites are limited to some caves near the Mexican border.

All in all, there are parallels between American Archaic and European Mesolithic developments. They were periods of environment-specific specialization and diversification, in which increased labor was devoted

to raising the caloric or protein yield of food.

The potential role of environmental change at the end of the Ice Age and during post-glacial times has not been widely appreciated. The shift from a glacial to a non-glacial environment on the Great Plains greatly reduced the complexity of the open vegetation, in favor of a more monotonous grassland with fewer plant species and specialized environments, while the faunas indicate that the post-glacial climate was, contrary to expectations, more continental, despite higher temperatures.[11] Accelerated eolian sedimentation has been verified on the High Plains about 8000–4500 BP, contributing perhaps to the demise of the Paleoindian way of life and probably explaining the limited archaeological record for the Early and Middle Archaic in this area.[12] In the Southwest and Great Basin, the disappearance of the great pluvial lakes coincided with a drastic change in potential resources. Although some modest playa lakes and many marshy floodplains persisted, with the exception of an arid period from 6500 to 2500 BP, which eased after 5500 BP,[13] the spatial fragmentation of plant and animal resources possibly contributed to the small-scale and peripatetic settlement patterns of Archaic peoples in the area. Demographic growth was very slow until the appearance of irrigation at a much later date.

In the Mississippi Basin, the Early and Middle Archaic period coincided with a notably drier climate. After 10,000 BP, episodic runoff led to gullying of the watersheds, with alluvial fans growing along the floodplain margins. As aridity increased, upland ground cover was reduced, slope soils eroded, and sheets of colluvium built up along the edges of valley floors, with two peaks of sedimentation about 8500 and 5200 BP. Ground cover only improved, with stable soil development and a switch from a braided to a meandering floodplain, after 4800 BP.[14] This long-term but relative impairment of upland resources may have encouraged the population to concentrate more on obtaining food in the form of lake and riverbank plants and wildlife that characterized Archaic developments here. In the more humid Northeast, late glacial woodlands had been relatively open, typically with 15–30 percent of the pollen belonging to nonarboreal species. Eventually, dense forests with a lower animal population were established and, as in the European Mesolithic record, evidence for settlement is very thin, except along the coasts.

It is therefore plausible that the increased regional differentiation of environments and human ways of life in North America from 8000 to 3000 BP were interrelated.

Toward an agricultural landscape in the East

About 3000–1500 BP, economic trends that emerged during the Late Archaic period crystallized into more definite patterns. Mesoamerican

cultivated crops (cultigens), pottery technology, and cultural ideas became important in the Southwest and the Mississippi Basin. The bow and arrow, constituting a major improvement in hunting technology and warfare, were introduced from the North. Trade in food, raw materials such as copper and marine shells, and ornaments accelerated and affected economic life in the back country of the coasts and river valleys. New forms of social organization and ideology appeared and were reflected in large ritual centers in the Mississippi Basin and a general increase almost everywhere in the clarity of the picture archaeologists have been able to reconstruct.

In the Mississippi, Ohio, and Tennessee basins the period from 1000 BC to AD 900 represents the Woodland culture complex, a disparate group of proto-agricultural peoples that were interconnected by an active, long-distance trade network. Intensive gathering of wild plant and aquatic foods continued, but the array of local cultigens was increased by the addition of sunflower (an oil plant, *Helianthus*) and goosefoot (a starchy seed, *Chenopodium*), while eight-rowed "flint" and twelve-rowed "dent" maize were introduced from the Southwest and Mexico respectively.[15] Maize of both types has been verified in Tennessee about 350 BC, in the Ohio drainage after 300 BC, and in the Illinois Valley by AD 650.[16] Tobacco was also introduced from Mesoamerica about AD 200, while pottery traditions of similar origin were established in the Ohio and Tennessee basins by 900 BC, spreading to the northern High Plains by AD 500.[17]

In effect, the Woodland phenomenon represents a 2,000-year period of diffusion, innovation, and development: regions where humans could live expanded and productivity increased; populations grew significantly and settlements became semi-permanent. The role of domesticated foods also increased progressively. The stable carbon isotopes in human bone remains indicate that maize played a small but expanding dietary role after AD 400, which is even true in cemetery records of Ontario and the East.[18] By this time, one can speak of "supplementary" agriculture within an intensified gathering economy. But even prior to the dissemination of maize, sizeable towns with great burial mounds sprang up (Fig. 2.2). The largest of these is Poverty Point, Louisiana, a complex of artificial earth mounds and geometrical earthworks that contain nearly 1 million cubic yards of material, begun about 1200 BC. A cluster of such sites in the middle Ohio Valley around Adena and Hopewell includes towns with up to 38 burial and effigy mounds about 100 acres in size, which date between 500 BC and AD 400.[19] Trade goods are prominent in such centers, indicating a far-flung exchange system that actively linked a multitude of small villages (50–100 inhabitants) and raw material sources across the Midwest, while maintaining indirect contacts with towns in the Mississippi Valley and the Southeast. Presumably, trade also assured complementary food supplies, at least during years with average crop yields.

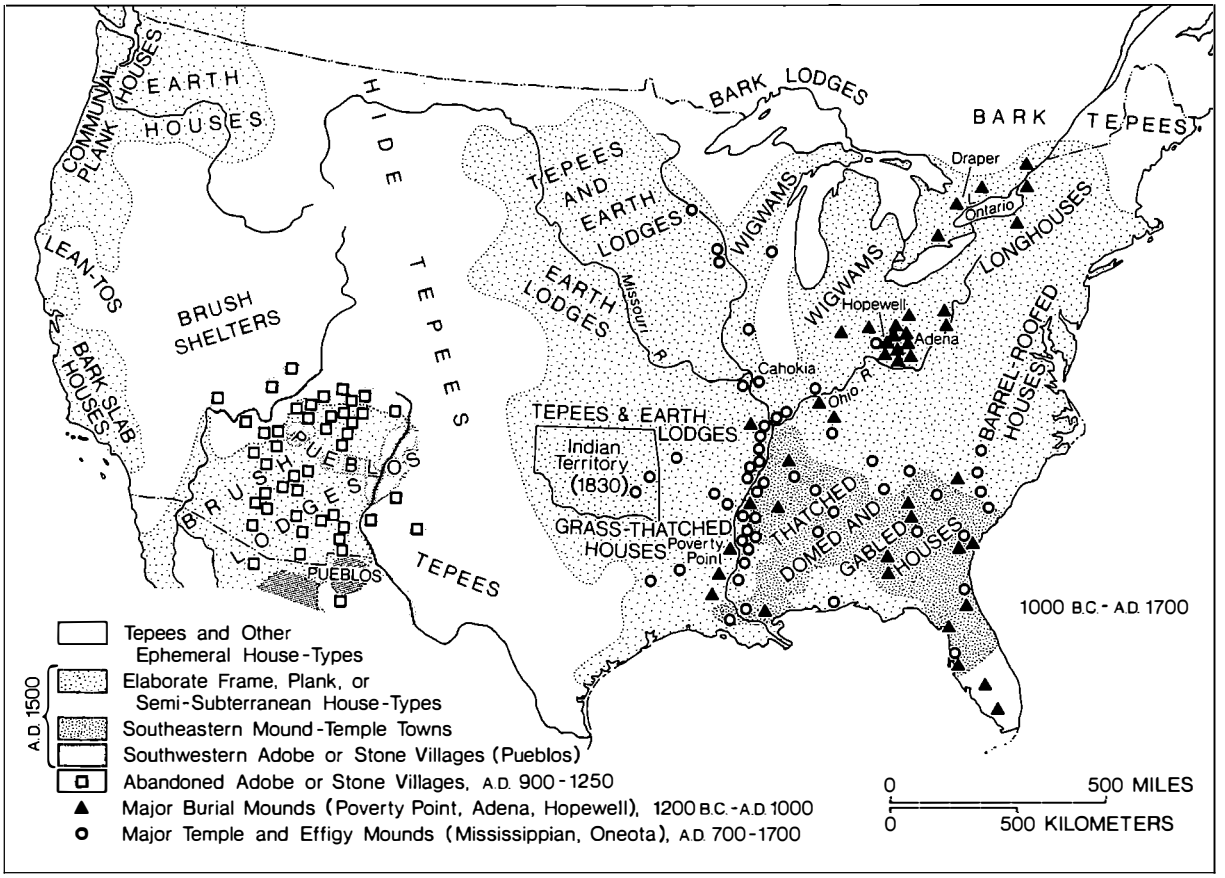


Figure 2.2
Indian settlement in late prehistoric and European contact times.

Although overall population density was low, perhaps as low as one person per square mile, the persistence of some towns with several thousand inhabitants over four and five centuries—without a true agricultural base—has no parallels in Old World prehistory. The level of political organization in the Adena–Hopewell town clusters is a matter of debate, but their resource base may have been vulnerable to environmental perturbations. Drier episodes with gullying and fan alluviation, dated roughly from 100 BC to AD 50 and from AD 750 to 900,[20] coincided with the shift from the Adena to the Hopewell archaeological phase, and again with the Woodland–Mississippian transition. Severe food shortages may therefore have triggered or exacerbated sociopolitical crises and ultimately stimulated incremental shifts towards agriculture.

The Mississippian phenomenon refers to the agricultural high point of Native American settlement in the Mississippi and Ohio basins. Geographically, at any one time this Mississippian phase represents a dozen or so settlement clusters along different floodplain segments (Fig. 2.2). Many such clusters were short-lived, perhaps enduring a mere 75 years, while others spanned most of the 600 or so years represented by the Mississippian period (about AD 900–1500). The designation again encompassed different tribes, with varying sociopolitical complexity,

but each geographical and temporal component was concentrated around one or more ceremonial centers, with conspicuous "temple mounds," that also served economic and political functions. The hierarchical nature of settlement size, function, and arrangement seems to have been paralleled by some degree of social hierarchy ("chiefdoms"). The unifying elements of the different regional components, spread from the Gulf Coast to the Great Lakes watersheds, appear to have included riverine trade networks, a common system of agriculture, and a broadly shared body of ideas and beliefs.

The Mississippian phase developed from indigenous, Woodland roots, with some infusion of cultural and ideological elements, from the Gulf Coast and from Mesoamerica, in part via the Southwest. The configurations emerging through archaeological research took form over some two centuries, attained their maximum visibility between AD 1100 and 1300, and subsequently show evidence of decline and regional abandonment. The agricultural base was ostensibly centered on maize, but a large range of plant foods was actually exploited. Beans began to be cultivated, providing a balance of amino acids, together with squash, gourd, and sunflowers. "Flint" maize was best adapted to shorter growing seasons in the northern part of the Mississippian area, but both varieties were widely grown, and commonly harvested when still green. In the warmer areas, a second crop of late maize was planted lower on the floodplain, and often allowed to mature fully, after which it was parched, stored, and used for making hominy during the winter and spring. Possibly maize was intercropped with beans, but this is not supported by later ethnohistorical sources.

Yet carbon and nitrogen isotopes from Mississippian human bone indicate that beans were less important than might be assumed, and that animal protein provided about half the dietary intake.[21] This was not true, however, in dense agricultural settlement clusters, where the cemetery record testifies to a poorly balanced diet.[22] Fish and perhaps shellfish provided additional food resources, and the bow and arrow allowed more effective hunting of migratory waterfowl as well as deer, wild turkey, and raccoon.[23] Thus, the floodplains and their margins provided complementary environments in an annual cycle of exploitation at different seasons.[24] Finally, there were supplementary, wild plant foods such as nuts, fruit, berries, and seeds. The Mississippian agricultural system was therefore highly diversified, rather than specialized, but invariably depended on proximity to floodplains for both their fertile alluvial soils and natural pulses of energy. Nothing is known about the scheduling of fallow periods, and manure was not used, but the simple hoe and digging stick technology would have been unable to provide sustained yields on sandier soil without long fallow intervals. Overall, this method of agriculture was extensive, rather than intensive. Allowing for the absence of domesticated animals, the closest European analogy was with simple Neolithic farming.

Excavated site residues suggest several categories of settlement: (a) short-term, special purpose sites used in hunting, plant collecting, or processing; (b) homesteads of one or several families; (c) hamlets of perhaps ten or 20 houses; (d) villages, with an area of 0.5–3 acres and from 30 to over 300 houses, enclosed by a palisade or earthworks; and (e) ceremonial towns, ranging from 12 to over 200 acres in size and including anywhere from 200 to 1,000 houses.[25] Houses enclosed space of 30–60 square yards and were roughly rectangular, with numerous post impressions in the soil indicating permanence but frequent rebuilding with perishable materials, in pole and thatch style; there was a central hearth, with storage pits inside or outside. The houses are thought to have been inhabited by seven or eight people. Such structures were commonly arranged in rough rows, at a density of 12–28 per acre. A typical hamlet had about 100 people, a village between 700 and 1,300 inhabitants, and a ceremonial town 2,500 or more.

The largest settlement of the time and region was Cahokia, located on the former levee of a cut-off Mississippi river meander, near east St. Louis (Fig. 2.3). The intersecting meanders were already partially filled in, as indicated by several mounds built down within them; but the sloughs and seasonal marshes provided access to fish and fowl, while the connected waterways facilitated navigation and contact with the outside. The site was occupied by a large settlement from at least AD 1100–1350, but enjoyed its heyday during the 13th century.[26] Over 100 mounds have been identified in the area illustrated by Figure 2.3, with

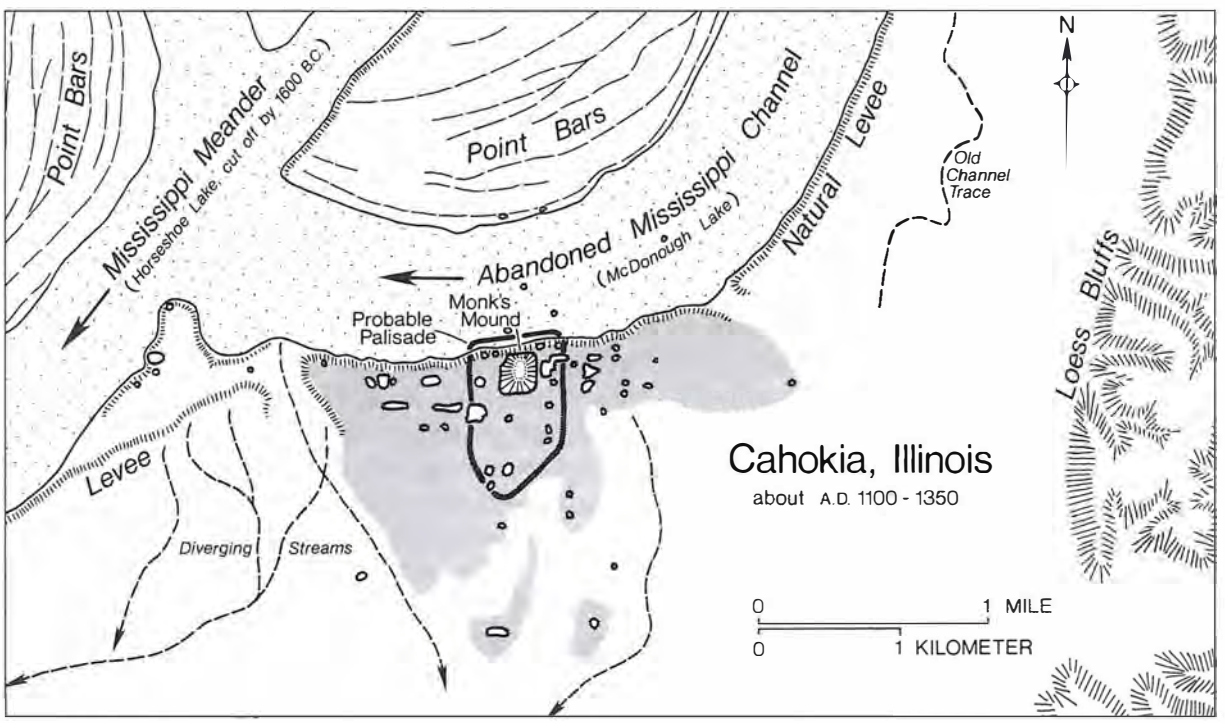


Figure 2.3
The large population center of Cahokia, Illinois, had 30,000 inhabitants in the 13th century. Ceremonial mounds visible in the 5-foot contours of the 1:24,000 topographic map are shown by strong outlines of various shapes.

some 40 conspicuous enough to be visible within the site on the contours of the 1:24,000 topographic maps. Most served as platforms for public buildings or the residences of prominent people, although at other sites mounds were often still used for mortuary rites or burials. The Cahokia mounds were primarily oriented along the crest of the levee, centered on the four-tiered Monk's Mound (13.5 acres, with an intact relief of 112 feet); further lines of mounds were arranged in perpendicular fashion, probably with large open "plazas" adjacent. A central area of 200 acres was once enclosed by a log palisade, with watchtowers and gates at regular intervals. Rebuilt four times, this palisade may have served to enclose a defended refuge as well as a high-status area.

Residential land use in Cahokia was concentrated in a roughly 2,000-acre area, with several adjacent satellite clusters of houses, and an estimated total population of 30,000 people about AD 1250.[27] Goods found within such residences indicate strong differentiation according to wealth, as well as between craftsmen and farmers. Several other large ceremonial towns of 120–300 acres surrounded Cahokia, at least during its early stages, as did dozens of villages, suggesting some form of central place hierarchy. Cahokia was a major center, the largest settlement in the United States until it was surpassed by Philadelphia in AD 1800, and it remains prominent in the landscape today.

The demise of the Mississippian settlement clusters is poorly understood; however, the cemetery skeletal record of the 13th century indicates poor nutrition, widespread infectious disease, and high numbers of births per woman.[28] Since many potentially productive areas remained unsettled, this implicit subsistence crisis was apparently compounded by social constraints on dispersal and by unequal access to resources. In any event, large areas were quasi-abandoned and in 1673 Marquette and Joliet found the mound cities deserted and saw remarkably little evidence of settlement along the lower Illinois and middle Mississippi rivers. However, a modified version of the "mound temple" towns and their sociopolitical system was still encountered by de Soto in the southeastern United States, and by the French north of Natchez in the period 1673–1682.[29]

The Mississippian economic network stimulated agricultural development and village agglomerations well beyond the direct influence of this cultural sphere, in the Northeast and on the Great Plains. In upstate New York, the Iroquois, a peripheral offshoot of the Woodland tradition, shifted from small, oval houses to great longhouses during the 13th century, indicating a change from nuclear to extended residences, with up to two dozen units; from then to about AD 1500, they aggregated into increasingly large villages (Fig. 2.4), supported by relatively intensive agriculture and by hunting, fishing, and plant gathering within a large territorial radius.[30]

To the west, Woodland groups first penetrated river valleys of the eastern Plains about 2000 BP, building countless small river-bluff

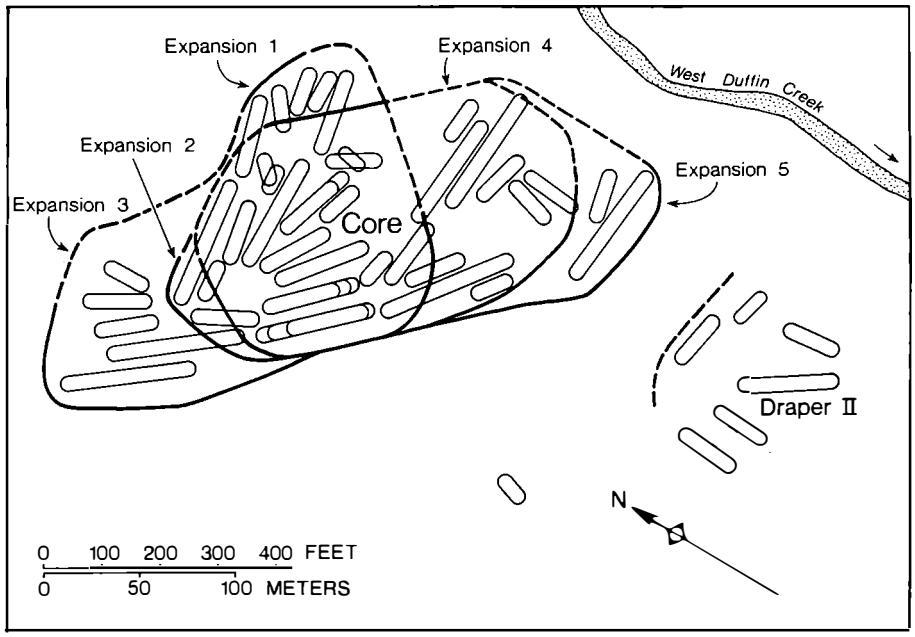


Figure 2.4
The Draper site, Ontario, represents a dense cluster of Huron longhouses within an expanding stockade, during the 16th century.

mounds. After AD 700, semi-agricultural villages began to appear along the central Plains rivers where maize, squash, and sunflower were cultivated on the major floodplains, complemented by bison hunting.[31] These villages frequently shifted their location, and consisted of 20–30 multifamily lodges of rectangular, semi-subterranean type. These Plains Village Indians competed with the established, mobile bison hunters and berry foragers of the region, but they began to abandon some valleys by AD 1300, partly in response to recurrent droughts and erratic floods. This withdrawal, recalling that in the Ohio–Mississippi drainage, continued over several centuries and was accompanied by social changes, reflected in a shift to circular or oval lodges, larger villages with 30–100 houses, and stout palisades. Oñate visited Wichita Indians at Quivira on the middle Arkansas in 1601, estimating the number of houses in this large but otherwise unremarkable town to be around 1,200. Further retraction of these communities on the ecological limits of extensive farming ensued when both they and the neighboring Plains hunters adapted to horseback riding during the early 18th century. The Mandan, Arikara, and Pawnee represented enclaves of this tradition a century later.

Pueblo and irrigation agriculture in the Southwest

The agricultural transition in the Southwest was also gradational. Eight-row maize, squash, bottle gourd, and beans were all introduced between 3000 and 2000 BP, the time span of the San Pedro stage, for

which available sites were limited to rock shelters in the mountains of southern New Mexico and Arizona.[32] Plant gathering and hunting were, however, the staple food practices. Proto-agricultural settlements soon began to spread to the Mogollon Rim and onto the Colorado Plateau (about 200 BC) with hamlets or small villages and increasing use of semi-subterranean houses, and the gradual appearance of two different pottery traditions (Mogollon and Pueblo or Anasazi). Simple villages with a third pottery tradition appeared in the arid Gila and Salt River lowlands after AD 1, where, by AD 500, there was a progressive introduction of several new beans, Mesoamerican cotton (and loom weaving), and grain amaranths, their cultivation made possible by irrigation.[33] This Hohokam tradition supported larger agricultural settlements around AD 550–700, and new varieties of drought-resistant maize were developed to increase the dependability of the food supply.

Eventually, two distinctive settlement styles, linked to different ecologies, emerged after AD 950. In the high country, increasingly large settlements were constructed of multiroom, multistory, and flat-roofed, dry-masonry houses, arranged around large, circular, masonry-lined, ceremonial pit houses, known as "kivas."[34] These pueblos have a strikingly urban appearance (Figs. 2.5 and 2.6), whether they are situated in open valleys, at canyon heads, or in immense rock shelters in or below the canyon walls (Fig. 2.7). Supported by cultivation of maize, wild foods such as pinyon nuts and juniper berries, as well as jackrabbits and domesticated turkey, such towns sometimes housed several thousand people. Cultivation depended on rainfall and the diversion and control of sporadic floodwaters, with successive checkdams slowing the runoff of small upland streams.[35] It also relied on rock lines along

Figure 2.5
The masonry structures of the Pueblo Bonito ceremonial and population center, Chaco Canyon, New Mexico, illustrate the durability of 11th- and 12th-century settlements. The arroyo in the background was incised after AD 1100 but before abandonment, probably impeding floodplain cultivation.

Figure 2.6 Masonry construction and pine crossbeams, Chetro Ketl, Chaco Canyon, New Mexico. Begun in AD 945, the complex gained additions as late as 1116, but was abandoned by 1120.

the lower borders of cultivated fields to impede soil erosion. The best-known emergent towns with large apartment complexes date after the period AD 1150–1175, when defensive situations were generally selected and satellite hamlets increasingly abandoned. At some point between AD 1290 and 1450, these settlements were either totally abandoned or abruptly reduced to very modest proportions.

In the lowlands, the Hohokam of the Gila–Salt drainage developed a complex irrigation network around the site of modern Phoenix that is the largest (over 250 square miles) and most elaborate of the New World (Fig. 2.8). Some of the canals were 15–18 miles and more in length by the time that this system achieved its maximum development (around AD 1400), and flows of up to 237 cubic feet per second have been estimated for trunk channels.[36] Feeders appear to have been taken off directly at the Salt River banks, presumably when rainfall was more regular and the present erratic flooding was not a factor, and without the use of the mortared, masonry diversion dams characteristic of Spanish irrigation. Hohokam canals were not "lined," although centuries of flowing water have impregnated many with hard lime, and sluice gates were simple arrangements and involved backfilling and removal of earth, unlike the mortared counterparts in Spain, with wood or iron traps.[37] The prehistoric Salt River system remained sufficiently visible and logical in its arrangement that in 1878 Mormon settlers hired Pima Indians

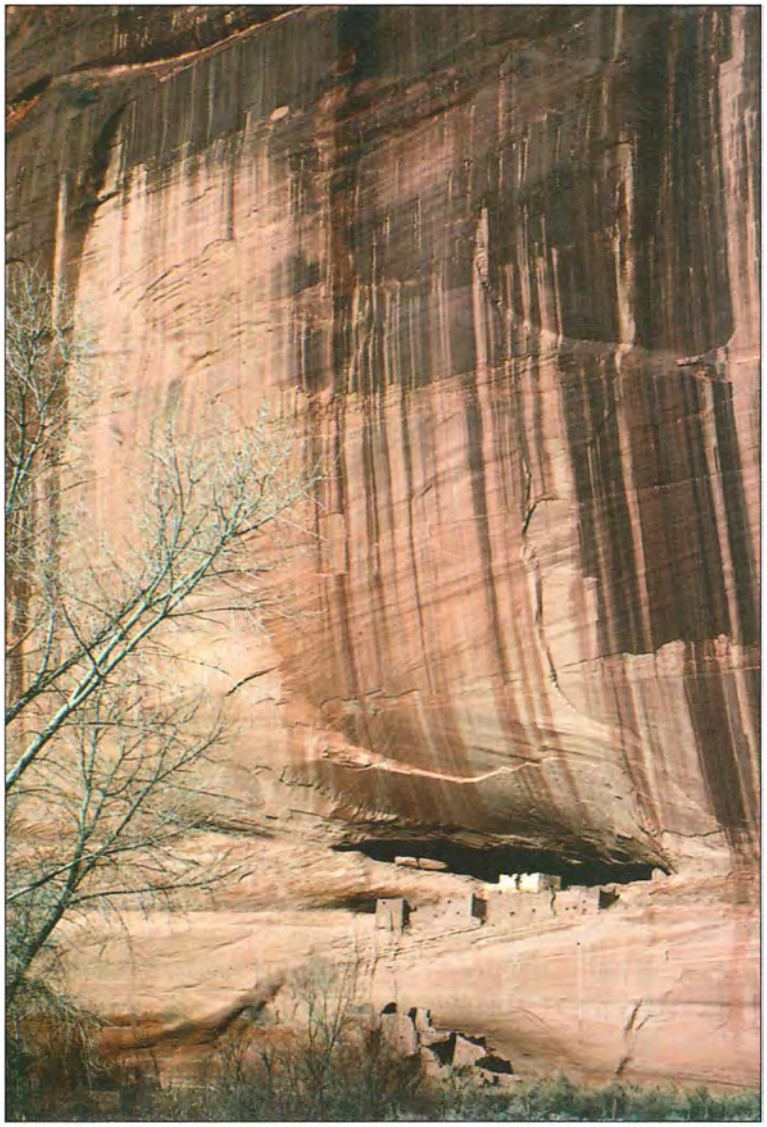


Figure 2.7
Ruins of the White House, Canyon de Chelly, Arizona. Occupied between AD 1060 and 1275, the site consists of an upper village of houses in a rock shelter and a lower part on the canyon floor, connected by a rock stairway up the canyon wall.

to reconstitute the 300 miles of major Hohokam canals. Interspersed within this network are at least 80 Hohokam settlement sites that have been classified into several size categories, some of which were larger than 250 acres and many of which remained occupied over a span of 500–800 years.[38] The settlement surfaces of the Salt River south bank, roughly half of the total, add up to nearly 5,000 acres,[39] suggesting a maximum possible population of 75,000–100,00. By any reckoning, this was one of the largest ever traditional irrigation systems in human history.

Hohokam agriculture involved a great deal of field preparation that has left visible small landforms.[40] Rocks from the stony alluvial soils were systematically piled up in small mounds or around field

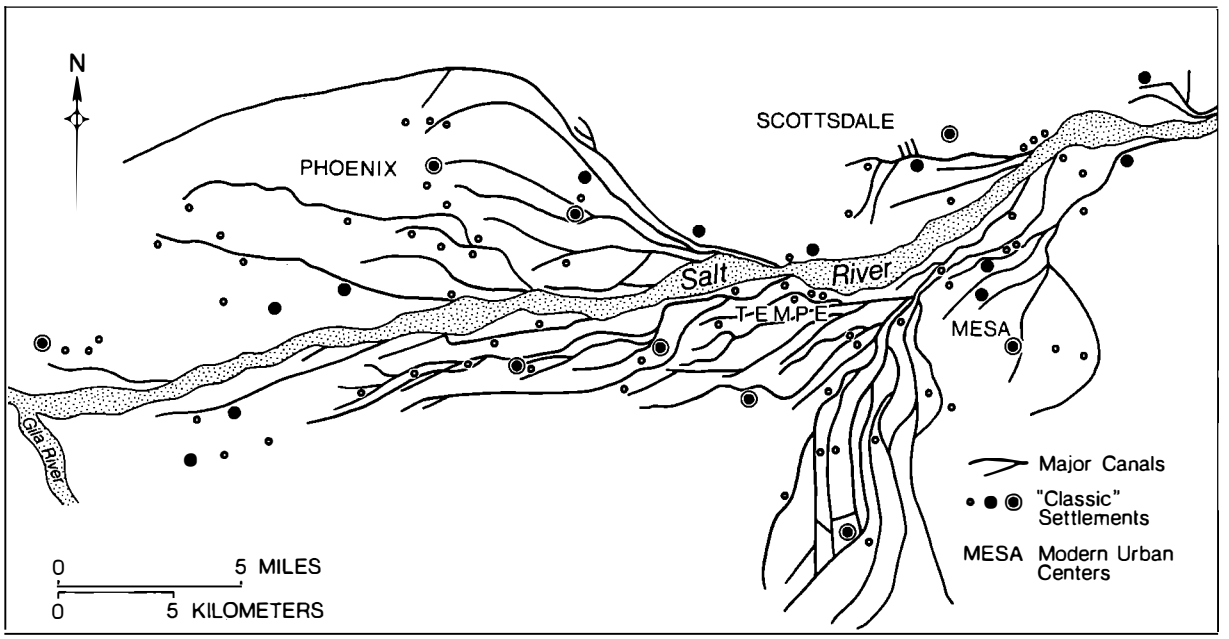


Figure 2.8 The irrigation and settlement network along the lower Salt River, Arizona, in Classic Hohokam times (AD 1150–1400) was the largest in the prehistoric New World.

margins, sometimes functioning as true retaining terraces. Rocks were also removed from grids of small depressed squares known as "waffle gardens," watered by hand in the period of first European contact. Irrigation was initially practiced with partly controlled floodwaters on the floodplain, and elaborated later with water dispensed from higher-lying canals through parallel sets of tightly spaced ditches. Away from the main rivers, water was diverted out of streams to run down canals high on the valley margins, irrigating local areas of better soil. Further back into the deep valleys of the Salt drainage, rain-fed agriculture was increasingly practiced on high alluvial terraces or on suitable mountain slopes, where scattered plots were somewhat protected by lines of rocks that retained water and soil (Fig. 2.9).[41] This expansion of cultivation to marginal lands accompanied population expansion between AD 1150 and 1250, after which resources were exploited to capacity, given the available Hohokam technology. Some peripheral areas began to be abandoned by AD 1250, and about AD 1400 the Tonto system collapsed, followed by the Salt River core network some 50 years later.

House and town construction by the Hohokam was less permanent than in the masonry pueblos of the plateau. Puddled adobe was the basic building material, poured in regular courses of calcic mud that hardened to the consistency of a low-grade concrete to allow the raising of multistoried, rectangular structures. Casa Grande, near the Gila River, had four floors and walls three feet thick (Fig. 2.10), and has remained a prominent if derelict landmark since being described in that state by Kino in 1694. Other ruins have generally fared less well, "melted down" slowly by rain or quarried as a source of soil in the late 19th century. But

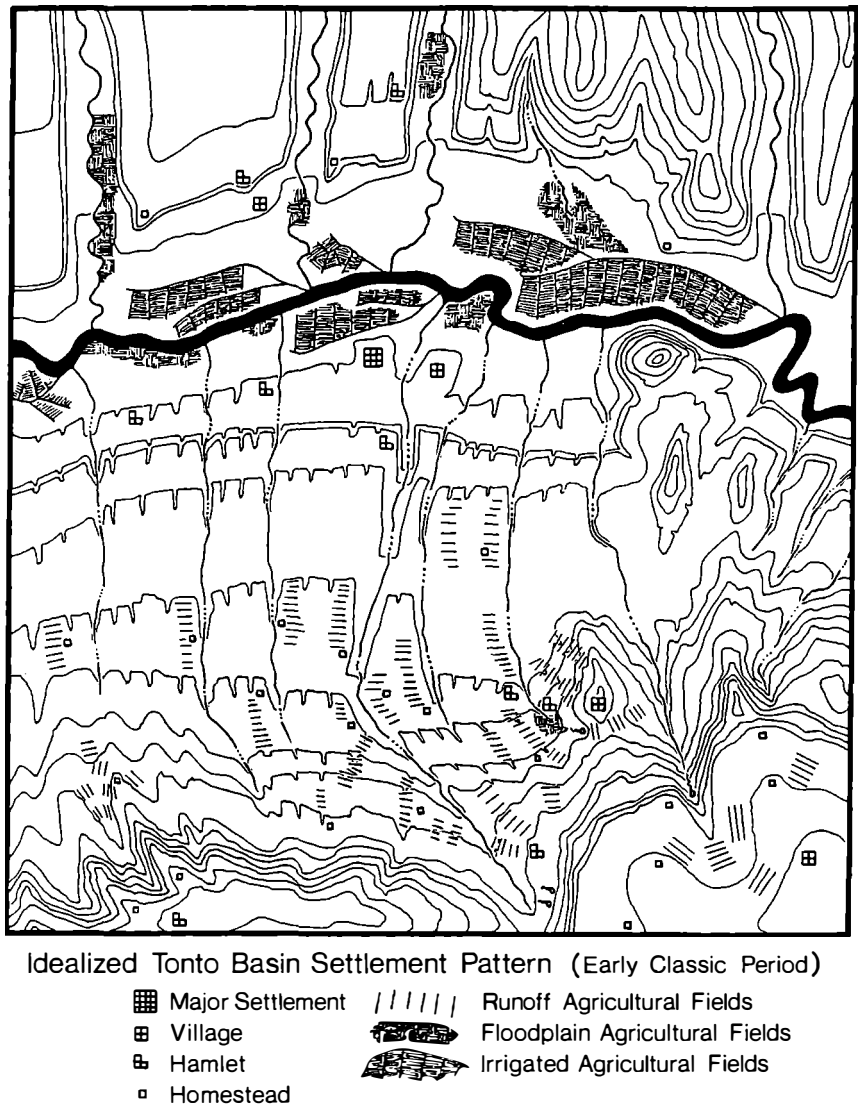


Figure 2.9
A model that illustrates the diversity of agriculture and settlement strategies of Hohokam in the Tonto Basin, Arizona, about AD 1250.

the mass of adobe accumulated in Hohokam villages over centuries of occupation has created conspicuous mounds similar to Near Eastern tells. Roofs were flat and supported by large wooden beams (that allow tree-ring dating), covered by a bed of stout reeds and then several layers of adobe. Windows were small and rare. The so-called Spanish domestic adobe architecture in the Southwest and northern Mexico is in fact indigenous, with the exception that Spaniards substituted preformed, sun-dried adobe bricks for puddled adobe and then added drain spouts from the roof. Nowhere in Spain is adobe plastered on masonry walls, as is the custom in many surviving southwestern pueblos (Fig. 2.11), although Spanish walls may be surfaced with a thin coat of cement before whitewashing.

The cycle of demographic growth, settlement groupings, and eventual abandonment evident in the late prehistoric site clusters of the Southwest paralleled that of counterparts in the Mississippi–Ohio basin. It suggests a latent instability in such settlement systems that needs further exploration.

Significantly, the southwestern site clusters that appeared about AD 950–1050 showed a parallel but not strictly synchronous development. Agglomeration peaked as early as AD 1075 and as late as 1325, and partial or total abandonment took place in some areas during the late 1200s, in others during the mid-1400s. Maximum population tended to accompany or precede congregation in large settlements, suggesting social changes, possibly a switch from an intercommunity exchange system to one of centralized redistribution. Abandonment sometimes followed droughts evidenced in long tree rings, or local floodplain downcutting (with lower water tables and loss of irrigation "head"), but more commonly coincided with periods of wildly erratic rainfall.[42] It was sometimes preceded by an abortive attempt to expand cultivation to marginal sites.

In one case where the population trends and available resources for one small site cluster have been reconstructed, the combination of available arable soils, water supply, and wild plant and animal foods would not have sufficed to feed the expanding population during times of declining rainfall reliability.[43] Abandonment ensued. To this, one must add the inevitable depletion of indifferent, unimproved soils after decades of planting with a demanding crop such as maize. Alternate cropping appears to have been unknown and beans are, here too, surprisingly rare among botanical remains. Even if short fallows had been

Figure 2.10
The Casa Grande, near the Gila River of Arizona, was built about AD 1300 and abandoned during the 15th century. Measuring 41 by 62 feet, this adobe structure was 33 feet high and had some 60 rooms. The walls taper upwards from a base of 53 inches to 21 inches, and were constructed with regular 25-inch courses of puddle adobe, poured between some sort of formwork. The lower wall surfaces were restored in 1891, the shelter built in 1932.

in operation, maize yields could not be maintained over time. The basic problem in the Southwest, therefore, seems to have been that productivity could not be sustained in the face of demographic growth, given a relatively static technology. Thus, the social systems appear to have been too rigid to adjust, and wholesale abandonment ensued.

The displaced populations subsequently relocated to existing pueblo centers, where a dramatic upsurge of population occurred between 1250 and 1400. At Zuñi, a cluster of six or seven archaeologically documented villages were described as the "seven cities of Cibola" at the time of Coronado (1540), and in 1582 the Spanish estimated 130,000 inhabitants in 61 pueblos for the Southwest.[44] Perhaps the Old World diseases introduced by the Spaniards headed off further crises of sustainability and Malthusian "overshoot."

While agricultural economies with large, permanent settlements evolved in the East and Southwest, the productive environments of the west coast became the scene of highly successful foraging societies. In California, a vast range of wild plant foods was utilized, with much emphasis on acorns that were ground into bread meal, while tobacco was the sole cultivated crop. Freshwater and marine fish were equally important, and exchange networks bound together people of the coast and the interior.[45] Prior to European contact, a population of over 300,000 included at least a dozen centers with more than 1,200 people.

In the Pacific Northwest, by 1500 BP equally large communities lived in fortified, seashore villages of communal plank houses that were supported by salmon, halibut, and cod fishing from boats, with harpoons and nets. Small, curly-haired dogs and mountain sheep provided wool for blanket weaving, while some groups planted and tended gardens of

Figure 2.11
...he multistoried, flat-...ofed and adobe-faced masonry houses of Taos, New Mexico, are representative of surviving pueblos in the Southwest.

clover roots and other plants.[46] Further inland, smaller villages consisted of large, circular pit houses sunk into the ground, the roofs formed by heavy, sloping rafters covered with bark and earth. Wild, starchy roots and bulbs were roasted in earthen ovens; spawning salmon were taken in the rivers and lakes, along with beaver and mussels, while moose, deer, bear, and mountain sheep were sought farther afield on seasonal hunting forays. Because they were built of perishable materials, there is little visible evidence of the northwest coast settlements today, other than an occasional totem pole. But early travelers left vivid accounts of their strange charm, teeming populations, and industrious bustle.

The European intrusion

When the first European explorers and settlers reached and penetrated North America, they encountered agricultural peoples (Figs. 2.2 and 2.12). On the mid-Atlantic coast between Capes Cod and Hatteras they found groups of small tribes practicing a reasonably intensive agriculture, with a short fallow system.[47] In the lower Great Lakes area, they visited the large palisaded villages of the Huron and Iroquois. In the Southeast,

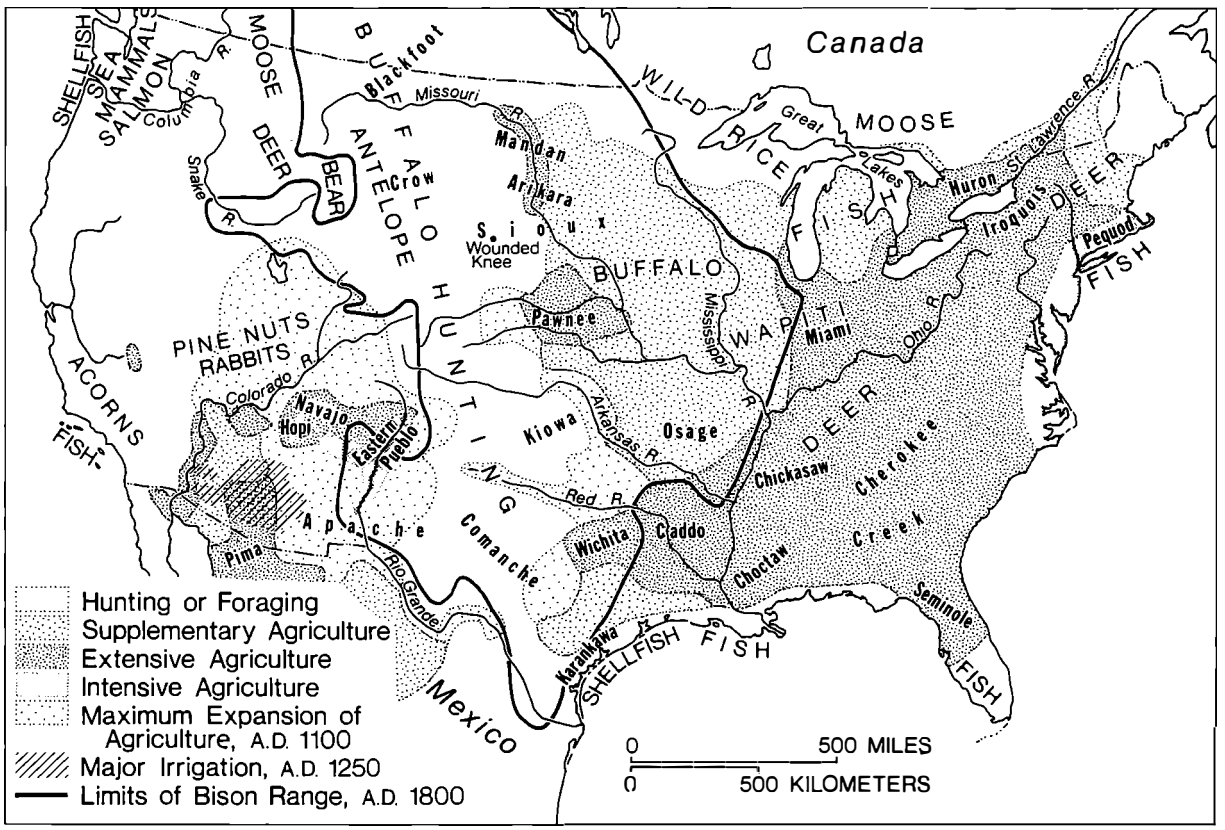


Figure 2.12
Patterns of Indian subsistence in Euro-American contact times, 16th–19th centuries.

they initially found temple towns recalling the settlement clusters of the Mississippian period. In the Plains they caught a glimpse of the big riverine villages, and in the Southwest they climbed up to the populous pueblos perched on mesa tops. These ethnohistorical observations, by 16th- and 17th-century European explorers and colonists, are lucidly synthesized by Sauer.[48] They complement the archaeological record, but in isolation they are too incomplete and biased to provide an adequate view of the original American cultural landscape.

Estimating the population of pre-European America is intrinsically difficult, and necessarily based on assumptions of population density, early ethnographic estimates, and a few rough censuses in the period of initial European contact. A major complication is that the 15th century was one of demographic decline in the Mississippi–Ohio Basin and Southwest. Many of the thriving farming villages and ceremonial or trade centers had been abandoned, and agriculture was retracting on the Plains, perhaps in response to increasingly frequent drought. Another factor is that the Spanish first introduced Old World diseases to which the Native Americans had no immunity. Beginning with the early Spanish and French contacts, wave after wave of plague, smallpox, measles, scarlet fever, and whooping cough swept across whole regions, and killed off aboriginal populations well ahead of the explorers or soldiers.[49] After Cartier's visit to the St. Lawrence in 1535–1536, Iroquois agricultural settlement disappeared, presumably as a result of disease. Before the landing of the *Mayflower*, plague introduced by French fishermen had destroyed up to 90 percent of the New England population, and during the 1630s smallpox and measles eliminated up to two-thirds of the Huron and Iroquois. Similar series of years with mass deaths affected the Southeast from the 16th to the 18th centuries, the Southwest during the 17th century, and the Plains during the 19th century.

Ubelaker suggests a pre-contact population of 1.85 million for the continental United States, a figure that successive volumes of Sturtevant's reference work would cumulatively revise upward to at least 2.5 million.[50] For AD 1500, Denevan's aboriginal number of 3.2 million is not excessive, with another 1.2 million in Canada, Alaska, Hawaii, and Greenland.[51]

The European intrusion was peaceful and violent by turns. De Soto's entry was so barbaric that the survivors were reprimanded in Spain. Already in 1609 the French were in confrontation with the Iroquois. In Connecticut in 1637, 800 Pequot Indians were burned alive after a Puritan attack on their village; a Plymouth chronicler described the terrible stench as "a sweet sacrifice." And in 1680, the heavy-handed efforts of the Spanish governors and the Franciscan missionaries to abolish their native culture goaded the southwestern pueblos into bitter, protracted revolt. But until after American independence, these hostilities were overshadowed by other cultural impacts.

The Native American had always been highly mobile, and tribal territories commonly were flexible as a result of tribal intermarriage and kinship ties.[52] Furthermore, complex regional trade networks were common long before the arrival of the Europeans. Marine shell for ornaments, furs, cold-beaten copper, pottery, flint and obsidian, stone pipes, tobacco, maize, and salt were all exchanged along waterways and at periodic markets within a radius of 60 miles or more. These trading patterns were intensified by European demand for furs in exchange for guns, domestic metal products, glass beads, and liquor. The Euro-American fur trade in the St. Lawrence, Great Lakes, and Hudson Bay regions consequently revolutionized the Indian economic system. By the 1640s, the French, British, Dutch, and Swedes had created a strong demand that stimulated intertribal warfare and steadily increased the radius of over-intensive fur-trapping, and the drawing out of a string of strategically located European trading posts and forts along the principal waterways of the Midwest and Canada.[53]

A second factor was the erosion of Indian culture. After 1598 the Spanish introduced thousands of sheep and 1,300 horses to the Southwest, and the recently arrived Navajo Apache raided enough stock to adopt sheepherding in a significant way, with wool weaving verified among them by 1706. Spanish horses also made their way to the settled Plains tribes after the Pueblo Revolt of 1680, and by the 1720s many of the Plains hunters had become highly accomplished horsemen and deadly raiders. Equestrian hunting was spurred by the lucrative profits from trading buffalo pelts, which increased pressures on the Plains farming villages and encouraged many Plains and Rocky Mountain tribes to turn from a settled to a nomadic lifestyle. In the Southeast, de Soto had introduced 400 Spanish pigs, most of which were promptly lost or stolen and went feral in the eastern forests.[54] In 1560, a large cattle herd was driven from Mexico to Florida, and cattle subsequently were run by the Seminole and Creek. Semi-cultivated native plums of excellent quality were tended by tribes from the High Plains to Georgia, according to the earliest Spanish reports, and several tribes soon adopted Spanish peaches as well as South American potatoes. When the British penetrated the Carolina piedmont in the early 18th century, the Cherokee were herding pigs and cattle, and growing peaches and apples;[55] by 1800, the Cherokee were shifting to plow agriculture. This abandonment of native culture by the Cherokee, and to a lesser degree by the Creek, Seminole, Chickasaw, and Choctaw, earned them the 19th-century label of the "Five Civilized Nations."

This cautiously optimistic picture of measured social accommodation through the mid-1700s was shattered by the vigorous expansion of an independent America after 1776. Hundreds of thousands of settlers poured across the Appalachian passes, placing the Native Americans on the defensive. The dreary cycle of settlement or conquest, Indian cessions, government guarantees for new borders, and renewed

Anglo-American advance is summarized in Hilliard's map sequence of confiscated lands, and recounted by Utley and Washburn.[56] The remnants of the Five Civilized Nations were marched in chains to Oklahoma in 1831–1842, despite a Supreme Court decision in favor of the Cherokee.[57] The Ohio Valley was cleared out after 1811, and the upper Midwest "pacified" in 1832.

The fur trade now shifted to the Plains and Mountain West. The western woodlands were trapped barren by 1840, leaving the Plains buffalo as the last great resource.[58] When railroad construction began after the Civil War, buffalo meat was needed to supply the work crews, and robes made of buffalo hide were in insatiable demand now that transportation by railroad opened up previously inaccessible markets. Anglo-American hunters joined the Indians in slaughtering up to 1 million buffalo a year. As a result, the buffalo was extinct in the southern Plains by 1879, and the original multitude of up to 60 million head was reduced to 500 animals in the northern Plains by 1889. The Plains Indians, who had posed the major obstacle to westward settlement, lost both their prime exchange commodity and their staple food supply. As they succumbed to starvation and disease, the U.S. army destroyed encampments and winter food supplies with minimal provocation. Dwindling rapidly in numbers, the Plains tribes succumbed one by one, and their remnants were exiled to marginal reservations where they could not live by their traditional economy. In 1890, the last Sioux uprising ended when uniformed soldiers executed women and children at Wounded Knee.

The census of 1890 enumerated only 249,300 American Indians, a bare 0.4 percent of the national population and 10 percent of the original indigenous population in 1500. The survivors were scattered on some 275 reservations, amounting to 2.5 percent of the continental United States. Through a combination of expropriation, disease, and extermination, the policy of "manifest destiny" had eliminated Native Americans as a competitive minority. Except for the southwestern Pueblo Indians and Navajo, traditional subsistence and settlement patterns were defunct, and although sacred places on traditional tribal grounds may retain their significance, the built environment of the residual reservations now exhibits little more than a legacy of impoverished Anglo-American ways of life.

The surviving legacy

The most obvious imprint of Native Americans on the landscape is the Indian place-names. Of the 48 coterminous states, 25 carry Indian names, as do 13 percent of some 1,300 counties, hundreds of rivers and mountains, and thousands of towns and cities. So familiar to the average Anglo-American as to be unrecognized, these toponyms serve

as a constant reminder that the landscape had been humanized by the First Americans. Zelinsky, in his *Cultural geography of the United States*, draws this single conclusion, downplaying other cultural impacts.[59]

There is indeed a problem of recognition and acknowledgement. From the 17th century on, the Indian has been portrayed as a brutal savage, while the litany of Euro-American provocations and atrocities was conveniently forgotten. The Indian became the victim of derogatory, racial stereotyping that remained standard fare for American movies through the 1950s. Demoralized by defeat and the collapse of their system of values, the surviving Indians lingered as government wards on desolate reservations. Romanticized alternative views saw the Indian as a noble savage, in close communion with nature; but he remained an outsider to the dominant Anglo-American culture.

The importance of the Indian legacy is, however, expressed each year in the average American home when turkey, corn, squash, pumpkin pie, and cranberries are served, and decorative gourds form the centerpiece for the Thanksgiving dinner, remembering a fleeting moment of cooperation between Puritan settlers and their American hosts. That legacy is also recalled each morning in a traditional Southern breakfast when "grits" are served and in the Southwest where tortillas prevail. Indian corn became a staple of the British colonists within a generation after Plymouth Rock, and south of Philadelphia it replaced wheat in the making of bread. Eminently suited to the American growing season, maize remains one of the most productive food plants of the global economy, and a prominent reminder of the Indian legacy in the rural landscapes of the Midwest heartland.

Not just corn but tobacco and cotton stand today as retrospective landscape symbols of an Indianizing influence felt by early European society in the American environment. At Jamestown in 1612, cultivated American tobacco preceded commercial tobacco of West Indian origin in the development of the Virginia tobacco industry, and the original species continued to be grown and smoked by French Canadians well into the 19th century. Wild Carolina indigo dyes, long used by the Indian, were a key component of emerging plantation agriculture, and when long-fibered Mesoamerican cotton was established in 18th-century Georgia, it formed the foundation for the Southern slave economy. Native plums became a standard Anglo-American orchard crop and, after phylloxera destroyed the French vineyards in the 19th century, American stalks of grapes, once semi-cultivated by the Indian, were grafted onto Old World vines; they not only saved the global wine industry, but led to an American counterpart that included Catawba and Concord variants. Indian medicinal plants, sassafras tea, and maple sugar remain popular in some areas.

The unprecedented success of the American frontiersmen was in part predicated on Indian customs and know-how. To clear the forest, aside from clear-cutting, trees were girdled and deadened by burning

the detached bark around the base of the trunk—the Indian custom of land clearance. The stream of Anglo-American settlers advancing through the eastern forests often reutilized the open tracts or secondary growth marking old Indian fields, both for their ease in clearing and in the knowledge that these represented the best local soils.[60] The tale of Johnny Appleseed, planting fruit trees in the vanguard of Ohio settlement, reveals the importance of abandoned Indian orchards for a balanced diet among the pioneer settlers. Early homesteaders in the Great Lakes area and northern Plains survived long, snowy winters by eating dehydrated meat ("jerky"), a mortar-crushed meat with vitamin-rich berries (pemmican), and parched corn, in Indian fashion. Their migration routes followed Indian trails, just as the French had used Huron birchbark canoes to claim the Mississippi Basin and Euro-American fur traders had penetrated the Plains and the West.

The biological heritage of the Indian is equally real. The Indian population registered by the 2000 census is 2.4 million, eight times what it apparently was in 1950, as urbanized Indians begin to acknowledge their ancestry with pride (Fig. 2.13). Less than a quarter of these live on reservations or tribal trust lands. A similar explosion is apparent in Canada, with a sevenfold increase between 1951 and 2001; some 698,000 are now identified as First Nations people. In addition, the U.S. 2000 census now includes 1.6 million Americans claiming partial Indian ancestry.[61] The number of early settlers taking Indian wives has always been politely overlooked, but was a reality.[62] The large, French-speaking minority of the Canadian Plains, the Métis, are mixed-blood

Figure 2.13
Traffic sign and street names in Tsalagi, the Cherokee language, near the headquarters building of the Cherokee Nation, Talequah, Oklahoma. There are 22,000 speakers of Tsalagi, mostly in Oklahoma and North Carolina.

descendants (390,000) of French fur traders, and there were similar but less publicized multicultural communities in the American West.[63] Regardless of the genetic contribution to American bloodlines, these points show that Indian women played an underappreciated role in facilitating frontier expansion and shaping its society, well beyond the significance of Indian cultigens, technology, and landscape guides.

Physical configurations of the Indian landscape also survive directly. Apart from the abandoned or living pueblos of the Southwest, thousands of mounds in the East remain conspicuous landmarks of an earlier civilization, despite road building and mechanized plowing. The 19th-century Mississippi boatmen returned upstream to Tennessee by the Natchez Trace, previously the Chickasaw Trail, and still visible today. The Angeleno who drives over the Cajon Pass towards a Las Vegas weekend follows an Indian trail already adapted by the Spaniard. The modern irrigation system around Phoenix, Arizona, is largely a recreation of its Hohokam counterpart. The flat-roofed adobe house of the Borderlands, and its gentrified application to new architectural designs, is basically an Indian form, not a Spanish introduction of a Berber house type (Fig. 2.14).[64] French fur trade posts and Anglo-American forts were located at Indian communication or population nodes, and served as nuclei for civilian settlement: Kingston, Ontario; Albany, New York; Pittsburgh, Pennsylvania; Detroit, Michigan; Fort Wayne, Indiana; Peoria, Illinois; Green Bay, Wisconsin; Des Moines, Iowa; Fort Smith, Arkansas; Fort Worth, Texas; Missoula, Montana; or Walla Walla, Washington provide some examples. Spanish presidios and missions were located next to Indian settlements or ceremonial centers in the Southwest and California, to become centers like San Antonio, Texas;

Figure 2.14
Upscale modern villas in the Old Town section of Albuquerque, New Mexico, built in Pueblo Revival style.

Santa Fe, New Mexico; Tucson, Arizona; and, in California, San Diego, Los Angeles, or San Francisco.

Thousands of years of Indian settlement influenced the Anglo-American landscape in many other subtle ways. The quality of land had already been determined by generations of Indian use, a realization that may help to explain the insatiable greed of the homesteader and rancher for Indian core territory. Indian expertise in countless facets of forest and prairie living greatly facilitated British colonization and American westward expansion, preventing much costly trial and error. Determined Indian resistance by the Comanche, Sioux, Apache, and other tribes probably affected rates and patterns of settlement as much in a negative way as passive tribes or thinly settled lands did in a positive way. Although the average American might well not appreciate this legacy, historical geographers have no excuse for lacking a deeper appreciation for the American roots of the American landscape.

Chapter three
Refashioning Hispanic landscapes

DAVID HORNBECK

THE SPANISH landscape of the United States is usually associated with California and the Southwest alone, yet Spain explored and colonized a much greater proportion of the United States than the small area now identified with Spanish influence suggests. A fundamental reason for the general unawareness of Spanish settlement is that the history and geography of the United States have been written from the viewpoint of English settlement on the east coast. Before English colonists settled the eastern seaboard, however, Spain had explored and occupied much of the present-day southeastern and southwestern parts of the United States.

Spain's influence on the United States has both geographical and institutional foundations. Today the names of seven states—Florida, Colorado, Nevada, California, New Mexico, Texas and Arizona—have their origins in the Spanish language, as do scores of rivers, mountains, and towns. To this day, many Indian groups in the Southwest speak Spanish better than English. Spanish architecture appears throughout the western part of the United States. From San Francisco to St. Augustine, title to land originated from Madrid or Mexico City. Principles of mining, irrigation, water, and property rights of women stem from the Spanish regime. Yet, many believe that Spain never really occupied the land, but only explored for "Gold, God, and Glory," and therefore had little or no impact on the development of land and society in North America; real settlement had to await the French and English.

Admittedly Spain's occupance of North America in some areas was a tenuous, short-lived experience; however, the territory of 20 states had some contact with Spain. For almost 300 years Spain occupied the southwestern part of the United States. Between 1762 and 1800, Spain possessed the entire trans-Mississippi west, granting lands, conducting trade in furs, and building trading and military posts as far north as Minnesota. Florida was in Spanish hands from 1526 until 1821, during which time military outposts and missions were established extending as far north as Port Royal, South Carolina; Spain even briefly occupied

the Chesapeake Bay. Today, the areas once settled by the Spanish are usually referred to as the Spanish Borderlands (a term popularized by the historian Herbert Bolton in 1921), referring to the areas' location peripheral to central Mexico.[1]

A chapter that attempts to synthesize Spanish settlement and its landscape heritage cannot hope to cover more than 300 years of exploration and settlement in detail or discuss all areas equally. However, a brief examination of specific topics and themes should illustrate the importance of Spanish settlement in North America. Much like all European colonization of the New World, Spanish settlement became complicated by political intrigue, internal bickering, war, and bureaucracy. At the outset, however, exploration and settlement were new and exciting, but foremost it was the search for unknown lands, a discovery of exotic places and peoples. Spain began its search for new territories in North America from two established areas of settlement. The first push was from the Caribbean into Florida, along both the Gulf and Atlantic coasts.[2] The second area from which Spain began to explore North America was central Mexico northward into the trans-Mississippi West and along the Pacific coast (Fig. 3.1).

Spanish exploration

The second decade of the 16th century opened the geography of Spain in North America; three centuries later it closed with Spain withdrawing from the area. During the intervening years, Spain was an active participant in exploration and colonization. In 1513, Ponce de Leon landed on the southern coast of Florida. Six years later, Alonso de Pineda explored the Gulf of Mexico, clearly illustrating that North America was a continent. By 1525, Esteban Gomez had explored the eastern coastline from Florida to Labrador, passing the Connecticut, Hudson and Delaware rivers, and naming the region Tierra de Gomez (land of Gomez). In one of the most spectacular explorations in North America, Panfilo de Narvaez set out to explore the lands between Florida and the Rio Grande. Leaving Havana in 1527, the group finally ended its trek in 1534 on the Gulf of California. Hernando de Soto explored a vast area between 1538 and 1541, traveling through what are now the states of Florida, Georgia, South Carolina, Alabama, Mississippi, and Arkansas.

From central Mexico, Spain began to explore the lands toward the north. In 1538, Francisco de Ulloa explored and mapped the Gulf of California. The next year, Fray Marcos de Niza trekked through the present-day Southwest, perhaps as far as to present-day New Mexico. Based on Fray Marcos' report of seeing wealthy villages to the north, Francisco Vasquez de Coronado organized and led an expedition north from Mexico City to Arizona, New Mexico, Colorado, Texas, and Kansas;

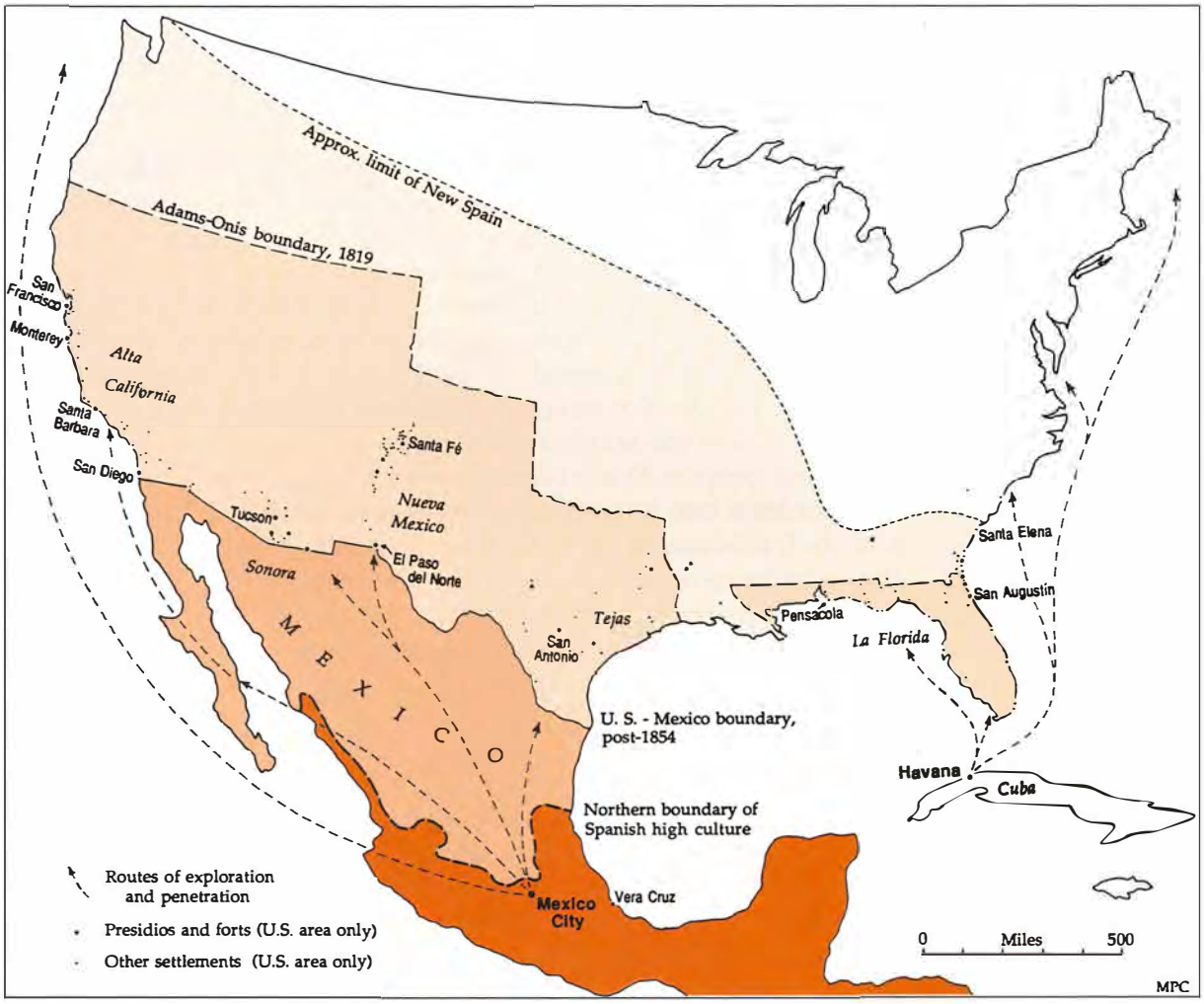


Figure 3.1 Spanish North America, 1600–1854. Spain considered all of North America in its possession. Color tints indicate the gradations of intensity of Spanish cultural influence and its symbolic retreat over time.

along the way members of the expedition explored the Colorado River and discovered the Grand Canyon. Soon after Coronado's return in 1542, Juan Cabrillo explored the Pacific coast from San Diego Bay to Oregon.

Thus, by 1550 Spain had explored and mapped a vast area of North America extending from Florida to the Oregon coast. During the early years of Spanish exploration, this area was perceived as a land of mystery and hope, of romantic stories and imaginative tales that somehow were believable. In Florida, explorers sought the Fountain of Youth; in South Carolina they looked for the fabulous Diamond Mountain. In Arizona and New Mexico, the Seven Cities of Cibola offered unlimited wealth for their conqueror; somewhere on the California coast could be found the Straits of Anian, and in Texas the Kingdom of Gran Quivira awaited discovery. These were extravagant tales, believable "facts" that led men to try their luck on what became known as "the northern mysteries." Bold adventurers, these explorers searched each tale to its end.

Forty years of exploration revealed that there was little or no substance to the imaginative northern mysteries, but Spanish exploration gave North America its first geographical outline.

Those who sought the secrets of the northern mysteries had little to show for their efforts. Narvaez and de Soto came to watery graves exploring Florida. Coronado, searching for wealth, returned a broken man. Cabrillo was lured up the Pacific coast only to be buried on Santa Barbara Island. These men and others were the adventurers of the 16th century; although they found no wealth their efforts were not simply idle jaunts into an unknown land, but rather the beginnings of a map of North American geography to be filled in and detailed later by other European nations.

Populating the land

Spain did not simply explore and then leave an area. Rather, Spanish explorers established settlements in most of the areas they explored. In 1559, Spanish settlers founded Pensacola and six years later established St. Augustine (Fig. 3.2). The first of many Jesuit missions along the South Atlantic coast (from southern Florida to Chesapeake Bay) was founded in Florida beginning in 1566. By the beginning of the 17th century, Spain had placed permanent colonies in New Mexico and had established missions in the Hopi area of Arizona.

Settlement during the 16th century was for the most part driven by economic and religious motives. Mines, stock ranches, towns, and missions were established to exploit or convert local Indian populations.

Figure 3.2
Moated bastions guard the northern wall of the Castillo de San Marcos at St. Augustine, Florida, as seen looking east towards the Matanzas River. Although the fort and town were founded in 1565, the elaborate stone fortress dates from 1672 to 1687.

But with intrusions from other European powers, Spanish settlement began to be driven by a new factor—defense. During the 17th century, defensive settlements north of the Rio Grande and the Gulf of Mexico were established in response to French and British settlement threats of incursion. Of Spain's settlements in North America, only New Mexico was not initially settled to create a buffer against encroachment; instead, it was colonized to Christianize the Indians. For the most part, however, new settlements throughout Spain's northern frontier during the 17th century were primarily for defensive reasons. Even during the 18th century California was not occupied for economic reasons, but rather to thwart Russian expansion southward along the Pacific coast.

Spain's strategy was to protect the more heavily settled areas of the Caribbean and central Mexico from foreign intrusion by using the area north of the Gulf Coast and west of the Mississippi River as a buffer zone. After the French arrived in force at the mouth of the Mississippi during the 1720s, Spain retreated and turned Texas into a buffer province. By 1750, the geopolitical maneuverings between Spain, England, and France began to have an effect on the Spanish Borderlands, causing Spain steadily to lose territory (Fig. 3.1).

To carry out its settlement strategy, Spain employed three frontier institutions: the mission, the presidio and the pueblo. The missionary and the military were the primary means by which settlement was achieved, with small civil colonies established later. Short of both manpower and civilian colonists, Spain depended upon a settlement strategy that absorbed the indigenous population. To effect settlement, Spain employed a system of Catholic mission stations that were to convert the local Indians to Christianity and teach them to become loyal Spanish subjects (Fig. 3.3).[3] The type of mission most frequently used was the *reduccion* or *congregacion*. Its purpose was to attract natives who lived in small, dispersed villages, congregate them in the mission, and "reduce" them from their heathen way of life to that of Christians. After they had been successfully weaned off their native culture, the mission was to be turned over to secular clergy, with the missionaries moving on to another frontier to repeat the process. Spanish missions at one time extended from Florida and Georgia through Texas, to New Mexico and Arizona and into California. Today the remnants of these early missions remain as one of the most visible landscape elements of Spanish occupancy.

Presidios formed the defensive arm of Spanish settlement. As agents of the government, the presidios were responsible for defending the area, subduing hostile Indians, maintaining peaceful relationships with friendly Indians, and acting as the secular authority until a civil government could be established. Presidios were scattered along a wide arc extending from Georgia and Florida on the Atlantic coast to four strung along the California coast (Figs. 3.4 and 3.5).

Pueblos—civil communities—were usually a later addition to the

Figure 3.3
Mission San Xavier del Bac, in the Santa Cruz Valley just south of Tucson, Arizona, built by Franciscan friars and native labor between 1783 and 1797. Twin towers and an elaborately carved entrance typify Spanish mission architecture in the Borderlands.

Spanish colonization scheme, after missionary efforts were completed. They were established to supplement the military with agricultural products, engage trade when feasible, set examples of Spanish life for the Indians to follow and, in times of emergency, act as a reserve militia for the military (Fig. 3.5).

The ultimate goal of the presidio–mission–pueblo settlement strategy was to ensure Spain's claim to a vast area extending from Florida to California. The choice of settlement sites therefore was an important consideration and in large measure was predetermined by the specific role each institution played out on the frontier. As military outposts, the presidios were located in areas that would provide maximum advantage against foreign intrusions and hostile Indian attacks. In contrast, pueblos were founded with an eye toward permanent settlement and agricultural development. Mission sites were no less planned than the presidio and pueblo but were more flexible in their location. Missions were found primarily in areas that contained large numbers of Indians and were allowed to take up and use as much land as was necessary to

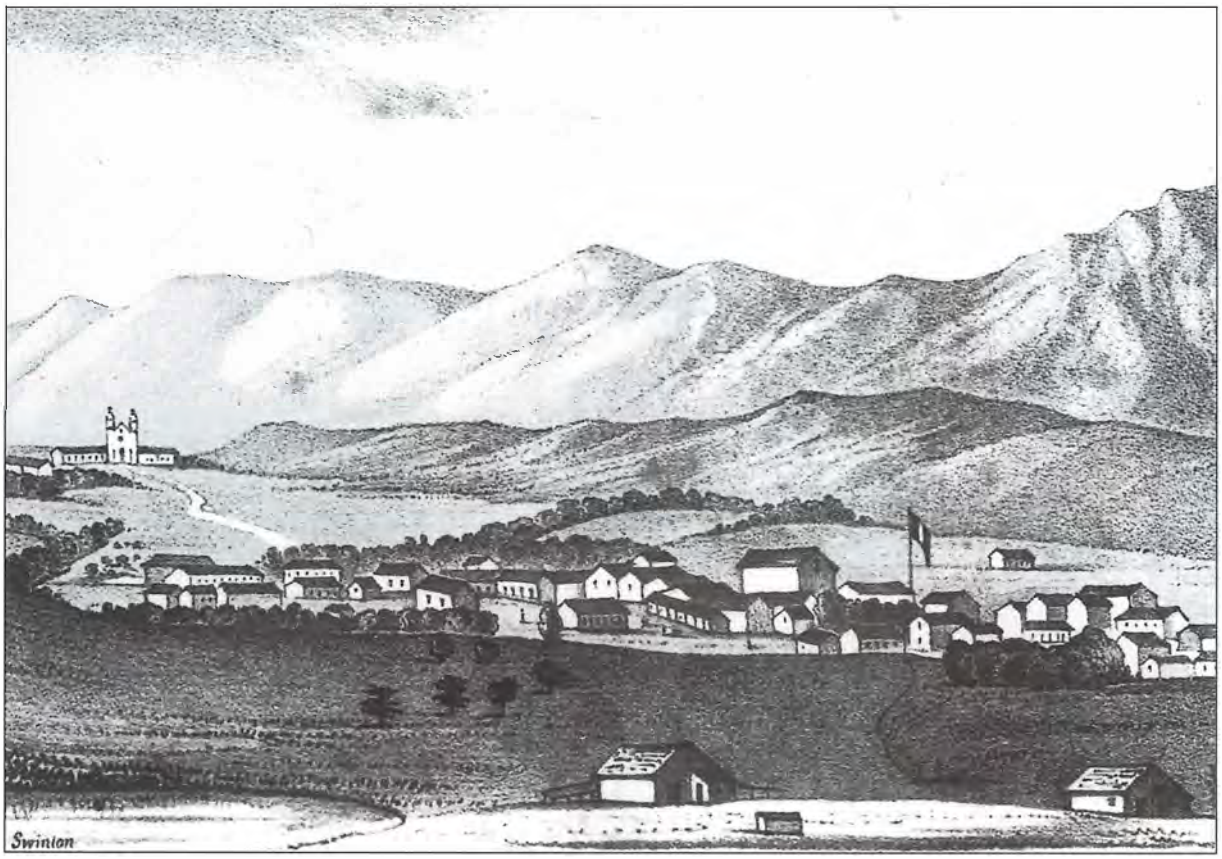
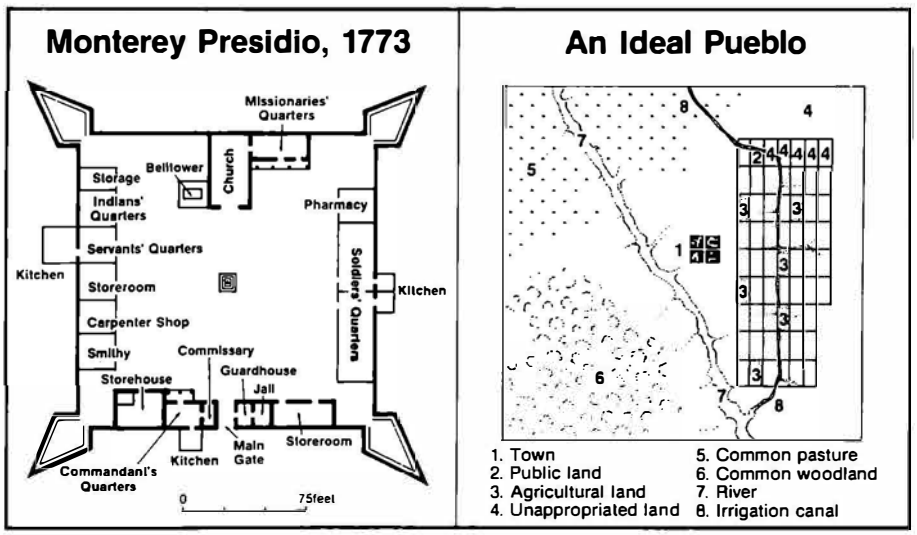


Figure 3.4
Presidio at Santa Barbara, California, founded 1781, as seen in a 19th-century lithograph. Mission Santa Barbara can be seen at some distance from the military town.

Figure 3.5
The building plan for the presidio of Monterey, founded in 1770, shows the internal arrangement of Spain's military fortresses in North America. The idealized layout of a pueblo is drawn from the evidence of the pueblo of Los Angeles, founded in 1782.



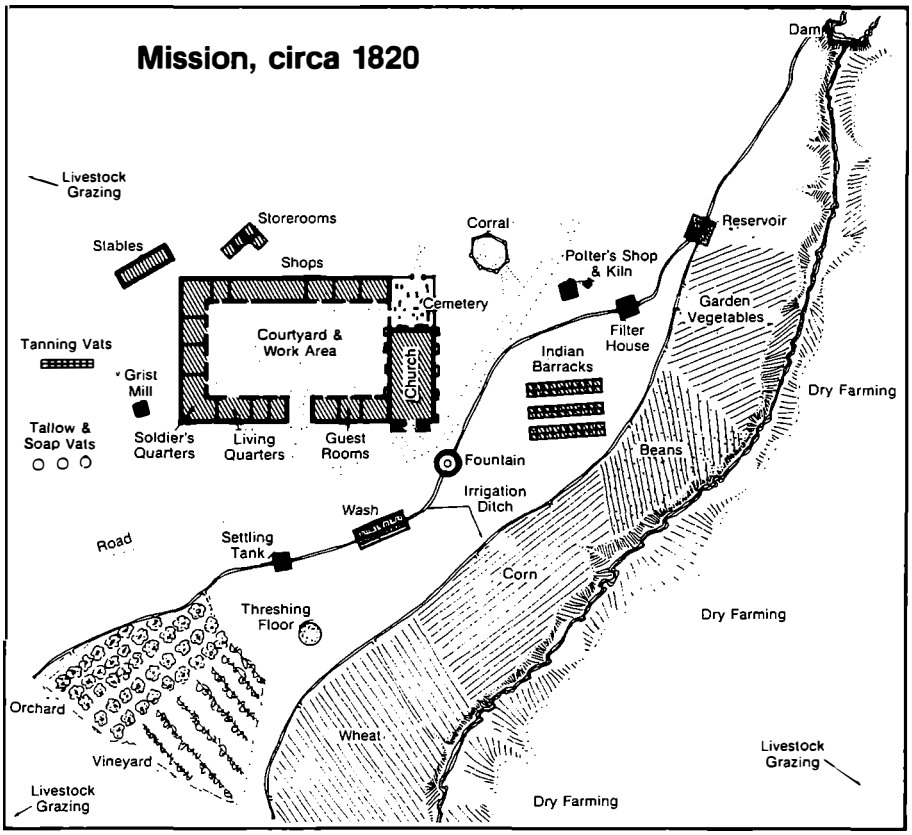


Figure 3.6
Missions were an integral part of Spain's colonization scheme. While the specific layout and design of each mission was different, the overall patterns were similar.

care properly for Indian neophytes, or converts. So the missions were able to take advantage of good sites and Indian labor to expand into large, well-developed settlements (Fig. 3.6).

The mature cultural landscapes that evolved from the imposition of these Spanish institutions in California can be glimpsed in a striking reconstruction of the settlement pattern of the lower Salinas Valley near Monterey, which is based on evidence found in land grant applications from the late Mexican period (Fig. 3.7).[4]

Shaping the borders

Spanish settlement was mainly for defensive purposes and thus institutionally organized.[5] Individualism was not encouraged in Spain's settlements as it was on the American frontier. Spanish settlers, soldiers, and missionaries were part of a royal play and acted roles according to the parts sent to them from Madrid. With Spain more interested in protecting her rich settlements to the south, she steadily lost much of the northern lands claimed and settled during the 16th and 17th centuries.[6] Political maneuvering and war began to reshape Spain's

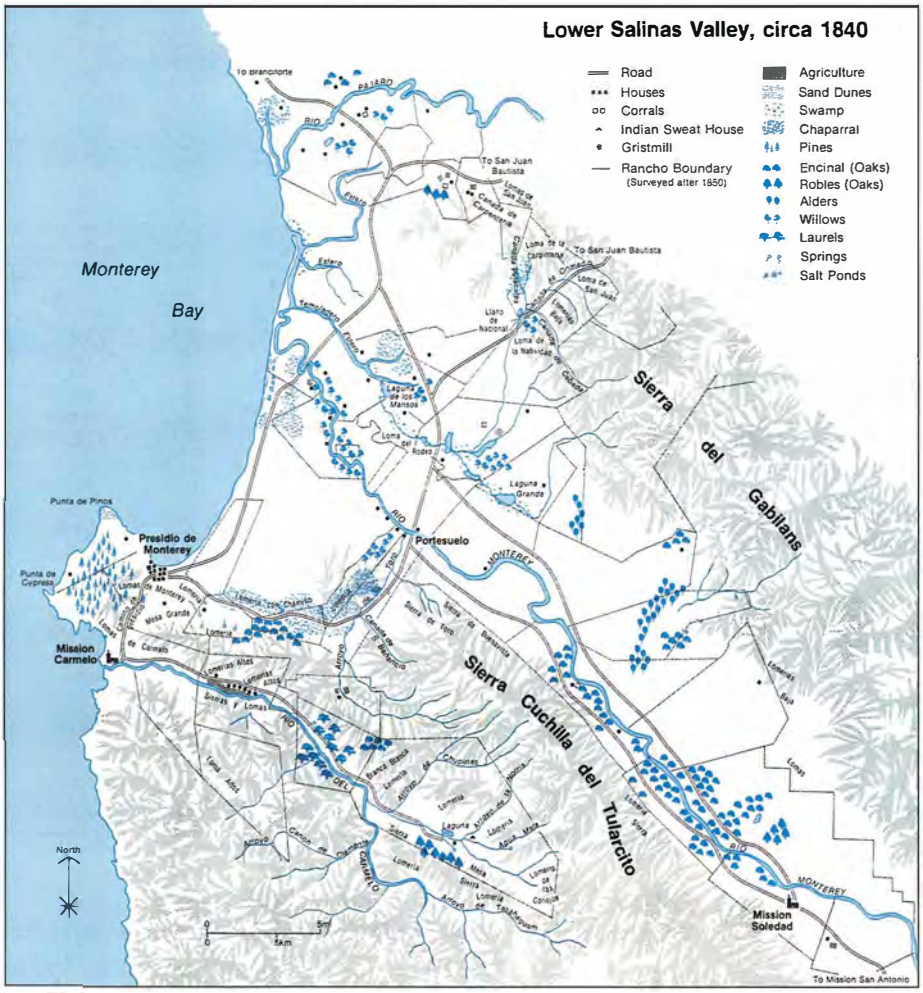


Figure 3.7
A partial reconstruction of the cultural landscape of the lower Salinas Valley in California toward the end of the Mexican period, based on 37 surviving *diseños* (maps prepared for land grant applications). Settlement features were sparse and agriculture severely restricted, with most usable land given over to grazing.

North American borders. Importantly, the Seven Years' War altered North America's political boundaries.[7] French rule was ended, and England pushed rapidly toward the Gulf of Mexico and the Mississippi River. Russia, a new player in North America, began to push southward down the Pacific coast. In response to both Russian and English efforts to expand their settled areas, Spain occupied California and strengthened her position in Arizona, New Mexico, and Texas. With the fledgling United States on the scene, Spain's borders began to bend even more. France sold Louisiana to the United States, creating problems along the Mississippi. The United States took advantage of Spain's problems with her colonies to acquire the Gulf region, including Florida. In the 1819 Adams–Onis Treaty, which established the boundaries between Spain and the United States, Spain yielded her claims to Oregon and British Columbia to the United States so as to retain Texas.

Spain, however, was not to remain a major player in North America during the 19th century. In 1821, Mexico declared its independence

from Spain and subsequently adopted Spain's defensive strategy for holding its northern frontier. Nevertheless, during the remainder of the 19th century, the Spanish Borderlands continued to recede in the wake of aggressive American settlement. First, Texas fell into American hands through annexation, precipitating a war with Mexico that allowed the United States to acquire the remainder of the Spanish Borderlands, including California, in 1848. In 1853, present-day boundaries became complete with the Gadsen Purchase in southern Arizona. In each case, the American advance stopped when it reached the line of permanent Spanish settlement. The defensive strategy of Spain had worked, but by mid-19th century she was no longer in North America and was not able to reap the benefits of her defensive efforts.

When American frontiersmen began to push westward from the crest of the Appalachians and across the Mississippi River, they found settlements already established throughout much of the frontier. St. Louis on the Mississippi, Poste des Arkansas at the mouth of the Arkansas, and Natchtoches on the Red River were occupied long before the Americans arrived. As the American frontier moved farther west, it ran into an uneven but nevertheless defined line of occupation that stretched from Texas through New Mexico and Arizona to California. These areas were the Spanish Borderlands, the outer rim of Spanish colonization, containing a population of almost 100,000. The Borderlands, however, were not a wilderness; rivers had been mapped, towns founded, roads completed, agriculture developed, and trade routes established. The frontier wilderness of the 19th-century West, as portrayed in American literature, was not entirely wild.

Spanish legacy

Half of the land in the present-day contiguous United States was once under Spanish control, and the most recognizable area of Spanish influence is the area extending from Texas to California. Here social, cultural, economic, and legal institutions derived from Spain remain a part of everyday life. The irrigation systems of the small market gardeners of New Mexico and the large corporate farmers of California share a common water rights system that is a thinly disguised copy of Spanish water law. It was in the Spanish Borderlands that Indian and Spanish culture came together, mingled and established a new pattern, a pattern that is only slightly altered today in many parts of the Southwest. The irregular land ownership patterns throughout the Borderlands remain as evidence of Spanish land tenure (Figs. 3.8a and 3.8b). Spanish names of rivers, mountains, towns, and cities are the enduring witness in modern times to Spanish exploration and settlement that took place many centuries ago.

The more obvious remains of Spanish influence—her language, art,

Figure 3.8a
A Mexican land concession, shown in an 1841 *diseño*, or crude estate plan, of Rancho San Miguelito, San Luis Obispo County, California. Each citizen requesting land had to prepare a sketch map, depicting the area requested. Such vernacular cartography produced the earliest maps of California.

folklore—exist throughout the Borderlands, but are most evident in New Mexico. The Spanish language as spoken in New Mexico contains many phrases and words derived from 16th- and 17th-century Spain that are in common usage. So too the legacy of Spanish art lives on in the vivid decoration of the many small wayside churches that dot the landscape, art that combines both aboriginal and 17th-century Spanish color schemes and designs. The religion of New Mexico is a strange mixture of Catholicism and native Indian belief and practice, particularly in the rural areas, testifying either to successful or unsuccessful missionary efforts, depending on one's perspective. Spain also left behind a veritable wealth of folklore, much of which has become indigenous to the greater Southwest, particularly in New Mexico, where it is not

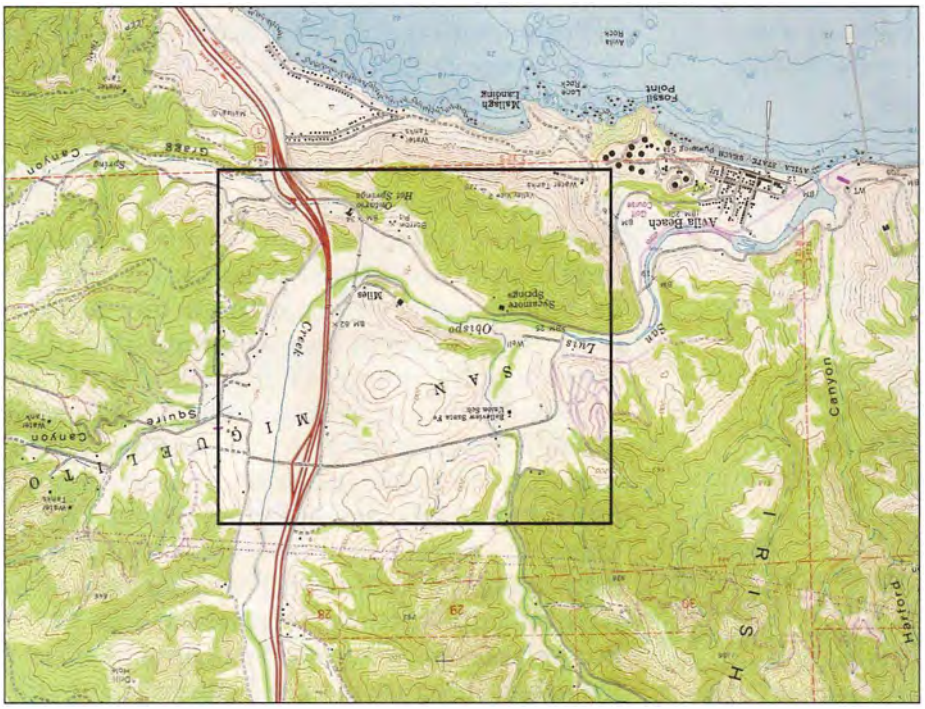


Figure 3.8b
The area of Rancho San Miguelito located on a modern U.S. Geological Survey topographic map, reoriented to match the viewpoint of the mapmaker in Figure 3.8a (the top of the map faces south, showing the Pacific Ocean). The general character of the terrain can be recognized in both maps, but differences in detail such as stream courses and roads suggest either perceptual choices or historical changes in the landscape.

Figure 3.9
Spanish-era houses on St. George Street in St. Augustine, Florida, looking southward. Classic architectural features include the *reja* (wooden-grated) bay windows jutting into the street space, second-story balconies, and spouts carrying off water from flat roofs.

uncommon for Pueblo Indians to recite traditional Spanish romances of the 16th century as if they were tales of their own forebears.

One of the most obvious remains of Spanish occupation is her architecture. The oldest standing dwelling today in the United States is not

in Boston nor Virginia but in Santa Fe, New Mexico. In addition to Santa Fe's historic buildings there is a trail of what were originally Spanish outposts composed of civic buildings, houses, missions, and military fortresses extending from Florida to California, whose construction was perfectly suited to the climatic conditions of each region (Fig. 3.9). Unlike their English counterparts, Spanish settlers did not disdain aboriginal architecture, but rather strove to mingle and assimilate all that could be used to good account, leaving us today a blend of Spanish and aboriginal buildings that are distinctive in their artistic design. Nowhere is this more evident than in the Spanish mission ruins of Texas, New Mexico, Arizona, and California (Fig. 3.10).

One of the more underplayed and least noticed legacies of Spain in North America is her impact on modern urban patterns. As suggested earlier, Spain employed institutions to occupy new areas and peopled its land with three types of communities. Today, many of these communities have taken root and become major cities along the Gulf Coast and throughout the Southwest. The major cities of New Mexico and Arizona were built upon Spanish foundations (Fig. 3.11). Nowhere in the Spanish Borderlands, however, has Spanish settlement had a greater impact on the urban structure than in California. To settle and occupy that state, Spain established 21 missions, four presidios, and three pueblos along the California coast. Today, 72 percent of the state's population lives in one of the 28 places founded by Spain. Within these cities, many street names, roads, boundaries, neighborhoods, the orientation of street patterns, water rights, and land tenure are of Spanish origin, to the surprise of many who reside there.

Figure 3.10
Mission Santa Barbara in 1895. Founded in 1786 by the Franciscan Order, this is the only mission in California continuously occupied since it was founded. The mission is considered the "Queen of California Missions" for its distinctive architectural style.

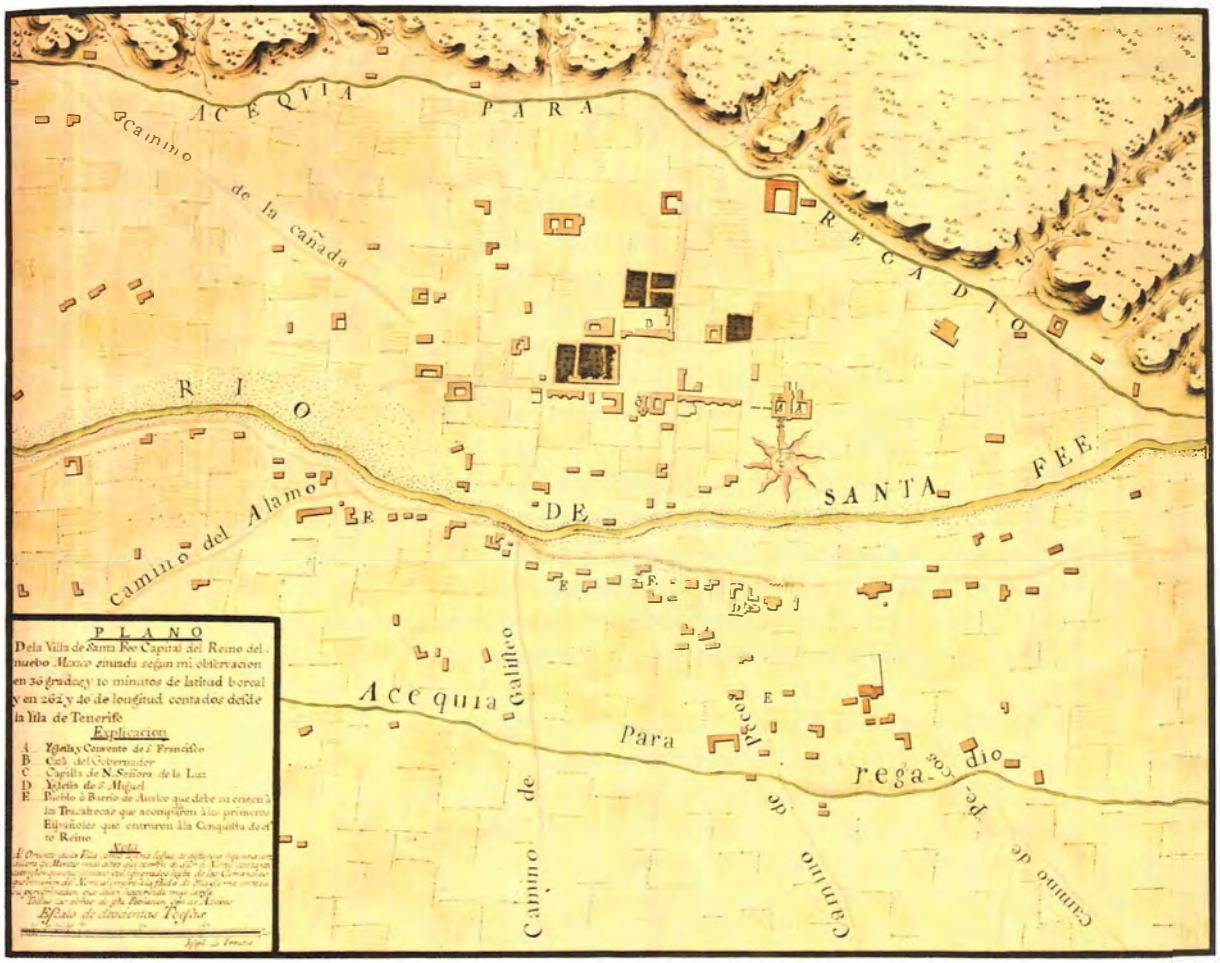


Figure 3.11
The layout of Santa Fe, New Mexico, in 1766, after a century and a half of existence. Two plazas anchor what constituted the beginnings of a grid town plan, as specified in the Spanish *Laws of the Indies* of 1563, but clearly many residents preferred to build homes closer to or on their properties in the urban fringe.

Rapid urbanization of the Southwest and California during the past 20 years has created considerable change in the landscape. Once-rural areas have spawned rapidly growing communities and existing urban areas have expanded substantially, creating pressure to change the elements of the Spanish landscape that remain. Today in California, those most visible features identifying Spanish settlement, the missions, have become urban tourist attractions, bringing thousands of visitors each year. In Arizona, New Mexico, and Texas, urban growth has had similar effects. It is not uncommon to see a Spanish mission next to a busy freeway in a rapidly growing community, preserved as a symbol of the past, yet modified to fit how we think a mission should have been constructed, and now used as a recreational attraction for weekend visitors. Spanish mission architecture and design traditions have spurred

emulation in modern times as buildings and furniture created in the mission revival style have gained national popularity.

Spanish contributions to the United States are all too frequently dismissed with the phrase, "they came for Gold, God, and Glory but did not settle the land." Yet the American landscape is replete with symbols and relics of Spanish colonization and influence in shaping the vast reaches of the continent. The oldest genuine historical artifacts of Spanish origin are concentrated in the Southwest, but Spain's ultimate influence upon urban design and building styles is to be found in various forms throughout the modern United States.[8]

The legacy of Spanish accomplishments and heritage is extensive and suggests that Spain had a considerable impact on the history and geography of the present-day United States. Spain planted its institutions, language, religion, and traditions over a wide area. In our textbooks we share with Spain a common heritage: the exploits of de Soto, Coronado, Cabrillo, and de Leon. Yet we often downplay their exploits while emphasizing the childish myths that surrounded their adventures. The evolution of the Spanish Borderlands is a rich chapter in the discovery and settlement of North America.

Chapter four

Retracing French landscapes in North America

COLE HARRIS

IN GENERAL, French landscapes could not be transplanted overseas, but elements of French landscapes, like other elements of French culture, could be. Official France, centered in the towns, was more transferable than local France, dispersed through the countryside. Everywhere the French settled in North America, French traits were rearranged; the new landscapes were North American compositions fashioned, largely, from French elements.

Of course, there never was a French landscape, least of all in the 16th and 17th centuries when French interest in North America began. France was a dense mosaic of local cultures marked off from each other by language or dialect, custom, and economy, as well as by landscape. The numerous *pays* of France each had their own character—differences from place to place that frequently emerged clearly within a day's walk. Superimposed on this sense of locality was a more official France expressed in the great estates, the towns, the provincial governments, the church, and, of course, the royal court. Merchant capital also transcended the local worlds of peasant culture. Literary culture and high style dominated official and, to a degree, merchant France, but hardly touched the great mass of rural France where oral cultures predominated and nine out of ten Frenchmen lived. Even the towns reflected their regional cultural settings. Modern techniques of surveillance had not yet created a unified nation-state. Variety characterized the myriad, diverse landscapes of a still profoundly rural and, in many ways, medieval France.

Footholds on the continent

French commercial capital reached out to North America at the beginning of the 16th century.[1] In 1497, John Cabot noted the abundance of cod in the northwestern Atlantic. Within the next few years, French fishermen who had until then been operating in waters south of Ireland swung west across the Atlantic to exploit this new source of fish. Well

before the end of the 16th century, most of the Atlantic ports of France, great and small, participated in the transatlantic fishery with at least 150–200 ships and thousands of men crossing the Atlantic each year. Some of them fished on the great offshore banks and returned to France without landing in the New World. More made for a rocky harbor where their ship was beached for the season. Fishing took place in small, prefabricated boats assembled ashore and operated in inshore waters. The men lived ashore, salting and drying their catch there. At the end of the fishing season, ships were loaded with dried cod and everyone returned to France.

Work camps, scattered around Newfoundland and Cape Breton Island, along the Labrador shore, and in the Gulf of St. Lawrence, were the first French settlements in North America.[2] They were utilitarian workplaces, built by migratory workers for the seasonal processing of fish, and not intended to last for long or to accommodate families. Sometimes structures from one season survived to the next; if not, they could be quickly rebuilt. There had to be a landing stage (*échafaud*) where the cod were unloaded, headed, gutted, and lightly salted. There had to be a wash cage and a large vat for cod liver oil. Commonly there were low drying platforms (*vignaux*) for the cod, or perhaps branches (*rances*) spread out for this purpose. There was usually a cabin for officers, at least one for men, and in the larger camps there were small breweries (for spruce beer), bake ovens, and even tiny gardens. The regional variety of western France penetrated this sparse, transatlantic world. Isolated in different harbors, Norman, Breton, Gascon, and Basque fishermen built slightly differently, piled cod differently, dressed differently, used slightly different fishing gear, and ate somewhat different foods. A sensitive eye would have identified the region of France from which fishermen in a particular harbor had come. Yet the opportunity for cultural transplantation was severely curtailed in these settlements shaped, primarily, by the technology and work of the cod fishery. In essence, fragments of European capital and labor were detached from Europe, placed on the edge of the wilderness for a few months each year, then withdrawn. The labor force was entirely European; natives were pushed aside, their summer fishing grounds pre-empted.

Year-round fishing settlements began in a few places in the 17th century. Women arrived, cabins were slightly better built, kitchen gardens became a little larger, although in many areas climate and rock discouraged even this minimal year-round settlement. Basically, the French cod fishery remained migratory, dependent, by the 17th century, on a few fishing ports in France, stable techniques, and a renewable resource. For more than 300 years, a type of seasonal work camp would be built and rebuilt in tiny harbors around the complex coastline of what is now Atlantic Canada.

From early in the 16th century, some fishermen traded with natives for furs. Late in the century, a few ships began to be outfitted expressly

for the fur trade. As this happened, the focus of the fur trade shifted westward, toward the St. Lawrence River, the principal conduit for the furs of the interior. In 1600, fur traders overwintered at Tadoussac at the western end of the Gulf of St. Lawrence; eight years later another group (led by Samuel de Champlain) established a post at Québec, the head of deep sea navigation on the St. Lawrence River. This time the French were on the St. Lawrence to stay. Trois-Rivières was established in 1634. Montréal, founded as a mission in 1642, soon became the most interior outpost of the fur trade. In these years, French traders did not venture beyond the St. Lawrence Valley; the fur trade was in the hands of their Indian allies (Algonquian-speaking groups living around the southern fringe of the Canadian Shield, and Iroquoian-speaking Huron living in what is now southern Ontario) who brought furs to the lower St. Lawrence and traded there.

By the 1650s, European diseases and heightened intertribal warfare (associated with the introduction of firearms) had destroyed most of the former native trading partners of the French. French traders themselves began to venture inland, in the process mastering the birchbark canoe, learning native languages, and in 1670 building the first trading post west of Montréal—Fort-de-la-Baie-des-Puants on Green Bay. In this interior world of shifting military and trading alliances and declining local supplies of beaver, the canoes and fur posts facilitated the remarkable territorial expansion of French commerce. Before the end of the 17th century, there were French posts on each of the Great Lakes, along the Illinois and Upper Mississippi rivers, on Lake Nepegon north of Lake Superior, and even on James Bay where the French captured posts built by the Hudson's Bay Company (Fig. 4.1). Such expansion soon created a glut of furs in Montréal. In 1696, the crown closed all interior posts, and did not reopen most of them until the Treaty of Utrecht (1713) returned the French-held forts on the Hudson and James bays to the British. French traders again circulated in the interior; by the 1730s there were French trading posts as far west as the lower Missouri and Lake Winnipeg.

The fur post was a palisaded, frequently garrisoned settlement in native territory. The largest—Fort Detroit and Michilimakinac—were entrepôts laid out in a grid of streets and defended by cannon mounted in small angled towers at the corners of curtain walls (Fig. 4.2). The smallest, comprising a few buildings surrounded by a palisade some 12 feet high, could be constructed in a few weeks to provide minimal accommodation for a few traders and soldiers overwintering among potentially hostile natives. White women were absent at such posts, and the traders themselves would leave after a year or two, not necessarily to be replaced. The fur post was, characteristically, an ephemeral outlier of French commerce and the French military, built to house and protect trade goods and personnel, a point of contact between native and European worlds in the wilderness. Wooden palisades and buildings

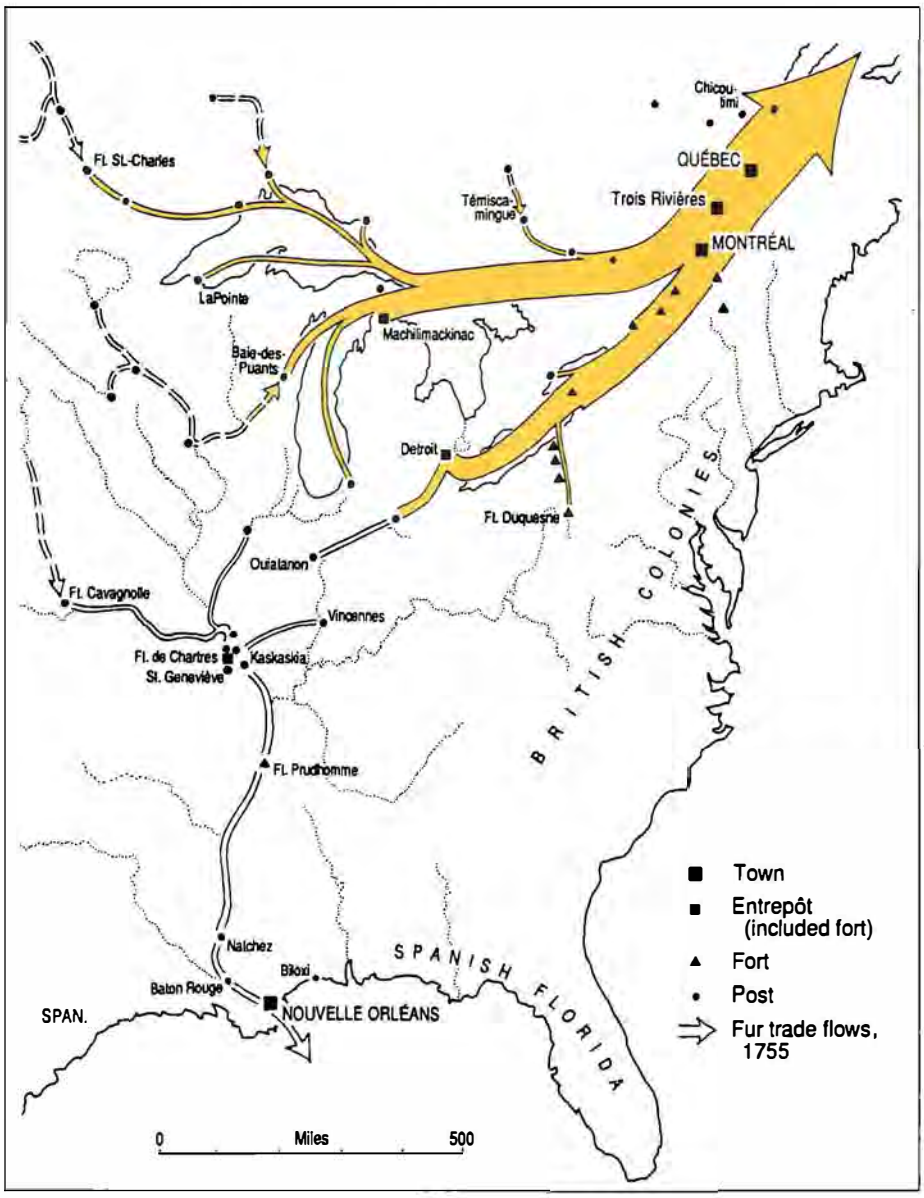


Figure 4.1
The French arc of settlement in North America in about 1755. The fur trade linked the web of settlements together. Trading posts were the most far-flung sites of French presence, guarded by forts in areas contested by the British. The Illinois country served as a breadbasket for many western operations, and the chief towns developed at the outflows of the St. Lawrence and the Mississippi rivers.

made of squared timbers, laid horizontally and tenoned to posts at the corners and at intervals along the walls, had not been used for centuries in military construction in France.

As the French fur trade became established in North America, it drew a few settlers, not all of whom could be employed in a trade that depended primarily on native labor. In the 1630s, agricultural settlement began in Acadia (the area centered on the Bay of Fundy between the present Canadian provinces of Nova Scotia and New Brunswick) and along the lower St. Lawrence River near Québec. From these frail beginnings emerged two different French-speaking peoples in North America.

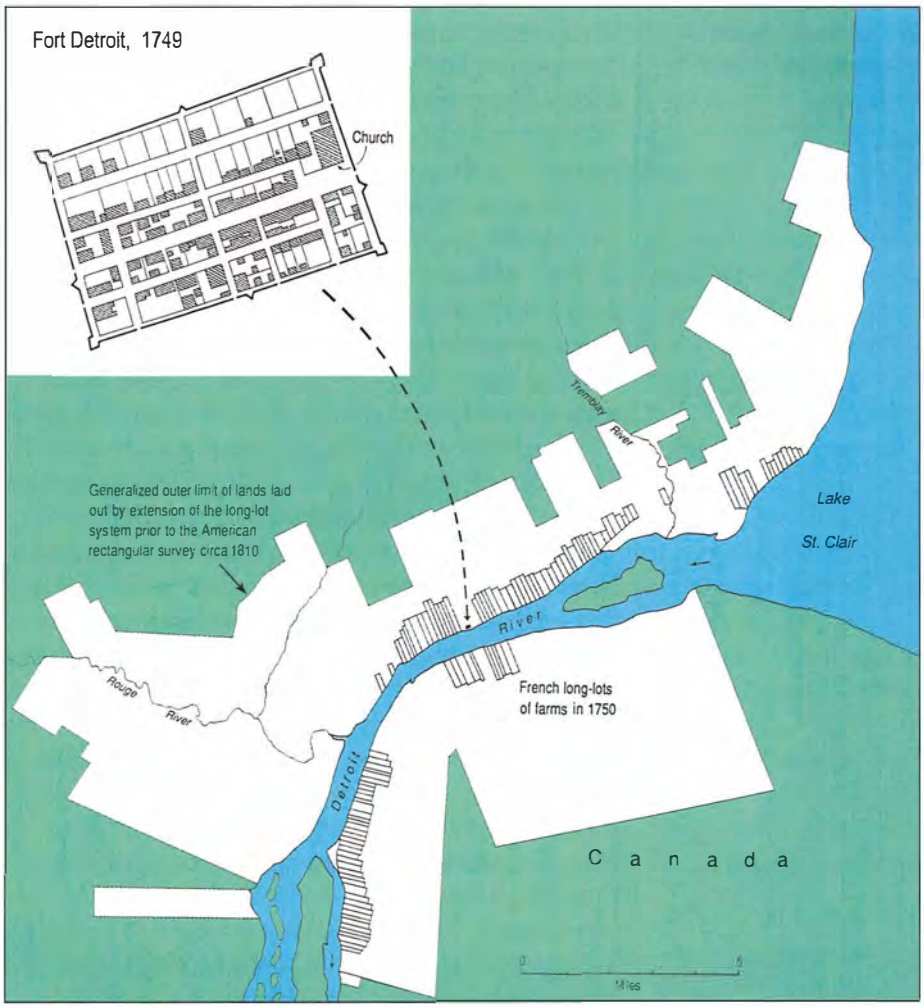


Figure 4.2
Fort Detroit and its French settlement district in easternmost Michigan around 1750. The town developed as a compact unit, but did not survive American takeover, which produced a grandiose new plan for the city of Detroit centered several hundred yards to the east. The rural long lots endured, however, and with their pre-American extensions created a framework that still controls the land parcel pattern of central Detroit and the adjoining city of Windsor, Ontario.

In Acadia, farming began on tidal marshes created by the great tides (up to 50 feet) of the Bay of Fundy.[3] The upper reaches of these marshes could be protected with broad, low dykes made of sods, reinforced with branches or logs, and punctured at intervals by sluice gates fitted with clapper valves. The marsh behind such dykes would freshen in a few years and make excellent plowland. Acadian life depended on these dyked marshlands, a niche of New World agricultural opportunity, bounded by sea and forest, in an exposed corner of the northwestern Atlantic.

The marshes supported the crops and livestock of northwestern France and, with them, a vigorous peasant economy. There were not many immigrants, perhaps no more than 40 founding families, and little export opportunity (there was some trade with Boston and, later, Louisbourg), but for several generations there was room for young Acadians to establish new farms on the marshlands around the Bay of Fundy. The Acadian farm was a mixed operation in which wheat and

legumes were supplemented as field crops by oats, rye, barley, and flax; cattle were the dominant livestock, and most farmers also kept pigs, sheep (for wool), and poultry; and every farm had a kitchen garden. The success of Acadian farming is reflected in the expansion of Acadian settlement. Girls married in their teens and the population grew rapidly by natural increase. In 1670, some 350 Acadians lived on the marshlands, and by 1710 there were 1,400; Acadian settlement had spread to all the cultivable marshes around the Bay of Fundy.

When France held Acadia, the fort, garrison, and governor at Port Royal maintained an official connection with France. But this exposed colony alternated between French and British control in the 17th century, and fell to the British for the last time in 1710. Even before 1710, the imprint of traditional power on such a countryside was slight. There were no royal taxes although, intermittently, men were required to serve in the militia, and there were no seigneurial charges for land. There were a few priests, who must have received some tithe. Acadian land was not valuable enough to attract or create a landed elite, and the export economy was not robust enough to draw merchants from France. In the 17th century, the few Acadian exports fell within the coasting trade from Boston. For the most part the Acadians were left to themselves. Their domestic economy, supplemented by some trade, maintained a rough sufficiency. Acadian families were better off than the rural poor in France, but none was nearly as well off as the more prosperous French peasants. The landscape created by such a people was dominated by their arable marshlands, dykes, and wooden, thatched farmhouses, built at the boundary of marsh and forest. Such farmhouses did not reflect a particular French regional style, rather the local availability of wood, and peasant ways from all over France. Over time, a common experience with a novel environment and a selective peasant memory (some memories were lost because they were environmentally irrelevant, others because not enough immigrants shared them) had created a unique peasant culture.

The core landscapes of New France

Along the lower St. Lawrence River, a somewhat different colony, Canada, emerged.[4] Québec and Montréal were the early foci of Canadian development. Both centers of the fur trade—Montréal as jumping-off point to the interior, Québec as port and point of contact with France—they slowly developed into small towns as their administrative, military, and commercial functions expanded; and as local authorities drew up town plans and distributed lots. By 1739, date of the last census of Canada during the French regime, there were some 4,500 people in Québec and almost as many in Montréal.

Retracing French landscapes

Québec and Montréal were the most comprehensive transplantations from France in the New World. They performed most of the functions of French towns, and housed similar classes. There were centers of power where merchants, government officials, military officers, and important clerics lived; where instructions arrived from France; where laws were made, judgments passed, and offenders punished. Occupationally they were diverse; some 40 percent of household heads were artisans representing all basic port trades, construction, and the provision of common consumer goods. Socially they were highly stratified, culturally they were melting pots, their populations reflecting the many regional sources of French emigration to Canada. Visitors likened them to French towns, Québec to a provincial capital; they most closely resembled the port towns of northwestern France, from whence, in good measure, they had sprung.

The European dichotomy between a commercial lower town and an administrative and military upper town emerged very early in both Québec and Montréal. Québec's congested lower town served the activities of the port on a ribbon of land between the river and a cliff, the heights of which commanded the St. Lawrence. Its upper town, far more spacious, was the location of royal and clerical officials and the garrison (Fig. 4.3). There were handsome baroque structures in the upper town, and much of the land around these buildings was laid out in garden plots arranged geometrically and walled. In the lower town, where land was scarce, buildings were contiguous along a street. Streetscapes were dominated by spare symmetrical stone facades, large

Figure 4.3
Street scene in the upper town of Québec City. Typical urban dwellings with long gabled roofs and dormer windows, eaves to the street, reflect the strong French influence of the early period. A similar streetscape developed in the Vieux Carré district of New Orleans.

and well-proportioned shuttered windows, narrow dormers, and massive chimneys—as in the towns of northwestern France. In Montréal, warehouses and other commercial buildings lined the riverfront and a far more open institutional town emerged behind them along an approximate grid of streets. In the 1680s, Montréal was palisaded for protection against the Iroquois, and in the 18th century the wooden palisade was replaced by a stone wall.

The countryside that expanded slowly along the river from Québec and Montréal was a more original creation. As in Acadia, it was built up from the family farm and the domestic economy in conditions where agricultural land was available but markets were inaccessible. The Canadian countryside, however, was never as detached as the Acadian from towns and the power they contained.

Land in Canada, as in France, was held by seigneurs from the crown. The seigneur subgranted land to farmers (habitants) who acquired security of title in return for annual rents and charges for seigneurial services. In theory, the seigneur was to behave towards his tenants as "*un bon père de famille*." In fact, in France by the 17th century the seigneurial system was little more than a source of revenue for seigneurs and of financial burden for their tenants. In Canada, few seigneurs produced much revenue in the 17th century, but seigneurs kept accounts and collected their due sooner or later. The bishop established parishes as soon as numbers warranted; whether the habitants wanted him or not, there was soon a resident priest and tithes to pay. The crown did not impose taxes, but did require roadwork and expected farm families to house troops and provide able-bodied men for the militia in times of warfare. "The Canadians," an official in Canada explained to his superior in France, "pay with their blood." As Canadian agriculture began to find export markets in the 18th century, merchants were regularly in the countryside. Many habitants were in debt to them. In such ways, traditional sources of power in rural France penetrated the Canadian countryside.

But rural Canada was not a reproduction of part of rural France, and could not be. French institutions and peasant ways had penetrated a forested valley near the climatic margin for agriculture where farm lots were available from a seigneur for no initial charge. Farm lots were laid out with a characteristic ratio of width to length of about 1:10 and an area of 50–100 acres. Such long-lot farms were well known in Normandy, source of many of the earliest immigrants to Canada, and suited new settlements of farmers who wanted to live along the river on their own land. The lots were easily and cheaply surveyed, and gave most farmers river frontage, a variety of soil and vegetation types, and neighbors close by (Fig. 4.2). As elsewhere in the North American forest, the pioneer work of clearing, working the land, and building was unremitting—a farm of some 30 cleared acres was the product of a lifetime of labor. One of the sons would remain on the parental farm.

The others would become pioneer farmers in their turn, usually as close to the parental farm as possible, and repeat the lifetime cycle of work and farm creation (Fig. 4.4).

In this way land was available, but the local market for farm produce was small, and the export market was nonexistent until the 18th century. And under such circumstances the Canadian farm, like the Acadian, was an unspecialized, mixed operation that provided as much as possible for domestic consumption and some surplus for

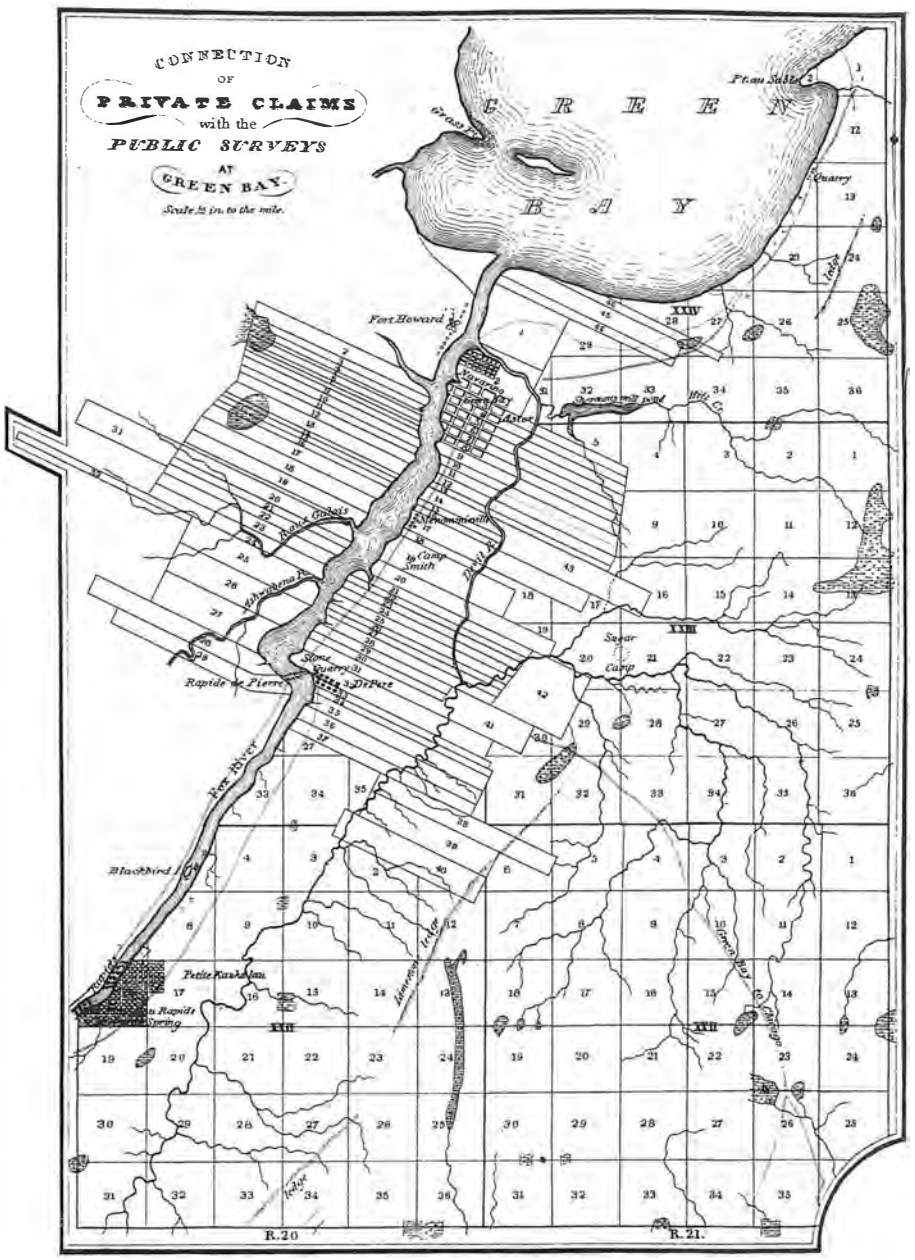


Figure 4.4
The pattern of long lots at Green Bay, Wisconsin, in 1809. When the United States land surveyors reached the area, they gridded all land not previously laid out. Authorities honored the long lots as existing "private claims," and their outlines became embedded in the subsequent evolving pattern of land ownership, still very evident today.

sale. A kitchen garden produced vegetables, tobacco, and fruit; plowed fields were planted principally in wheat, but also in barley, oats, and legumes; meadow and pasture supported cattle, oxen, sheep, and, usually, horses. Every farm raised pigs and poultry. Such were the elements of almost all established farms from one end of the colony to the other. There were a few larger farms on seigneurial domains, but the family farm was the basic unit of agricultural production. With 20 acres cleared on such a farm there was hardly a surplus for sale; with 30 or 40 acres cleared, some wheat, a cow or two, perhaps some piglets, perhaps a few tubs of butter, could be marketed most years. In the longer run, no farm family could be or wanted to be self-sufficient.

Compared to the French peasantry, habitant society was relatively unstratified. In a weak commercial economy there were no really wealthy habitants, and as long as land was available there were no landless families and few beggars. At the same time, the regional memories of immigrants from France were being blended along the lower St. Lawrence as an unconscious selection of remembered ways reinforced by common immigrant memories, or memories that were particularly relevant to the demands of pioneer settlement in a northern forest. Languages other than French, and many dialects of French, quickly disappeared. As in Acadia, techniques of building in wood came to the fore and others were forgotten. In sum, a distinctive, vibrant, Canadian culture was emerging. Because family farms were similar from one end of the lower St. Lawrence Valley to the other, and because part of the habitant population was remixed generation after generation as the young moved to new land, the rural culture of early Canada was expansive and probably fairly uniform.

By the mid-18th century, farms lined both banks of the St. Lawrence for more than 200 miles. Near Québec, land for agricultural expansion was no longer available. Everywhere the forest had been pushed back, replaced by tended countryside. Parish churches dotted the lines of settlement, more conspicuous than the many small water-powered grist- and sawmills on tributary streams or the windmills on promontories. Here and there a manor stood out from the houses around it, a reflection of a seigneur's growing revenue as a seigneurial population rose. The predominant building in the countryside was the small habitant house, usually constructed of squared logs dovetailed at the corners and tenoned to vertical posts around windows, chimney, and doors; usually whitewashed to preserve the logs; usually roofed with thatch or cedar planks. Overlooking river or road at the front of a long-lot farm and 100–200 yards from similar buildings on either side, such houses were a measure of a New World opportunity for the poor to acquire farms and of a unique peasant culture.

The French crescent: St. Lawrence to the Mississippi

All these French settlements in North America developed within the context of the larger military struggle between France and England for control of a continent. In this regard, the Treaty of Utrecht (1713), which ended the long Anglo-French hostilities known as the War of the Austrian Succession, was calamitous for France in North America. The treaty confirmed English title to much of Acadia, ceded Newfoundland (France retained fishing rights in the north), and returned the forts on Hudson Bay. France had bargained for European advantage with North American territory. In the aftermath of the Treaty of Utrecht, France sought to strengthen her diminished North American position by building a massive fortress town, Louisbourg, on Cape Breton Island at the entrance to the Gulf of St. Lawrence, and by encouraging trade and settlement along the Mississippi. It was hoped that a crescent of French power from the Gulf of St. Lawrence to the Gulf of Mexico might contain the British east of the Appalachians.

Begun in 1717, the fortress at Louisbourg was a defensive stronghold designed in the Vauban style to resist cannon bombardment. When completed in 1734, it was the largest fortress in North America, built on a low, exposed, frequently fog-bound peninsula at the entrance to Louisbourg harbor, and protected on the landward side by massive low stone walls, ramparts, and angled bastions. Behind the wall was a garrison town of more than 2,000 people. The town was dominated by the military, commerce (it became the major French port in the northwest Atlantic, one of the busiest ports in North America), and the fishery. Fishing installations rimmed the Louisbourg harbor, and schooners sailed from Louisbourg to the offshore fishing banks. Louisbourg itself was laid out in a precise grid of streets. Its most imposing buildings—the barracks, the king's warehouse, hospital, and principal residences—were stone structures in the baroque French taste of the day, their exteriors proportioned and austere, some of the interiors made remarkably ornate by fittings and workmanship imported from France. Lesser buildings were mostly of timber frame construction variously infilled. Small gardens, barely feasible in Louisbourg's climate, were laid out geometrically. Louisbourg's appearance reflected what it was, an early 18th-century outlier of the French state and French commerce superimposed on a far older fishery. Like Québec and Montréal, it housed a mix of peoples. Many of its inhabitants, particularly its women, had been born in the New World—in Acadia, in the former French fishing settlements in Newfoundland, or in Louisbourg itself.

The year that France decided to fortify Louisbourg (1717), she moved to strengthen her hold on the Mississippi Valley by granting a marching company title to Louisiana and a trading monopoly for 25 years. The company was to establish 6,000 free settlers and 3,000 slaves. The next year the company founded New Orleans. It began granting large

estates, assuming that they would be worked by indentured servants brought from Europe, and tried to recruit immigrants in France, the Low Countries, and Germany. Although several thousand French convicts were sentenced to deportation to Louisbourg, few arrived and fewer survived; European labor in Louisiana remained scarce and expensive. In these circumstances, the company turned increasingly to black slave labor and the model of the plantation economy as practiced on the French sugar islands. When the crown assumed control of Louisiana in

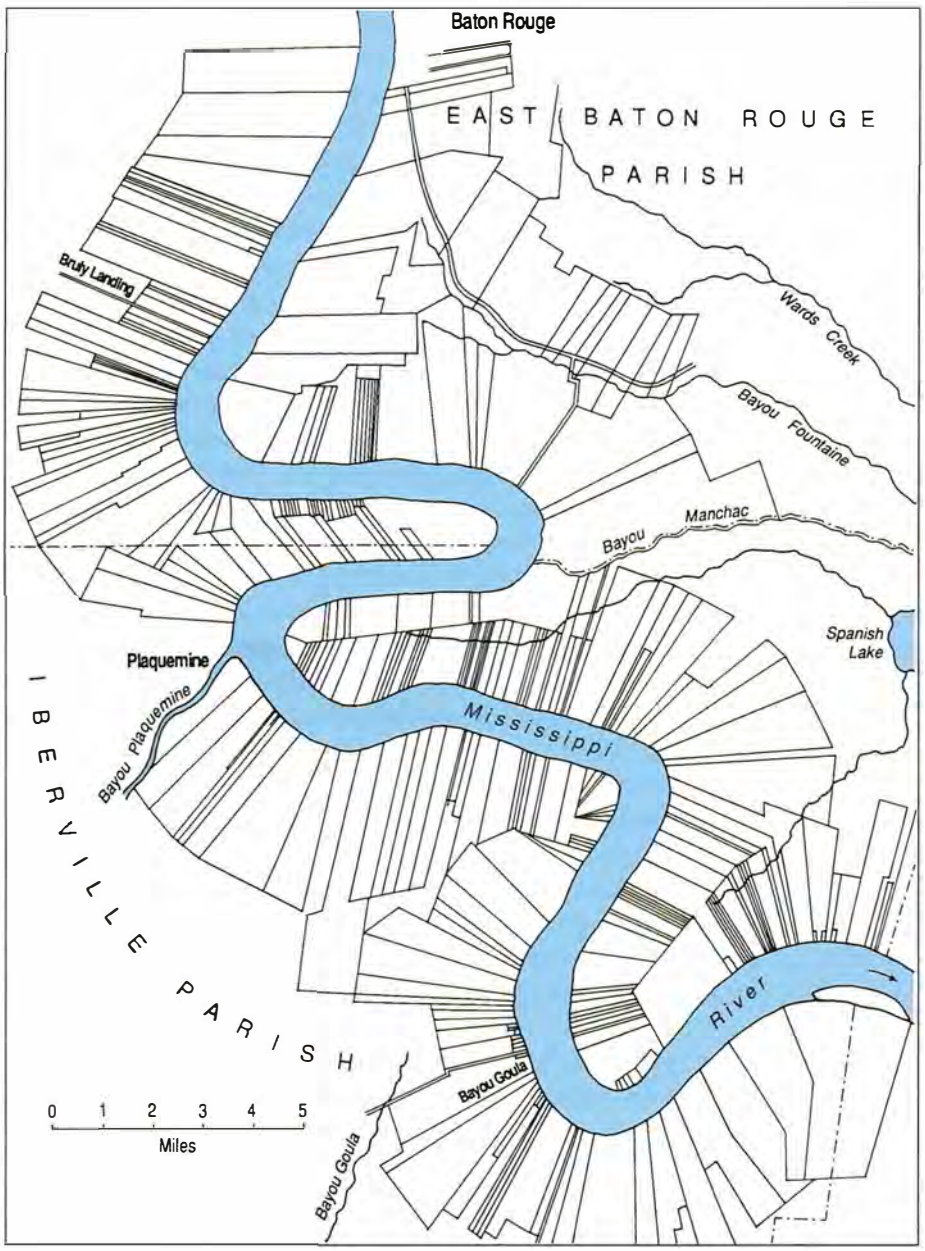


Figure 4.5 Mississippi long lots downstream from Baton Rouge, Louisiana, as they had evolved by 1850. This pattern reflects a long process of selective lateral subdivision and consolidation since the original French arpents were laid out. The heritage of French names in the landscape is strong.

1731, there were more blacks than whites along the lower Mississippi in a non-native population of about 4,000. Plantations were the principal units of production (Fig. 4.5). Rice, indigo, and tobacco were the major plantation products, together, on some of the larger plantations, with lumber and naval stores. When native groups resisted these incursions into their territory, they were overcome by French firepower. Between 1729 and 1731, the Natchez, approximately 3,000 people living along the Mississippi some 200 miles above New Orleans, were dispersed, many of them to St. Dominique as slaves.

New Orleans, like Louisbourg, was laid out in a rectangular grid of streets and, like Montréal, was walled on three sides. As local stone was not available, most buildings were of timber frame construction with brick infill (Fig. 4.6).[5] Otherwise, New Orleans looked much like a smaller version of the other French towns in North America, particularly Louisbourg—both 18th-century towns (Fig. 4.7). On the other hand, rural settlement along the lower Mississippi had little in common with that along the lower St. Lawrence. The banks of the Mississippi were occupied from New Orleans almost halfway to the sea, but primarily by plantations rather than by family farms. At the core of a plantation was a small nucleated settlement tied to an export economy—the agricultural equivalent of the early fishing camps in Newfoundland. There were rudimentary quarters for workers (slaves) and much more ample ones for an owner or the overseers (Fig. 4.8); in some cases a sawmill or a brickyard; the potatoes, corn, and vegetables; and fields planted in the

Figure 4.6
The Gabriel Peyroux House on Burgundy Street in the Vieux Carré district, New Orleans. While it was originally built on a plantation, Peyroux had it dismantled, moved, and erected here in 1780. The many French doors promoted air circulation in the languid summer heat.

Figure 4.7
Jackson Square in New Orleans, in the heart of the Vieux Carré or French Quarter, seen from the levee along the Mississippi River. Stately St. Louis Cathedral (1794, remodeled 1851) dominates the townscape here, flanked by the Presbytère (1794–1813) to the right and the Cabildo (1795), Spanish seat of government, on the left. The French mansard roof of the Cabildo was added in 1847, long after American takeover, but stylistically much in vogue at that time.

export crops. These were not the large plantations of the sugar islands, for the lower Mississippi had not established an equivalent export staple. There were some family farms. Yet the considerable majority of the rural population was black. In fact, to the extent that Old World folk cultures survived on New World plantations, those along the lower Mississippi were more African than French.

There was a French garrison at Natchez, some 200 miles north of New Orleans, and good but underused tobacco land nearby. At mid-century, the garrison at Natchez was penned in by the Chickasaw, and agriculture there was hardly feasible. At the mouth of the Arkansas River, 200 miles farther up-river, was another fort, the most northerly French outpost on the lower Mississippi. A few settlers had farmed there before

Figure 4.8
St. Joseph Plantation, built in the 1830s to raise sugar cane, is the largest of the French Creole plantation houses on the Mississippi River above New Orleans. Characteristic features include the elevated *premier étage* (primary living space), double gallery, and the hipped umbrella roof.

being driven off by the Chickasaw in 1748. Fully 500 miles farther north, in the territory the French called the Illinois country, were several agricultural villages: Kaskaskia, Ste. Geneviève, and several others on or near the Mississippi south of modern St. Louis, and Vincennes on the lower Wabash.[6] The first French-speaking settlers in the Illinois country had come from Canada, from where the territory was administered until 1717 when it was officially made part of the colony of Louisiana. By 1750, there were 2,000–3,000 people in these villages, two-thirds of them white, the rest black or native slaves. Economically and socially the Illinois country lay between the domestic rural economy of the lower St. Lawrence and the plantations of Louisiana.[7] Wheat, beef, pork, and some livestock on the hoof were sent down-river to New Orleans, destined for the sugar islands. Corn yielded abundantly, food for cattle and slaves. The largest landholder in the village of Kaskaskia controlled some 450 acres of arable land and owned 60 slaves (including women and children) and many hundred cattle, swine, and horses. Most settlers had very little arable land and presumably lived primarily from hunting and the hide trade, but almost 70 percent of white families were slave owners. Far in the continental interior, the French had reached a type of opportunity they had not encountered before in North America: rich land for mid-latitude agriculture *and* an export market. Some houses from the Illinois villages of that period still survive (Fig. 4.9). Father Vivier, the Jesuit priest who served the upper Mississippi settlements in the early 1750s, considered that the Illinois country was the pivot of the French effort to hold the vast crescent between the Gulf

Figure 4.9
Houses built in the traditional French colonial style on Main Street in St. Geneviève, Missouri. At left is the Bolduc House (c. 1770), next door the Bolduc–LeMeilleur House (c. 1820), and to the right the Vallé House (1780s).

of St. Lawrence and the Gulf of Mexico. He may have been right, but in 1750 a few villagers far in the interior were a fragile pivot for continental ambition. The Illinois country needed more settlers and more years.

On the eve of the Seven Years' War (1757–1763), the French claim to North America extended from Labrador to Texas, including the Gulf of St. Lawrence and St. Lawrence Valley, the Great Lakes, the whole drainage basin of the Mississippi, and, except for a rim of land acknowledged to be British, most of the territory draining into Hudson Bay.[8] Britain also claimed the Hudson Bay drainage, the eastern Great Lakes, and the Ohio Valley. In fact, most of this enormous territory was still controlled by natives. French claims, advanced against British counterclaims, had a cartographic and geopolitical vitality they did not have on the ground.[9] Nevertheless, the French fur trade operated through much of the continent, the French fishery to Newfoundland and Labrador was 250 years old, and there were widely distributed patches of permanent French settlement: some 13,000 people, by the early 1750s, on or near the marshlands around the Bay of Fundy; some 5,000 or more on Cape Breton Island; just over 60,000 along the lower St. Lawrence; some 2,000 (including slaves) in the Illinois country; 1,000 scattered in dozens of fur posts; and perhaps 6,000 (including slaves) along the lower Mississippi.

These were not many settlers to hold the larger portion of a continent. There were several colonial jurisdictions: Cape Breton Island, what remained of Acadia, Canada, and Louisiana. There were several unrelated export economies: the fishery, the fur trade, and the various trades of the Mississippi. There were several isolated regional cultures. Canadians and Acadians, descended from different immigrant stocks, lived in different northern agricultural niches, and after a time were different peoples. Most of the settlers in the Illinois country had come

from Canada but, on the edge of the prairie and the plantation economy, were no longer Canadian habitants. The subtropical lower Mississippi was another realm, differing in settlement history, economy, and local cultures from any other patch of French settlement in North America. A more official France was superimposed on these scattered, varied settlements, but its impact focused on the towns and weakened rapidly away from them. The townscapes of Québec, Montréal, Louisbourg, and New Orleans all reflected the outreach of official France, whereas the rural landscapes of French North America revealed the dynamics of local cultures.

The legacy

During the Seven Years' War, France lost almost all her North American territory. The crucial military actions focused on the towns: Louisbourg fell in 1758, Québec in 1759, and the French army surrendered in Montréal in 1760. Scattered rural peoples, deprived of the protection of the state, were also vulnerable. Many Acadians were deported in 1755, and most of the rest were caught over the next several years; their marshland farms were soon occupied by others. Some Acadian refugees eventually reached Louisiana, where they formed the nucleus of the Cajun people.[10] The tiny French settlements in the Illinois country were engulfed by the advancing American frontier. Spanish, then American, influences diluted, then overwhelmed, the small French-speaking population along the lower Mississippi. In much of North America, place-names are the enduring French legacy. But along the lower St. Lawrence, the heart of French settlement in North America from the early 17th century, a French-speaking regional culture survived and even expanded. Eventually, it would have outliers in New England, Ontario, and western Canada. Indeed, a country, Canada, would emerge out of the French undertaking in North America. It is one of the continent's particular ironies that after the American Revolution and the border settlement, the British position in North America fell back to the lands around the Bay of Fundy and the Gulf of St. Lawrence, the St. Lawrence Valley, and the fur trade in the interior—very largely, that is, to the French position in North America at the end of the 17th century.

Today, the French imprint on the American landscape is most widely discernible in the distribution of French place-names. Not surprisingly, their density is greatest within the arc of actual French settlements, but they reach to areas widely traveled by explorer and fur trader. French patterns of land division endure with remarkable clarity in the vicinity of major settlements, such as Green Bay, St. Louis, Vincennes, and Prairie du Chien, where later American land survey studiously avoided established claims (Figs. 4.4 and 4.10).[11] French town planning is most evident in the cities of the St. Lawrence Valley and New

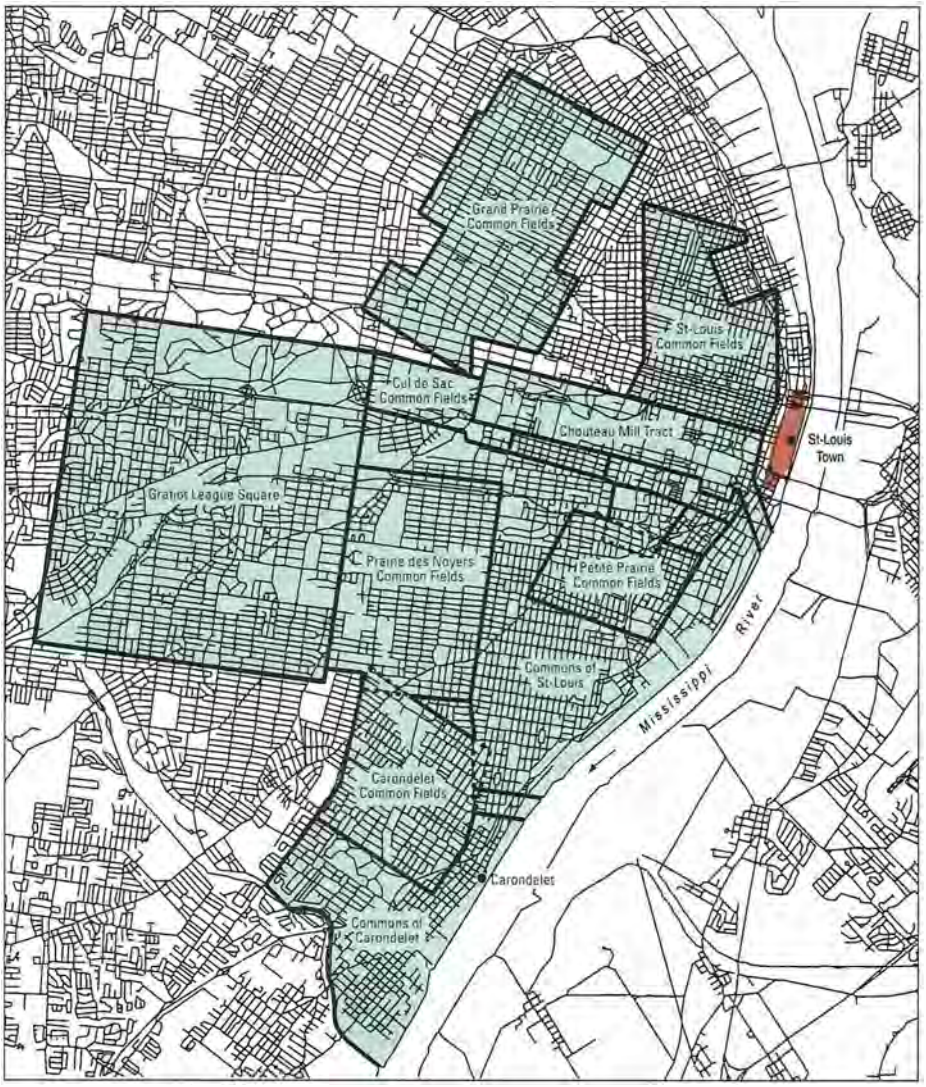


Figure 4.10
The common fields of French St. Louis, laid out beginning in 1765, and divided into long individual strips which nevertheless required communal decisions on agricultural activity (hence the word "common"), formed a morphological frame that permanently influenced the arrangement of streets and property as the city grew outward.

Orleans within the United States, partly in street patterns both regular and irregular, and partly in building forms that contrast strongly with standard American styles. The French imprint in the United States is sparse, muted, and mostly blurred, but in a few localities, most notably along the Mississippi River, it stands in bold defiance of patterns of later American dominance that have nevertheless failed to erase it completely.

Chapter five

Americanizing English landscape habits

PEIRCE F. LEWIS

DURING THE formative period of modern nation-states, there has been an almost universal tendency for power and wealth to accumulate in one relatively small section of the country. In England, for example, the seat of power has always been located in the southeast, focused on London. In France, the modern nation-state was forged in the north in a small region between the middle section of the Loire and the lower Seine—ultimately focused on Paris. And, although American national history is compressed into a much shorter period, a similar geographical tendency has been at work. Ever since the United States gained its independence, political and economic power has tended to concentrate in the northeastern corner of the country. The nation's most important financial decisions were made there, and a huge proportion of America's wealth was controlled by northeastern financiers and northeastern corporations. Its most prestigious educational institutions were located there and still are, so that a disproportionate part of the country's power elite has been educated at northeastern prep schools, colleges, and universities. Through most of the country's history, most important political decisions were made there—officially, in the national capital in Washington, or informally in the clubs and boardrooms of Boston and New York and Philadelphia and Pittsburgh. And from the days of earliest European settlement, it was in the Northeast that Americans formed some of their most persistent geographical habits.

Many of those habits had very tangible results, for over the course of time they came to be etched into the face of America's ordinary human landscape. Northeastern ideas would determine where cities would be situated and how their streets would be laid out. They would determine what ordinary houses would look like and how they would be placed in relation to streets and gardens. They would determine where roads would be built, and who would build them; where farmers would live and how they would design barns to house their crops and livestock; and a host of smaller matters. In concert, these ideas and habits would produce a set of ordinary human landscapes highly distinctive

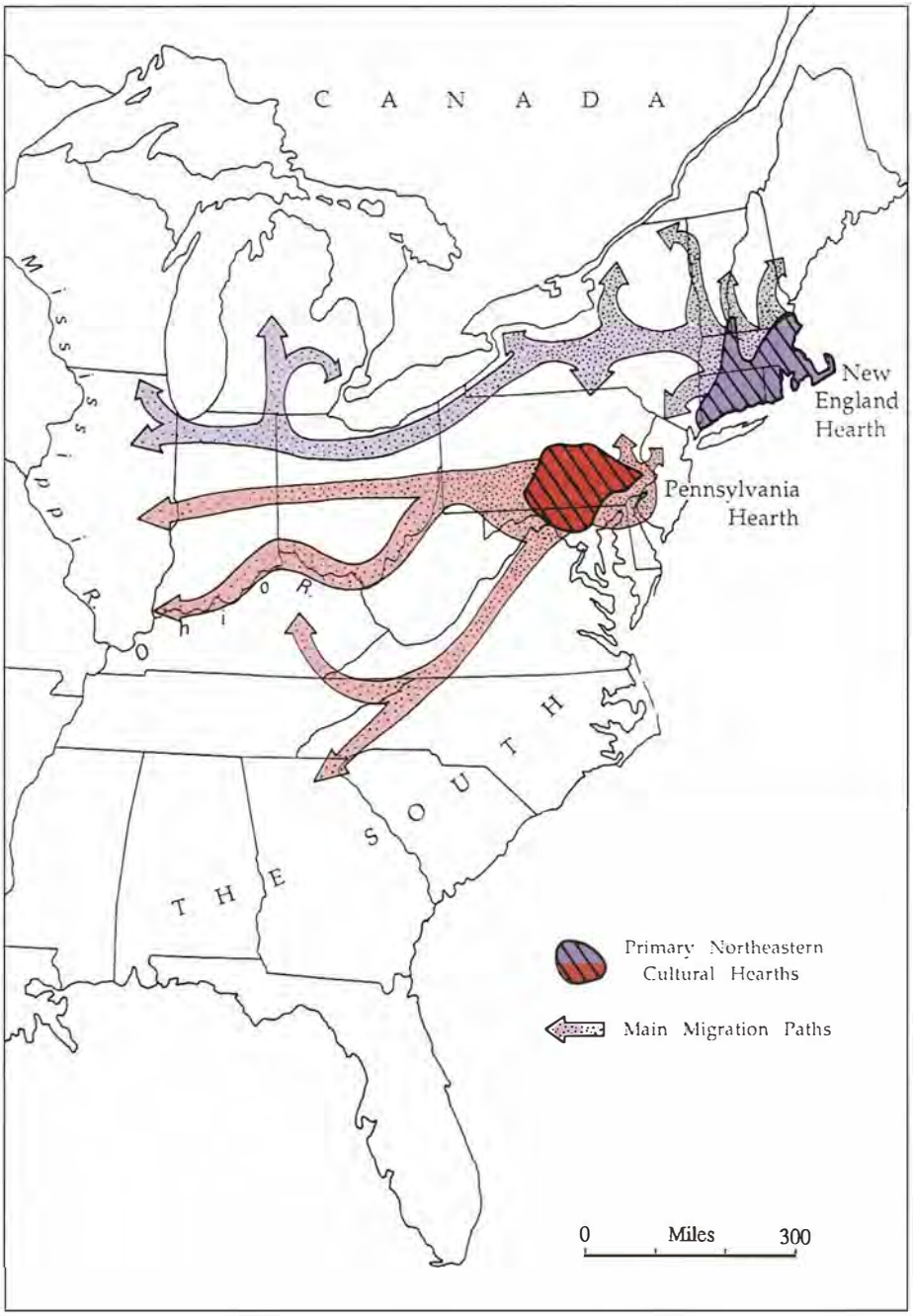


Figure 5.1
Westward spread of northeastern cultures. New England culture originated from a broad stretch of the Atlantic coast, but as it spread westward was squeezed into a narrow corridor between the Adirondacks and the Catskills—thence via the Erie Canal along the southern edge of the Great Lakes. Pennsylvania, by contrast, started with one small foothold on the Delaware River, but spread westward in a broadening diffuse fan that covered much of the continental interior. Even in the flatlands of the Midwest, however, the two streams of eastern settlement remained quite separate from one another.

in appearance, in turn underlain by a set of ethical, esthetic, and even religious ideas about how humans should treat the land.[1]

If these geographical ideas and habits had been restricted to the northeastern corner of the nation, they would be of little more than local interest today. The Northeast, after all, is only a small part of the United States. But the Northeast was the source from which most of the Midwest and West were eventually settled. In consequence, what began

as a congeries of rather peculiar regional quirks was carried westward and ultimately stamped as standard patterns of human geography across an enormous part of the American nation (Fig. 5.1).

An American version of England

Originally, many of the basic precepts of organized society were not American at all, but started out English. America, after all, was English long before it was American—and for most of the 17th and 18th centuries, most transatlantic settlers were content that it should remain so. The name New England, for example, was not chosen by accident, and it announced clearly that America was not intended to become a *new* world, but instead a new version of an old one. It would be an improved version, to be sure, both physically and morally—for its founders believed that this new version of England could and should be cleansed and rid of the Old Country's corruptions and iniquities. America would be the embodiment of the New Testament vision, they declared, a shining city on a hill, a beacon for all mankind to see and to emulate. It would be a richer version, too, for it was planted in an empty land—and had God not instructed His chosen people to multiply and subdue the earth?

So it was that the western shores of the North Atlantic started out English, and they remained so even after the Revolution and the act of formal political separation. And, to a considerable extent, America remains English today, culturally if not politically, simply because Englishmen arrived first, and settled in sufficient numbers that they could impose their ideas and tastes on anyone who happened to arrive later—even though such later arrivals would eventually outnumber their English predecessors. And so it is that in New England today, in territory now mainly populated by folk of Irish and Italian ancestry, there are towns named York and Bristol and Plymouth and New London. Even in the parts of Pennsylvania where Germans were so numerous that English-speaking travelers in the 1780s needed interpreters to make themselves understood, counties were named for Lancaster and York, Chester and Northumberland.[2]

Language was more than just a matter of naming things. Everywhere in British North America, if people wished to join the economic or political or social mainstream, they spoke English, or quickly learned to speak it (French Canada remained an isolated backwater for a very long time in part because its people could not or would not speak the English language that eventually became the key to economic and political success throughout the United States and Canada). Everywhere, people divided their land according to English measures, and settled their differences in courts under the rules of English statutory and common law.

A different sort of place

But America was not merely a duplication of England. From the time of earliest settlement, American geographical behavior diverged sharply from that of England—in ways that often made America seem perverse, uncouth, and eccentric—at least in the eyes of European spectators.

Much of this seeming eccentricity was a matter of plain necessity. Ways of managing land that had worked in the Old Country often did not work in America, and Americans quickly learned (sometimes the hard way) about the virtues of keeping an open mind, and abandoning traditional ways when the new geographical circumstances seemed to call for it.

Such constant experimentation did not always produce attractive results. Judge William Cooper, the father of James Fenimore Cooper and a large-scale land speculator in New York State in the early 1800s, sold his land to new settlers with the help of a little book filled with useful tips on how to survive and prosper on the American frontier. In *A guide in the wilderness* Cooper heaped scorn on aristocratic English and Irish settlers who came to the New York frontier and then wasted energy cutting down trees and rooting out stumps in order to produce a neatly manicured English-style country landscape.[3] Forget all that nonsense, advised Cooper. Burn the forest, and plant immediately among the charred remains. Bringing in a harvest is more important than making one's fields look pretty. If the timber was wasted and the land disfigured in the process, no matter. There was always more timber, more soil, more land—or so it seemed. That attitude toward land and resources did not end with Cooper, of course, and economics commonly took precedence over aesthetics, especially in the early days. Unlike England, America was a big country, and it rewarded those who seized its riches quickly. But such ambitions did not make for a tidy landscape, and they did not encourage habits of geographical thrift (Fig. 5.2).

Nor did they make for habits of permanence. For people who had already migrated once, there was always a propensity to migrate again—and yet again. It was all very well for Englishmen to have special attachments to special places—indeed, to take their names from the places where they and their ancestors had lived since the beginning of time. In England (indeed, in the Old World in general), one knew one's place, both socially and geographically. That was never the American way. Mobility—the willingness to abandon places when they had served a particular purpose—was the key to success, whether success was defined in economic terms or social terms. And the passion for mobility has left its distinctive marks on the American landscape: a chronic inclination to spend money on public roads; an uncritical admiration for the latest machines of transportation, whether steamboats, or speeding locomotives, or fast cars, or jet aircraft; and the unromantic willingness to abandon things that had outlived their immediate usefulness—beer

Figure 5.2
Newly cleared farmstead on the frontier of northern Michigan, in a photograph from the late 19th century. By this time, most new buildings were of frame construction, especially when a sawmill was nearby (see dam and mill at left).

cans discarded beside the highway, old farmhouses, or indeed whole cities when they outlived their usefulness. But none of those habits is new. All are deeply rooted in colonial America, and in the attitudes of the English people who settled her land.

A different sort of people

If the land differed from England, the people differed, too. Americans, after all, were migrants—and, as the demographer Ravenstein observed more than a century ago, migrants in all places and all times tend to be a special breed of people.[4] So it was with the shapers of America. They were English, to be sure, but they were not ordinary Englishmen. Ordinary folk, after all, do not uproot their families and abandon their ancestral homes to cross a dangerous ocean to live in a poorly known land on the edge of wilderness. Nor, in a time when religion played a central role in life and thought, did conventional people publicly renounce the established church of their native land. But in the eastern part of Atlantic America, between the Penobscot River and Chesapeake Bay, nearly all the migrants had done exactly that. Taken as a whole, the migrants were a tough-minded lot, with unconventional ideas about how society should be organized, and unconventional ideas about their relationships with God, with each other, and with the land itself. It is hardly surprising that they possessed unusual ideas about organizing their new geography as well, and that they left a special mark on the American landscape.

Two regions of the Northeast

The New England culture region

But British North America was not a homogeneous place. Within a short time after initial settlement, major differences had begun to emerge along the northeastern seaboard of what would become the United States. Two quite different culture hearths had begun to emerge, which by the time of the Revolution had expanded to dominate the northern half of colonial America (Fig. 5.1). One was New England, a little theocracy settled by post-Elizabethan puritans, who had broken away from the Anglican church at precisely the time when Britain's religious wars were raging hottest. Not surprisingly, these New England puritans took religion seriously, and went to great pains to organize their landscape in a way that would ensure the continuity of their ideas, and the rigorous exclusion of folk who did not agree with them. The original puritans had landed in eastern Massachusetts in the 1620s and 1630s and had imposed a theocracy so rigid that they produced their own refugees, who departed from Massachusetts to settle the shores of Narragansett Bay and other nearby coastal havens. Soon thereafter, others of more liberal bent arrived to settle the shores of Long Island and adjacent Connecticut. Even today, those original differences can be heard in regional accents, and seen in subtle differences in folk architecture which distinguish eastern New England, settled from Massachusetts Bay, from western New England, settled from Long Island Sound and the Connecticut River Valley.[5]

In general, however, there was more agreement than disagreement among the New Englanders. They took ideas seriously, and not just religious ones. The political scientist Daniel Elazar has called New England a "moralistic political culture," a place peopled by those who agreed that healthy society required strong community—a place where government would play an active, creative role in ensuring virtuous polity—and one where politics was not a dirty business, but esteemed as a high public calling. New Englanders took education seriously as well, and almost as soon as the first fields were planted, they hacked clearings in the forest to build colleges where young men would be nourished in mind and spirit, as well as in body. (Later on, New Englanders would be among the first to agree that women should be educated, as well as men, and New England's women's colleges came to be beacons for women's educational and political rights.)

But philosophy does not bake bread, and for all of New England's high-minded social aspirations, it immediately became obvious that New England was a meager land. The initial settlers had expected to settle down and become farmers, and, in the beginning, most of them did. Indeed, by the mid-19th century they had cleared the forests from all of southern New England and much of the mountainous north as well. But the climate was fierce, and except for the fertile bottomlands

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of the Connecticut River Valley, soils were marginal at best, impossible at worst. New Englanders joked sourly that the most plentiful crop from most fields consisted of stones—they made fine picturesque stone walls, but backbreaking misery for a farmer who was already working close to the margin.

Thus, ambitious New Englanders could choose one of several options. They could take to the sea for trading or fishing or whaling, and many of them did so in preference to grubbing stones from sterile fields. By the mid-19th century, New England ships were trading and whaling all over the world and bringing profit to dozens of colorful ports along the rock-bound coast. Or, they could learn to manufacture things, and they did that too, considerably before most of America had thought of doing so. As a result, New England got a head start in all kinds of useful industries, and the region became a major center of America's industrial revolution. Industry was densely concentrated in places like Manchester, Lawrence, and Lowell, crowded along the Merrimac River, where waterfalls generated power for spinning thread and weaving cloth. Along the north coast of Long Island Sound, Connecticut Yankees earned a worldwide reputation for manufacturing high-quality machined products, guns and locks and machine tools—useful and highly profitable things in a country like America that was expanding by leaps and bounds. Or, finally, a disgruntled Yankee farmer could simply pack up his family and chattels and go looking for better land west of the Appalachians. By the early 19th century, New Englanders were swarming westward across New York State, first by turnpikes, then by the Erie Canal, later still by way of the New York Central Railroad.[6] Many New Englanders

Figure 5.3
Hidden in the second-growth forest that covers most of present-day New England are the ghostly remains of an old agricultural landscape, now long abandoned. Here in southwestern Rhode Island, near Kingston, circa 1967, a stone wall serves as a reminder of the farmers who settled this infertile place in the 17th and 18th centuries, but whose descendants have long since departed. Comparable areas in Pennsylvania are still in agriculture.

went as far as western New York's fertile Genesee County, liked what they saw, and stayed, ultimately converting upstate New York into an extension of New England.[7] Others, still footloose, headed yet farther west along the southern shores of Lakes Erie and Michigan, and then fanned northward to convert the upper Great Lakes states into a vast Yankee preserve, blanketed with Yankee houses, Yankee towns, and Yankee place-names.[8] Even today, rural landscapes of Michigan and Wisconsin still have a very Yankee look to them, as do the northern parts (but not the southern) of Ohio, Indiana, and Illinois. By the end of the 19th century, this "Yankee Exodus," to use Stewart Holbrook's term, had almost depopulated most of rural New England;[9] by the middle of the 1900s, most of New England had reverted to forest. Indeed, seen today from the window of an airplane, much of rural New England looks like primordial wilderness. Walking in the woods reveals another story, however, as one stumbles through a ghostly rural landscape of tumbled-down stone walls and country cemeteries overgrown with trees and vines (Fig. 5.3). The scenery is picturesque, but the facts are grim. Farming in New England was a thin and dispiriting way to make a living, and most New Englanders eventually stopped trying.

It is hardly surprising that New England was not an attractive place for non-Englishmen, and the region's population remained almost totally British in national origin until well into the 19th century. Only then did a second wave of migrants begin to arrive, chiefly Catholic Irish refugees from the potato famine of the 1840s and, starting in the last third of the 20th century, waves of Italians and Portuguese. Although all of these later migrants originally came from rural places in Europe, when they moved to New England the farmland was gone, and they consequently settled in the only places where jobs were available, cities like Boston, Providence, New Haven, Waterbury, Fall River, and a host of others. By the end of the 19th century, New England had become an overwhelmingly urban place, an archipelago of hundreds of cities and towns, set down in a vast, unbroken ocean of second-growth forest.

The Pennsylvania culture region

But there was another part of the northeastern United States, and it was a very different sort of place from New England. Across the Hudson River to the south and west lay Pennsylvania—or, more accurately, "the Pennsylvania culture region."[10] Like New England and the South, Pennsylvania is seen, not as a political state, but rather as a multistate region with a distinctive set of cultural traits, and has exercised a potent pervasive influence on the larger national culture, on a par in importance with New England and the South. For just as New England has powerfully flavored the upper Great Lakes region, Pennsylvania's influence spilled westward in a great swath that stretches across much of the nation's midriff (Fig. 5.1).

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The character of Pennsylvania was indelibly stamped by the manner of its founding in 1682, when William Penn arrived with a band of English Quakers to create his new colony, and build *de novo* his city of Philadelphia. It was a lucky time to found a new colony, for England's fiercest religious wars were finally drawing to a close, and northwestern Europe was about to embark on the unknown seas of industrial revolution. The spirit of the times was changing, and there were opportunities for political and social experimentation that would have been unthinkable only a few years before. Penn made good use of these new opportunities, as he set about proving that one could follow one's religious conscience, tolerate the religious view of others, and prosper economically at the same time. Penn's "Holy Experiment," therefore, started out with very different assumptions than did the early settlers in New England, where religious conformity was the order of the day, and social order was considered a higher virtue than human freedom. Pennsylvania, by contrast, would be a haven of religious diversity, but it would also be a business venture, to make money for Penn and his fellow investors, and for any settlers whom he could persuade to buy land from him.

Like any ambitious real-estate dealer, Penn mounted a large-scale advertising campaign throughout the British Isles and in parts of Protestant Europe, touting Pennsylvania as a tolerant place where settlers would be left alone by church and government—providing only that they paid for their land and obeyed the laws.[11] Thus, from the very beginning, it was a much more tolerant place than New England, and consequently more diverse, although, in fairness, one must note that it was easier for an Englishman to be tolerant in 1682 when Philadelphia was founded, than in 1620 when the Pilgrims landed in Massachusetts. But even in 1682, there were very few places in the world that offered such freedom (certainly not in puritan New England, and not in the slave-owning South, either), and to many harassed Europeans the message of a Peaceable Kingdom on the fertile banks of the Delaware must have seemed achingly attractive. From 1700 onwards, migrants flooded to Pennsylvania through the new port of Philadelphia, soon to become the biggest city in North America and the largest English-speaking city in the world outside England itself. And then, around 1740, for the first time in the American colonies, settlers began arriving from the European continent, speaking languages other than English. Overwhelmingly, these new non-English migrants were German and Swiss pietists from the upper Rhine. By that time, however, the immediate outskirts of Philadelphia had already been occupied by immigrants from England and Wales, so the Germans leapfrogged beyond them to the west, and settled in the rich Piedmont land that stretches from Allentown to Reading to Lancaster to York, a region which today constitutes the heart of the "Pennsylvania Dutch" (*Deutsch*) country. By the time of the American Revolution, those of German immigrant stock

came to number more than one-third of Pennsylvania's population, and they turned Penn's "Holy Experiment" into the least English of all of Britain's Atlantic colonies. More than was true for any other of those colonies, however, the promise of Pennsylvania was a portent of America's promise—a place where the highest values were freedom, tolerance, and the ability to make money. It was a quite different set of values than motivated the New England Puritans; values from a different period in English history applied to a different region of America.

Pennsylvania, in consequence, took on a quite different role than New England in the making of American nationhood. Over the long haul, Penn's Quaker commonwealth contributed enormously to the economic wellbeing of America, but comparatively little to its moral or political life. It is of more than passing significance that New England and New York have produced some of America's most distinguished statesmen, while Pennsylvania, just as wealthy and populous, has more often produced a succession of political hacks.[12] Pennsylvania's great men have typically been captains of industry and leaders of finance, much less often statesmen or preachers.[13]

There were other major differences between Pennsylvania and New England. At the same time that Massachusetts Yankees were struggling to root boulders from their sterile plots, Penn had stumbled across some of the most productive country in eastern North America, a place with rich soils and a genial climate—at least by American standards. A farmer could make an excellent living in Pennsylvania if he took reasonably good care of his land and, as it turned out, the German settlers

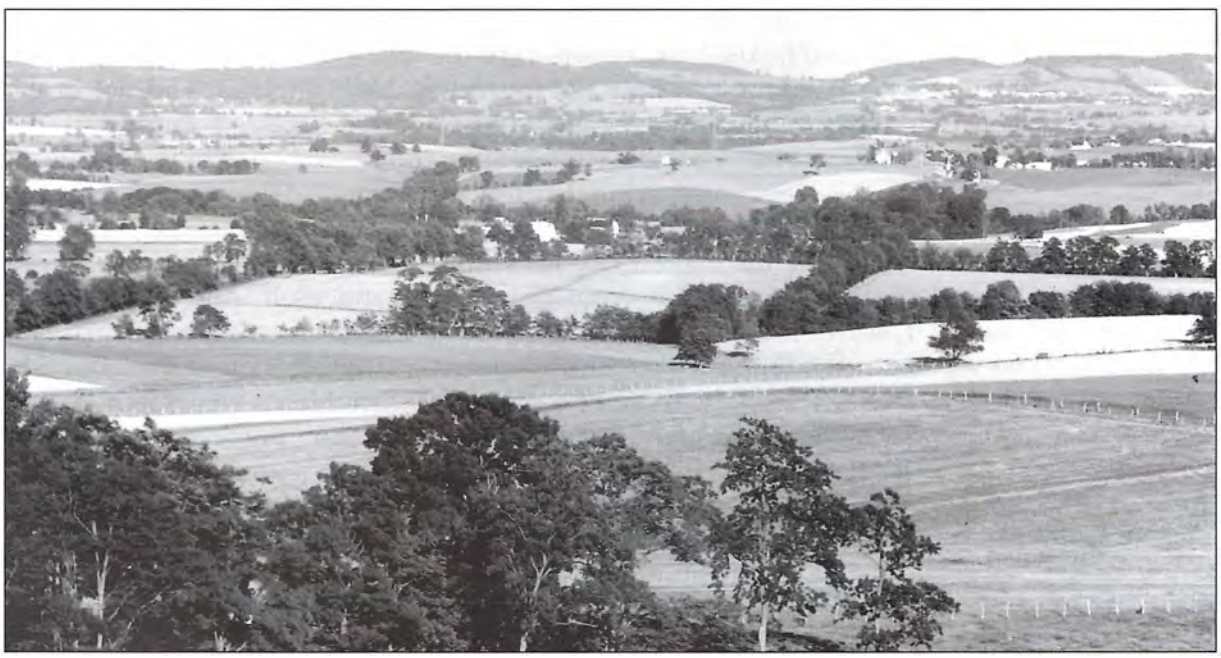

Figure 5.4
Lancaster County, Pennsylvania, circa 1980. In contrast with New England, most of southeastern Pennsylvania is still farmed—a testimony to rich soils, genial climate, and a long tradition of conservative agricultural husbandry.

Figure 5.5
The same general farmscape in Lancaster County, Pennsylvania, viewed from the air in 1990. Note the scattered but closely spaced Amish farmsteads here, and the contour-plowed fields anchoring this rich, sustainable agricultural landscape.

included some of the best farmers ever to set foot in America. Thus, over the years, while most of rural New England has reverted to forest, the bulk of southeastern Pennsylvania remains in farmland—and profitable farmland at that (Figs. 5.4 and 5.5).

That fundamental difference between New England and Pennsylvania survives today in popular imagery. The Pennsylvania farmer is commonly pictured as a jolly, rotund, industrious and not very brainy fellow with a music-hall German accent. His wife is very much like him—apple-cheeked and of ample girth, eternally and cheerfully preparing mountains of highly calorific food for her numerous apple-cheeked family. By contrast, the New England Yankee farmer is a scrawny, sallow, Scrooge-faced fellow, given to laconic aphorisms, who copes with his impossible environment through miserly thrift and native guile. Like many such popular caricatures, these two are wildly exaggerated, but they reveal an important underlying truth: Pennsylvania and New England were—and still remain—very different kinds of places. It is hardly surprising. They were founded on different kinds

of land, by different kinds of people, holding different sets of underlying ideas. Inevitably, those people created two very different strains of vernacular landscape.

The two landscapes of the Northeast: differences in vernacular architecture

The appearance of domestic houses is a case in point. Until well after the Revolution, important public buildings looked much the same in Boston as they did in Philadelphia or Savannah, and so did the houses built by affluent merchants and landowners. Indeed, on both sides of the North Atlantic, power-brokers and tastemakers were all attached to the same British system of ideas and values and, not surprisingly, they often possessed correspondingly similar tastes in food, drink, clothing, and architecture. In particular, high-style buildings tended to look alike, for the simple reason that all were designed by the same English academic architects, or by a small number of American architects who had learned their craft in England.[14]

When regional differences in architecture began to appear, well before the Revolution, they came not in high-style houses but in the vernacular houses of ordinary people. Furthermore, those differences were exaggerated between the Revolution and the Civil War, a time when settlers were moving away from the coast and its Atlantic connections, into the American interior where information traveled slowly and new environments challenged the utility of traditional ways. In the new western territories of the United States during the half century after the Revolution, regional differences had grown sharper than at any other time in American history. And it was during that same time that the greatest differences emerged between the look of the Pennsylvania landscape, and that of New England.

Pennsylvanians stuck to the old architectural ways longer than did New Englanders, a fact that suggests a kind of ingrained conservatism in Pennsylvanian domestic life that was not found in New England. As Pennsylvanians moved inland, they took with them the British habits of domestic building that they had contracted along the coast. The streets of inland Pennsylvania towns like Carlisle and Reading and York were lined with red-brick Georgian row-houses, much as in their English namesakes. Even today, southeastern Pennsylvania has an abundance of towns that look more British than any others in America.[15]

New Englanders, however, exhibited much greater independence of mind. Brick row-houses were built in sizeable numbers only in a few large coastal cities, Boston most conspicuously. By the time New Englanders had migrated a few miles inland, however, they had abandoned the use of brick and begun to build in wood. It was not just wood for framing, but exterior wood as well—shingles and clapboards, and

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a rich variety of wooden embellishments. To colonial Pennsylvanians, to build a wooden house was at best inelegant, at worst an admission of poverty. To New Englanders, it was an opportunity for exuberant experimentation and, by the time of the Revolution, even rich and fashionable people were opting to build their mansions out of wood, even in coastal towns where brick construction had until only recently been the ruling norm.[16]

Why did it happen that way? Differences in environment cannot explain it. Wood was no cheaper or more abundant in New England than it was in Pennsylvania, and clay for making brick was available almost everywhere. One can only guess that there was some cultural predisposition for New Englanders to experiment and Pennsylvanians to stick with what was tried and true. The reasons for that, in turn, are less than obvious.

The Yankee inclination to experiment with their common houses shows up in another very striking way. At the same time that New Englanders were shifting their favor from brick to wood, they were beginning to experiment with new locations for their houses. Only a short distance inland from the coast, New Englanders began to abandon the tradition of building urban row-houses, and instead started to build free-standing houses on spacious lots and set the buildings well back from the street. Thus, by the time of the Revolution, their towns had taken on a very different look (compare Figs. 5.6 and 5.7). The Pennsylvanian town still seemed very European, but the New England village had begun to assume an open and rather countrified appearance. On the western frontier, with plenty of wood and plenty of space, it was an obvious way to do things—and the only mystery is why it took Pennsylvanians so long to adopt the idea. Others, however, were not so slow, and from the early 1800s onward, Americans everywhere west of the Appalachians adopted this New England model—and house construction has followed this pattern in most of the United States ever since. Row-houses are scarce commodities in most American towns, except as rental units or condominiums—and, of course, in the gentrified "historical districts" of a few old eastern cities. Elsewhere, the American dream house remains a single-family free-standing house, standing independent of all others on a lot of its own, an ornamental landscaped lawn in front, and a less tidy backyard for gardens and children's play. That familiar arrangement turned out to be one of New England's most successful inventions.

There were other architectural differences as well. Shortly after the Revolution, Classical Revival architecture had begun to make its way into the United States, a style promoted by Thomas Jefferson, who argued that Greco-Roman classical architecture was more fitting in a republican democracy than traditional Georgian styles, which symbolized, after all, the most detested of British monarchs. From 1790 onward, indeed until the middle of the 19th century, important public buildings

Figure 5.6
Village street in Newfane, southwestern Vermont, circa 1989. The countrified landscape of the classic New England village has become the apotheosis for suburban America: single-family houses, separated from each other, and set back from the street, with large front lawns under a canopy of shady trees. Note the extensive use of wooden construction, as reflected in the white clapboard exteriors of buildings, a sharp contrast with red-brick Pennsylvania.

throughout the United States came increasingly to be modeled after the Parthenon or the Roman Forum.[17]

It was quite another thing, however, to incorporate classical ideas into ordinary domestic life, and the traditionally minded Pennsylvanians would have little to do with the notion. Classical architecture might serve for courthouses or solemn academies, but not for houses. New Englanders, on the other hand, adopted domestic classicism with unfettered enthusiasm. From 1800 to the time of the Civil War, as they streamed westward across New York State into the upper Midwest, they gave their newly founded towns fine classical names like Athens and Sparta and Cincinnatus and Sempronius,[18] and strewed those towns with houses that were made to look as much as possible like Greek temples (Figs. 5.8 and 5.9). Many of those imitation Parthenons are fairly crude, but they stand as exuberant testimony to the New Englander's habitual willingness to experiment with new ideas. Nor were those ideas restricted to architecture, and they flowed over into technology, politics, and even religion. In upstate New York in the early 19th century, religious revivals occurred with such frequency and immense

Figure 5.7
Elfreth's Alley, Philadelphia, a well-preserved remnant of 18th-century Philadelphia, is a standard bit of British urban morphology. Such brick row-houses continued to be built in Pennsylvania cities and villages until the mid-19th century, long after New Englanders had abandoned the idea.

ferocity that the very earth seemed scorched, a district "burned-over" by the intensity of religious enthusiasm.[19] Today, classical names and classical architecture serve as hints of a wider world—tangible records of an innovative people at an innovative time. It is significant that such names and such styles are almost totally absent in the areas settled by the more sedate Pennsylvanians.[20]

Barns and other rural matters

Rural landscapes in the Northeast had also begun to take on a characteristic look. From the very beginning, American farmers everywhere had rejected the common European practice of living in rural villages, a geographical arrangement which required farmers to walk from town to field in the morning and then walk back at night.

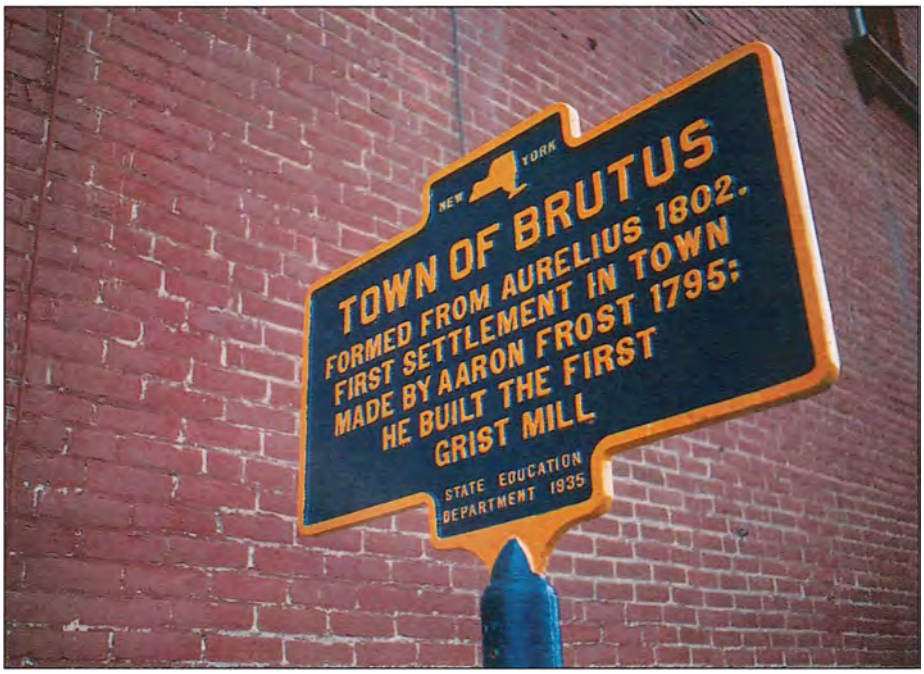

Figure 5.8
Roman and Greek place-names were strewn across upstate New York in the early-19th century, as literate New Englanders migrated westward and stamped the land with names that symbolized the political ideals of classical republican democracy, and rejection of British monarchy.

Figure 5.9
Vernacular Doric, Watervliet, New York. The Yankee migration corridor from western New England to southern Minnesota is thickly strewn with houses like these—some grander, some simpler, but all strongly evocative of classical ideas, and testimony to a literate, self-conscious population, well connected to a larger world of ideas.

That arrangement was found on many Southern plantations, of course, and in a few utopian communities in the North, but elsewhere American farmsteads were dispersed across the countryside. As a result, there came to be a sharp split between farmers and townspeople which persists in America even to the present day.

Americanizing English landscape habits

But again, significant differences had begun to develop between Pennsylvania and New England. And the design of barns is perhaps the most conspicuous sign of this divergence. Although English tradition had offered architectural guidance for domestic housing, English barns were too small to be of much use in the New World. In North America, big farms produced big harvests, and cold winters required shelter for livestock. In parts of northern New England, chiefly Maine, farmers solved the problem in a clumsy but picturesque manner by hitching a multitude of small buildings together to form "connecting barns."[21] Pennsylvanians, by contrast, shunned the British models, and imported a design that had been commonly used in the upper Rhine Valley and in northern Switzerland. This so-called "Schweitzer barn" was a capacious three-level building (animals on the ground level, threshing floor above, and hayloft above that), with a distinctive cantilevered overhang called a "forebay."[22] But its greatest utility was its size (Fig. 5.10). As harvests got bigger, the barns did too, and even before the end of the 18th century, affluent farmers were building colossal, elegant barns that often seemed more like cathedrals than agricultural outbuildings. Even today, Pennsylvania farmers are proud of those great majestic barns that still symbolize the plenty of the Pennsylvania land, the earthly rewards of hard work and a virtuous bucolic life. But it was also a good workable design for prosperous farm country, based on the need to accommodate a mixture of crops and livestock. So when Americans crossed the Appalachians and needed new barns in the rich farmlands

Figure 5.10
Pennsylvania barn, with its distinctive cantilevered "forebay," in central Pennsylvania, in 1979. The ground level is for stabling livestock; the second level, entered at grade via an inclined "bank" on the uphill side, contains a threshing floor; and the upper lofts are for storing hay. Barns like these are the single most diagnostic feature of Pennsylvania German rural culture.

of the Midwest, it was the gigantic Pennsylvania model they imitated, although, with typical disdain for frills, they left the forebay behind.[23] The more modest English barns of New England were seldom imitated.

Urban forms

It was in cities, however, where the American landscape began to deviate most extremely from old European forms. The most radical departure of all was in Pennsylvania, where Penn laid out the city of Philadelphia in advance of settlement, using a grid plan that called for what were for the time wide streets laid out at right angles to each other—north–south streets given numbers, east–west streets named after trees (Fig. 5.11). The grid plan itself was nothing new; it had been used across the world since time immemorial—in ancient China, throughout the Roman Empire, and throughout Spanish America, to name but a few places. But it was Penn who started the idea in British America, and, once implemented, the system spread across the Appalachians all over the United States. From Ohio, everywhere westward, it is the rare town where streets do not cross each other at right angles, and any newcomer can seek out the intersection of Fourth Avenue and Maple

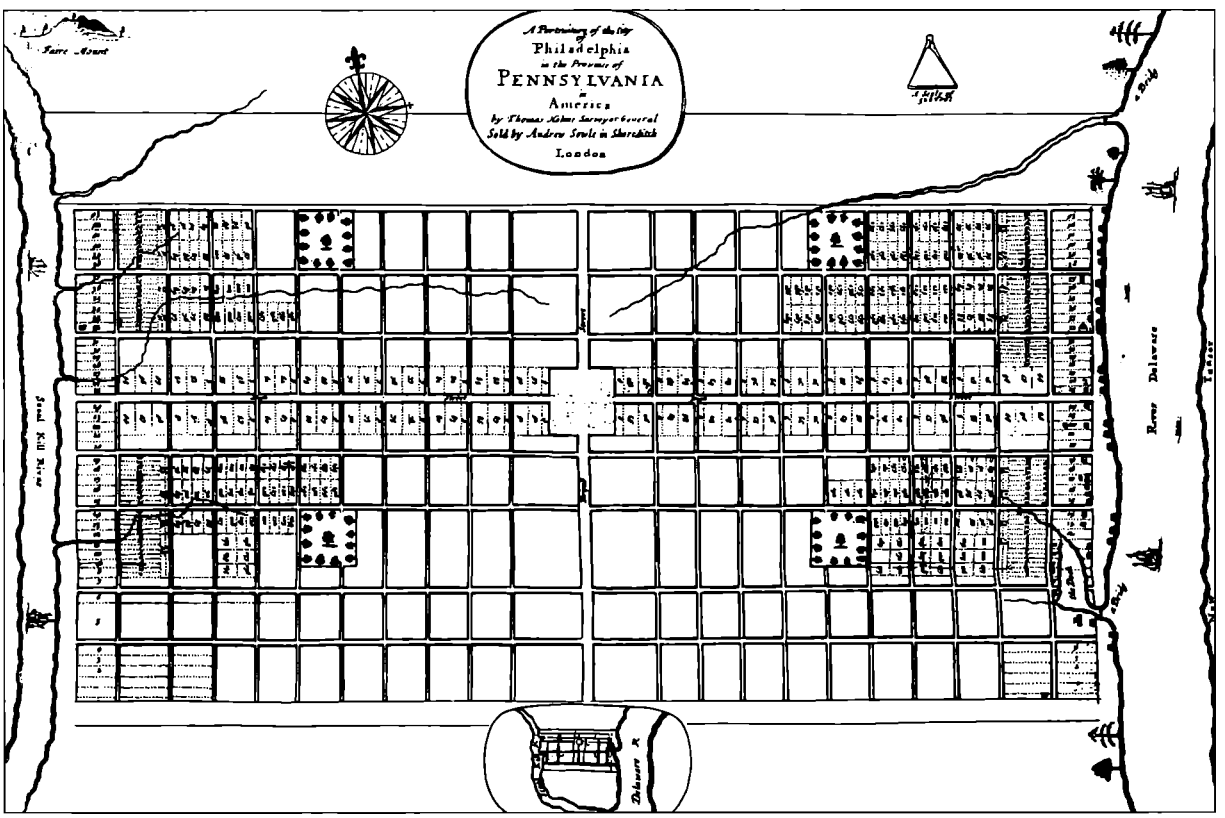

Figure 5.11
Plan of Philadelphia, 1682. Penn of course did not invent the grid plan, but Philadelphia's success was largely responsible for the later adoption of the grid by town planners all over the United States.

Street in the certain knowledge that it will be there—although in many towns (including the nation's capital), even tree names seemed unduly idiosyncratic, and cross-streets were designated anonymously by letters of the alphabet: "A" Avenue, "B" Avenue, and so on. Whatever the names or numbers, a walk "around the block" in Columbus, Ohio, is not substantially different in length or shape from one in Oklahoma City or Sacramento.

There has been endless speculation about the reasons why Penn's Philadelphia grid plan was so enthusiastically adopted by people who were laying out towns for the new American republic. Some have suggested that Americans liked the plan because it was democratic, but that idea does not stand up under scrutiny—despite the practice of designating streets by names and numbers instead of naming them after military heroes. There was nothing in the plan to prevent rich people from buying up big blocks of land, nor were those blocks democratically uniform in slope or drainage. (More than a few unwary buyers were sold city blocks that turned out to be swampland or, even worse, located completely under water in the middle of a river or bay.) But the grid plan had several important virtues in an expanding entrepreneurial republic. Most important, perhaps, it was flexible, with plenty of room for variety within and between the presumably anonymous blocks.[24] There was plenty of room for planning, and it was not uncommon for those plans to go awry. Penn himself had expected that his big Philadelphia blocks would permit farmers to live in town and plant large gardens around capacious houses, each block a kind of mini-farm which would in combination produce a park-like "greene towne." But land in Philadelphia soon became too valuable to fritter away on mere gardens, and land speculators divided the rectangles into narrow slices, and sold them to other speculators who promptly chopped down the trees to make room for row-houses. And in Washington, D.C., when Major L'Enfant planned the street pattern for the new capital city (a grid overlain by circles and spokes), he had expected the central business district to grow eastward toward the Anacostia River. Thus, the national capitol was built with its formal face in that direction. In fact, things turned out exactly the opposite. The Anacostia bottoms became a noisome industrial slum, while commercial and ceremonial Washington expanded toward the Potomac and Georgetown to the west. One curious result of L'Enfant's mistake is that for two centuries presidential inaugurations have taken place on the "wrong" side of the building. No matter. If mistakes were made, the grid would accommodate them.

Most alluring of all, perhaps, the grid made it very easy to lay out new towns in advance of settlement, and that was a huge virtue in a booming country where population was pressing rapidly into new and townless territories. The grid also made it easy to describe rectangular parcels of land on a map, so that speculators could buy and sell those parcels sight unseen. At the same time, its mathematical regularity greatly reduced

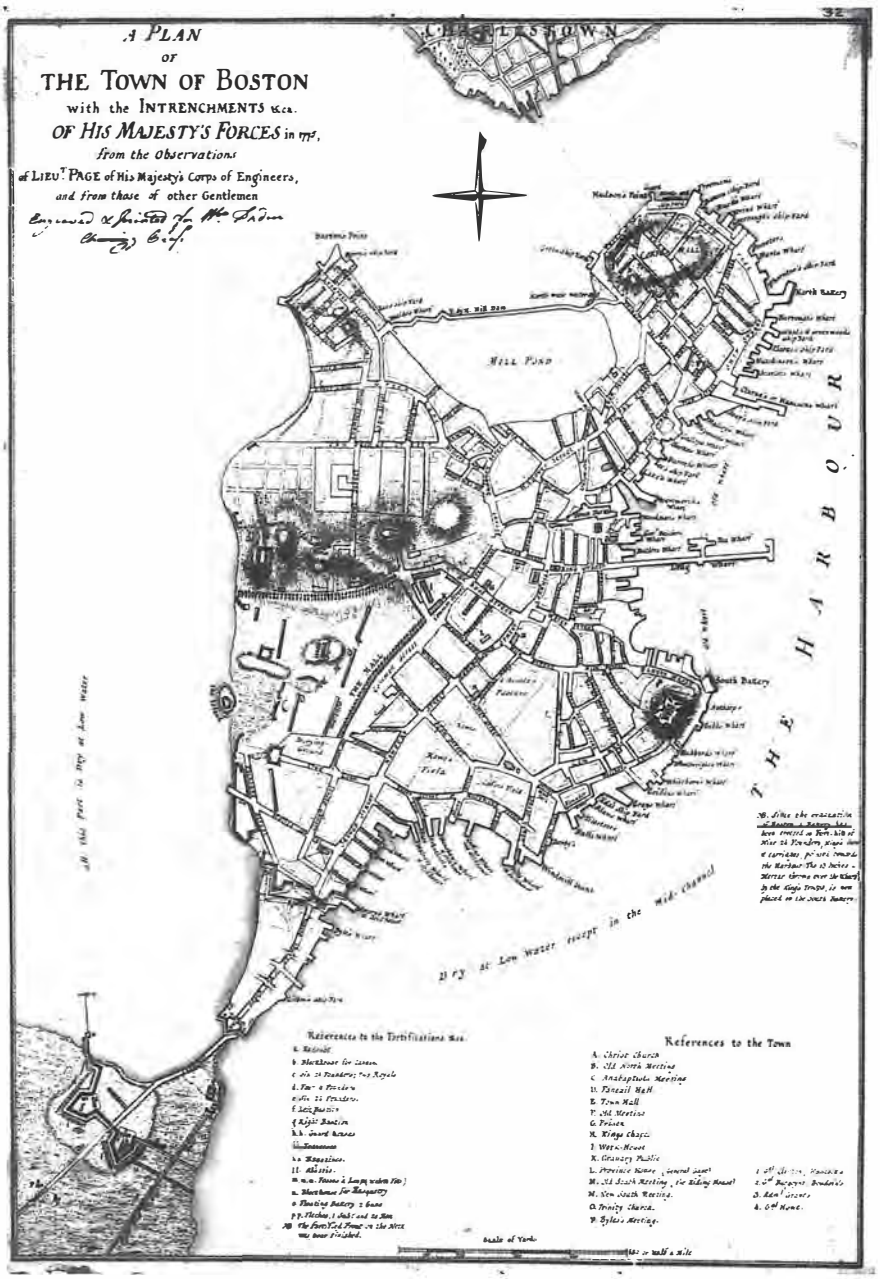

Figure 5.12
Street map of Boston, 1776. The streets of New England cities and villages were laid out *ad hoc*, as they had been laid out for millennia in the Old World. To Americans, accustomed to grid plans that imitated Philadelphia, Boston still looks rather foreign.

the room for surveyors' errors and consequent legal disputes over the location of boundaries. All in all, the urban grid plan was a perfect godsend for real-estate speculators, not only in Philadelphia but in all of the American towns, real and imaginary, that were strewn across the land to become new Philadelphias.

The grid was occasionally tried out in New England cities, but the effort was half-hearted. The core of New Haven, Connecticut, for example, was laid out in a grid, but New Haven is an exception. Most New

Americanizing English landscape habits

England cities grew in the old-fashioned European way, with main streets following old paths, and new streets and alleys added in haphazard bits and pieces as the need arose. The street plan of Boston is typical—a tangled skein of crooked streets that looks more European than American (Fig. 5.12). And, when those crooked streets are lined with red-brick Georgian row-houses, as on Beacon Hill in Boston, the effect is very British indeed (Fig. 5.13).

Despite the unplanned street pattern of many New England cities and villages, the geographical arrangement of *towns* was very much a planned affair—and that planning reflects the way that Yankees thought about themselves and about their communities. The New England town was conceived not as a geographical thing, as most Americans think of towns, but as a religious and civic community of people. When set down in a particular geographical place, a town's natural territory turned out to be a bounded chunk of land that was large enough to support a church and its congregation, but small enough to permit all its inhabitants to attend services at the same church on a regular basis.[25]

The geographical result was predictable. New England was divided into a mosaic of politically bounded "towns," 40 or 50 square miles in area.[26] Near the center was a church, spaced 5–10 miles from its nearest neighbor. More often than not, villages grew up around the church, first by the building of a tavern or general store, and subsequently other commercial buildings and, usually, a town(ship) hall.[27]

The New England village center was not designed as a marketplace, although commerce usually tended to accumulate there. Visually, its most conspicuous feature was its open "green" of common land, fringed

Figure 5.13
Early 19th-century row-houses, Boston, circa 1975. America's political revolution may have begun in Boston, but there is nothing revolutionary about the architectural ideas behind this staid English Georgian street scene on Beacon Hill. Only a short distance inland, however, New Englanders began building very different kinds of town.

by a church or two, a town hall, and perhaps a grange or fraternal building—mostly demurely classical in design, and, of course, painted white. This assemblage of white buildings around a village green has become a powerful image for many Americans, the quintessence of Yankee New England, the visual symbol of small-town simplicity and virtue.[28] One can debate whether that is true or not, but the New England village was clearly a very different sort of thing than the version that developed in Pennsylvania, where the center of town was a busy intersection or market square, suitably laid out at right angles, with shops crowding to be near the center. Today, many Americans view New England villages through a haze of nostalgic imagery, and see them as quaint vestiges of a bygone age. In one respect, they are quite correct. West of the Appalachians, when westward-moving Americans got down to the serious business of creating towns, there was no room for greens and churches in the middle of town. In most parts of the American west, the Pennsylvania model held sway. As in Pennsylvania, the business of an American town was business—only incidentally the creation of social community.

It is ironic today that the tight-packed Pennsylvania model of the American town, originally thought to be so practical and businesslike, has been routinely and unsentimentally abandoned by the practical businessmen for whom it was designed. It worked very well as a commercial center during the 19th century, when people and goods were delivered to town at a central railroad station, and proximity to the station was a requisite for prosperity. But that was before the advent of the automobile. Ironically, it was commercial success that was the undoing of that businesslike town. Commerce causes traffic jams, anathema to red-blooded American motorists. To avoid that congestion in the early part of the 20th century, bypasses were built around town centers, and the traffic that supported downtown prosperity was siphoned off elsewhere. More recently, when suburban shopping centers were built to suit the convenience of motorists, Pennsylvania-model downtown commercial districts began to decay all over the country.[29] It is additional irony that a good many New England villages, so long believed to be quaintly obsolete, have recently discovered that quaintness is a marketable commodity. In picturesque village after picturesque village along the northern fringes of megalopolis, prosperity has arrived, brought first by tourists, then by affluent refugees from urban congestion—stockbrokers and three-day-a-week corporate executives—who were hotly pursued by purveyors of expensive real estate, expensive foreign automobiles, and exotic upscale groceries.[30] In sum, both the Pennsylvania town and the New England village have, to put it kindly, taken on new functions, while at the same time they have abandoned the original purpose for which they were so carefully designed. It is doubtful whether New England Puritans had boutiques and stockbrokers in mind for their shining cities upon a hill. And it is equally

doubtful that William Penn would have predicted the decline in the commercial fortunes of his "greene towne."

The cultural–geographical baggage goes west

So it was that when Americans crossed the Appalachians into the interior of the continent, they carried two geographical traditions with them—and borrowed from both in highly selective ways. The New England tradition and the Pennsylvania tradition, however, were geographically separated from each other, not only along the eastern seaboard, but west of the mountains as well. The reason had to do with topography and transportation routes, for Pennsylvanians went west by a very different set of routes than did the New Englanders, and those routes led respectively in quite different directions. New England's avenue to the West was a narrow lowland that followed the Mohawk River between the mountain bulwarks of the Adirondacks and the Catskills and led to the great open plains along the shores of the lower Great Lakes—thence, as we have seen, into the northern part of the old Northwest Territory: northern Ohio, Indiana, and Illinois, and the better parts of southern Michigan, and Wisconsin. Pennsylvanians, by contrast, had a wider range of choices. They could head west, by way of what became the National Road, via Wheeling, Columbus, Indianapolis, and on to St. Louis. Alternatively, they could move down the Ohio River from Pittsburgh, toward the Kentucky Bluegrass and the middle Mississippi Valley. Or they could avoid the mountains altogether, and drift southwestward down the Shenandoah Valley into western Virginia, North Carolina, and the whole upland South. The New England stream, in short, was narrow and confined until it reached the lower Lakes. The Pennsylvania stream spread out in a great fan that eventually covered much of the interior. But both streams retained a kind of cultural purity as they poured westward—and they remained separate for a considerable distance west of the mountains.[31] Any traveler today can drive on little back roads across the state of Ohio, north from the Ohio River to Lake Erie, and see the Pennsylvanian landscape of the south abruptly change to the landscape of New England in the north. The marks of that old migration stream are still there.[32]

But the migrants were selective about the geographical ideas they carried with them, and the ordinary landscapes of middle America include elements from both New England and Pennsylvania, both in turn much altered from ancient English models. The mixture is eclectic. The interchangeable American grid-pattern town is pure Pennsylvania, of course, and one can argue that the widespread use of the Philadelphia city plan paved the way for acceptance of Jefferson's idea of a gridded land-division system for the rural lands of the whole Northwest Territory. But even that system is a combination of the two regional

Figure 5.14
In residential areas all over the United States, houses are set on lots apart from one another and back from the street, following a New England practice three centuries old. This street scene in St. Paul, Minnesota, is prototypical for thousands of American towns. When given a choice, trans-Appalachian Americans have overwhelmingly rejected the tight-packed row-house tradition that dominates many east coast cities.

traditions. The basic unit of land division is a square township, 6 miles on a side, and rigidly oriented to the cardinal directions of the compass. The rectangular geometry springs from Jeffersonian rationalism, but the 6-mile dimensions are those of the ancestral New England town. Towns, too, are mixtures. The middle of Midwestern and Western towns was consigned to business, and that was the Pennsylvania way of doing things. But the residential areas, with their widely spaced houses, big yards, and tree-shaded streets, are quintessentially New England (Fig. 5.14). Farmsteads are a mix: houses are wood, as in New England, while the enormous barns are inspired by models in Pennsylvania.

Large parts of this old landscape seem obsolete today, overlaid by new technologies, new people, and new canons of taste.[33] But despite all efforts, old patterns which were etched in the landscape are not easily erased, even though Americans have a seemingly infinite capacity to redesign and find new uses for things that have apparently outlived their usefulness—the New England village being an obvious case in point. Meantime, a huge part of the United States continues to bear the imprint of geographical ideas that were imported from England three centuries and more ago, and subsequently reworked by colonial Americans in a small corner of the Northeast. That imprint is still visible today, and its patterns continue to shape our lives.

Chapter six

Transforming the Southern plantation

CHARLES S. AIKEN

THE CONCEPT of modern plantation agriculture originated in Western Europe during the 11th and 12th centuries to mass produce crops in tropical and subtropical regions. Plantation agriculture became one of the major components of mercantilism, the first phase in the development of modern Western economies. During the age of exploration, the plantation system spread to the Western Hemisphere. One reason European nations established colonies was that political control of tropical and subtropical areas permitted orderly safe mass production on plantations. That plantation agriculture was established in the area that became the southern realm of the United States was the consequence of its extension into the section of the North American continent with a subtropical climate.[1]

A plantation is distinguished by several characteristics.[2] First, a plantation is capital-intensive. It is not a family farm. A large amount of land is needed to achieve economies of scale. The actual number of hectares, or acres, varies with the type of crop. Traditional Southern plantations ranged from several hundred to several thousand acres. Plantations have large resident labor forces. Studies of Southern plantations during the first half of the 20th century placed the minimum number of workers at five, assuming that each of the five was the head of a household. The traditional labor force was a family one, employing children in addition to adults. A plantation also specializes in one or two crops. Specialization allows the laborers to become highly skilled and efficient in the tasks associated with a crop. Proximity to fields saves time and increases efficiency. Also, the labor force is separate from management. A plantation is supervised by the owner or a manager. A large input of power (human, animal, mechanical) is essential. Lastly, a plantation has a nucleated settlement pattern. Buildings, including the ones for management and the power supply, the one for processing the crop, and the dwellings for laborers, are clustered. On large plantations buildings form a village or a town. Two external factors have been fundamental to plantation agriculture since its conception: government involvement and evolutionary innovation.

Establishment of plantation agriculture in continental North America

The English word "plantation," from the Latin *plantatio* (to plant), originally was used in the 16th century as a term for the planting of a new settlement or colony. The first English colony in continental North America was Virginia Plantation and the second, Massachusetts Plantation. The meaning of "plantation" in continental North America gradually changed to mean a planted field or a farm of any size. By the mid-19th century "plantation" was increasingly employed to mean a large farm, but a specific definition did not exist.

Until the development of railroads, plantation agriculture in the American South was confined to coastal areas and areas near navigable rivers. Plantations initially evolved in three coastal areas from the 17th century into the 19th: the Virginia–Maryland Tidewater, the South Carolina–Georgia Sea Island region, and the southern part of the alluvial Mississippi Valley in Louisiana (Fig. 6.1). Each area emphasized a different crop: tobacco in Virginia and Maryland, rice in South Carolina and Georgia, and sugar cane in Louisiana.

The British settlers of Jamestown, Virginia, arrived in 1607. They found no gold or minerals; farming was their only way to survive and

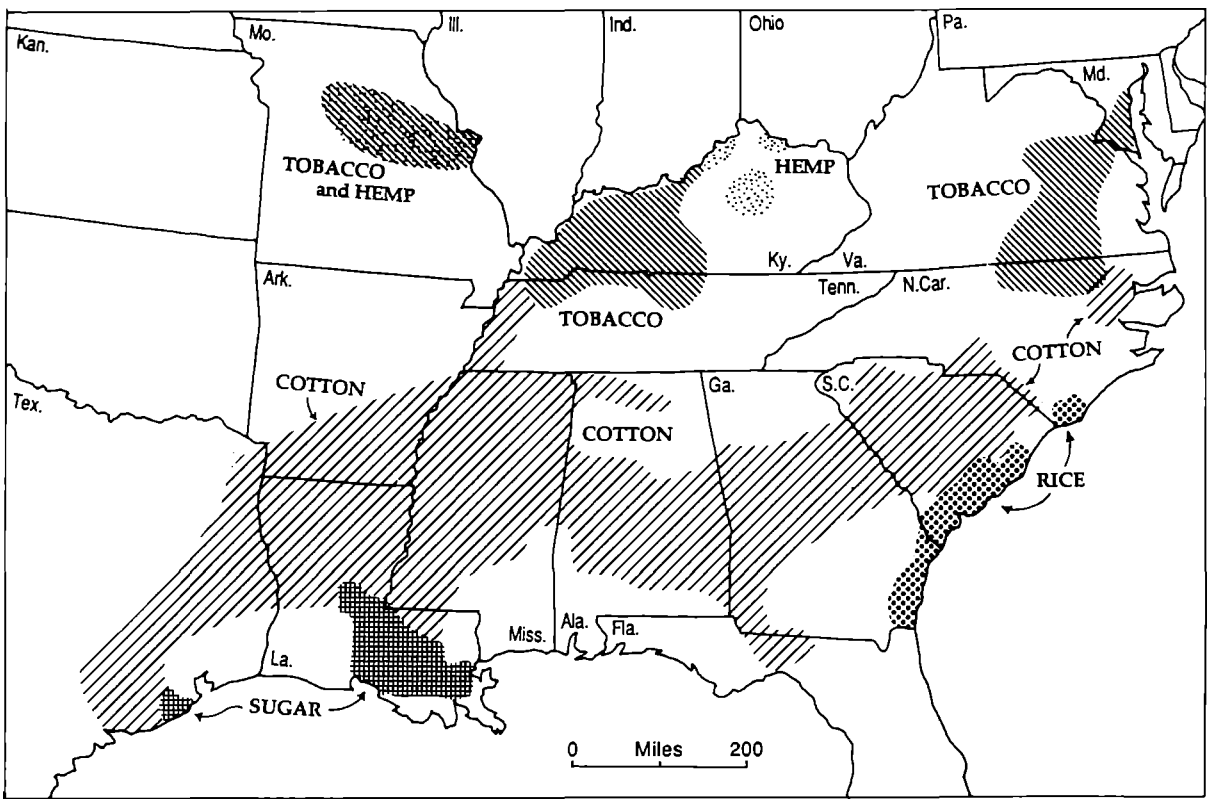

Figure 6.1 Southern agricultural specialization in 1860.

eventually to prosper economically. By 1607 a demand for tobacco, which was sniffed, chewed, and smoked, was already established in Western Europe, and addiction to the weed was spreading to other parts of the world. Tobacco became the first great commercial crop of North America and was so important by the mid-1770s that it helped to finance the Revolutionary War, which created the United States. John Rolfe, who arrived at Jamestown in 1610, quickly realized that the local tobacco of the Pawhatan Indians was inferior to that grown by the Spanish in the Caribbean. Rolfe obtained seeds of the Spanish tobacco, and the Jamestown settlers began growing it. Annual exports from Jamestown rose quickly. Rolfe's innovation was backed by the Virginia government, which established quality control to insure and expand demand for the colony's tobacco.[3] Before the Puritans arrived at Plymouth, Massachusetts, in 1620, the foundation for prosperous commercial agriculture had been established in Virginia. Additional capital, larger farms, and indentured servants for labor were the beginning of plantations in what became the prosperous colony of Virginia.

The second major area of British settlement in the American South was at Charles Town in what became the colony of South Carolina. A number of the early settlers were from Barbados and other islands in the Caribbean. The best lands on Caribbean islands had been quickly claimed. With no room to expand agriculture, the descendants of the early settlers had to seek land elsewhere. The subtropical part of the North American continent, especially Carolina, was the destination for many. Some of the white settlers were members of families that owned African slaves and brought black slaves with them. Slaves brought to the Caribbean and continental North America from West Africa and Madagascar had expertise in rice culture, for the crop was grown along the coast in western Africa and on the islands. In seeking commercial crops to grow in Carolina, settlers experimented with indigo, tea, silk, rice, and cotton. Rice proved to be the most profitable. During the first half of the 18th century, a prosperous plantation rice region evolved along the Sea Island coast of South Carolina and spread into coastal Georgia. An average of 3,550 tons of rice was exported annually in the 1720s, rising to more than 15,400 tons in the 1740s.[4]

Because of malaria, isolation, and the unpleasantness of the coastal marshes of the Sea Island region, many planters preferred to live in Charleston, Georgetown, Savannah and other towns. The Sea Island region with its urban planters differed considerably from other Southern plantation regions and resembled the Caribbean more than any other. The planter-merchants of the Sea Island region were heads of some of the wealthiest families in colonial America and the United States until the post-Civil War era.

The third coastal plantation region was along the lower Mississippi River and its distributaries south of Baton Rouge where sugar cane became the major commercial crop. Introduced from France's sugar

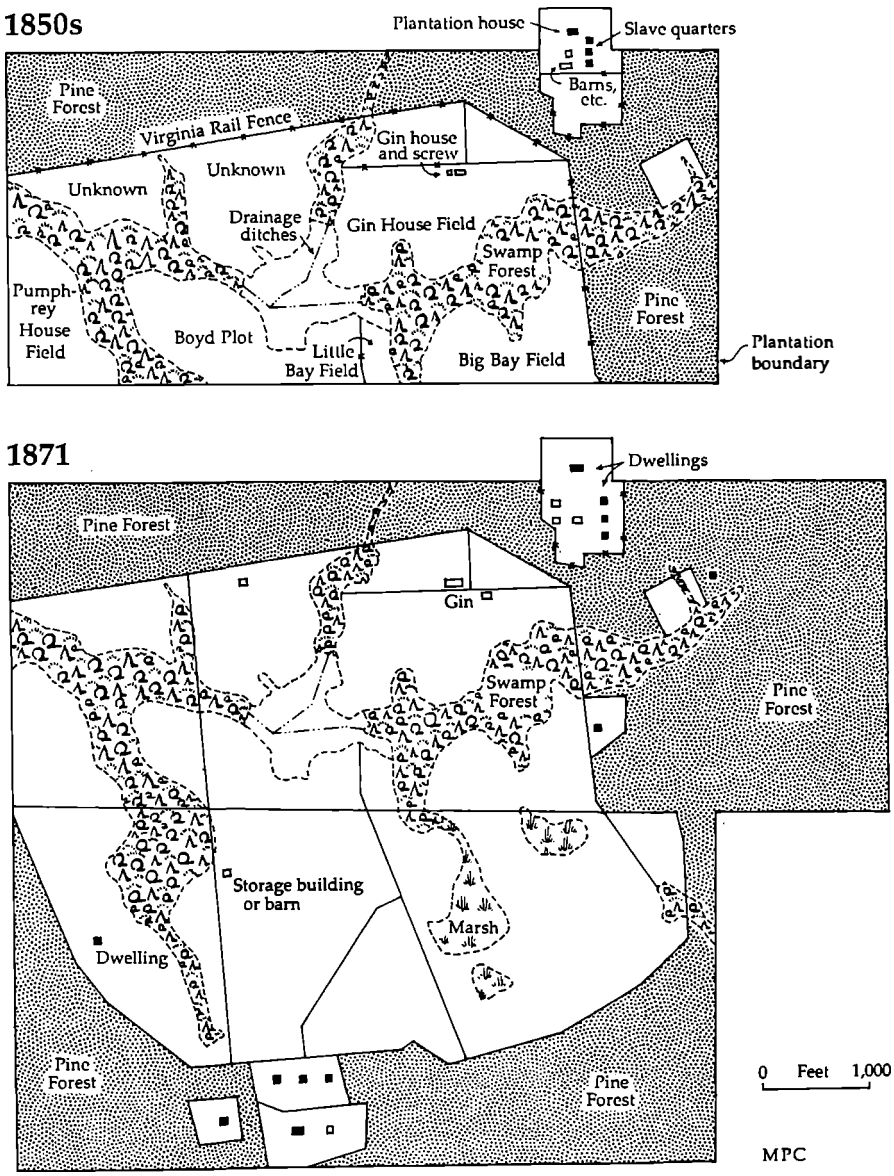

Figure 6.2
Birdsong Plantation in Taylor County, Georgia, in the 1850s. Reconstructed from the diaries of the owner, William J. Dickey.

islands in the Caribbean, the first sugar cane was planted by Jesuits in the mid-1700s in what is now downtown New Orleans. A tropical crop, sugar cane is in a marginal climatic situation in southern Louisiana. In the Caribbean sugar cane is a perennial, and two or three or more cuttings can be obtained from one planting. However, in Louisiana the crop must be planted annually.

Both syrup and crystallized sugar are produced from sugar cane. Half a century passed before, in 1795, crystallization of cane syrup occurred in Louisiana, and commercial production of sugar began. By

1803, when France sold the Louisiana territory to the United States, the third early Southern plantation region was in its initial stages. Production increased from 4,833 tons of sugar in 1810 to 264,159 tons in 1861. Roads in southern Louisiana are expensive to construct because the area is only a few feet above sea level. Because water transportation was inexpensive, sugar cane plantations became clustered along rivers and bayous. Plantations were established by persons of both French and British descent, each type of plantation having its own distinctive spatial characteristics.[5]

Cotton, the crop that became the major plantation staple of the South, was a relatively late addition to commercial agriculture, becoming significant in the 1780s. Although there is a commonly held belief that lack of a machine to remove the seed from cotton delayed its commercial production until Eli Whitney invented the cotton gin, devices that remove seed from cotton date from antiquity and were known to the early Spanish, English, and French settlers of southern continental North America.[6] The original cotton gin, known today as a "roller gin," evolved from the *churka*, which emerged in antiquity in the Indian subcontinent. A small crude roller gin consists of a pair of wooden rollers mounted on a wooden frame and turned with hand cranks. The device spread from India to the Mediterranean area and then to the Caribbean, where commercial cotton production was begun by European colonial powers.[7]

World production of commercial cotton was rather modest until the latter part of the 18th century, when the Industrial Revolution began. As the plantation system was critical in the rise of mercantilism, it also was important to the Industrial Revolution. With the construction of factories, population flowed from rural areas of Western Europe and the United States into towns and cities. The demand for food and for agricultural industrial materials, including fibers, greatly increased. Because the technology of textile manufacturing was among that which led the way in automation and the factory system, the demand for wool, linen, and cotton soared. Cotton, which had been a subsistence crop in colonial America, became a commercial crop that paid handsome monetary rewards in the new United States.[8]

Two types of cotton, called "black seed" and "green seed," were known to the early settlers in North America. Black seed cotton was grown commercially in the Caribbean and was introduced into the subtropical coast of continental North America by the Spanish, French, and British. On the continent, the tropical cotton was in a marginal climatic situation and could not be grown inland from the coast or north of approximately the southern border of Virginia. In the 1780s, rice planters in the Sea Island region began growing black seed cotton commercially. The seeds, which did not adhere tightly to the fibers, were removed using large animal-powered roller gins. In the 1780s, the Piedmont was the frontier in South Carolina and Georgia. Frontier farmers wished to

grow cotton, but the black seed variety would not mature. Green seed cotton, a subtropical variety, grew well on the Piedmont, but the seeds clung tightly to the fibers and the roller gin would not remove them.[9] By chance, into this dilemma arrived an unknown Connecticut schoolteacher and tinkerer, Eli Whitney.

After graduating from Yale College in 1792, Whitney was hired as tutor for a South Carolina planter's children. Upon seeing cotton, Whitney quickly devised a new type of machine that easily ginned green seed. Whitney's gin was quickly improved by Hodgen Holmes, a blacksmith, who substituted circular iron saws for Whitney's wire teeth. Although Whitney was granted a patent in 1794, the Holmes modification was a major improvement. The Whitney gin became known as the "saw gin."[10]

The Whitney principle of ginning opened the interior of the South to cotton production and helped to make cotton the major plantation crop. By 1860 cotton production had spread across the South into eastern Texas (Fig. 6.1). However, the saw gin was never adopted in the Sea Island cotton region and was used only sparingly in the Suwannee Basin of Florida, which became a long-staple cotton region. The saw gin shortened the length of fibers by cutting them.

The "Old South" plantation

Labor was one of the most significant problems from the beginning of plantation agriculture. Although many scholars of plantation agriculture before the American Civil War emphasize African slavery to the almost total exclusion of other topics, whites initially had significant roles as plantation laborers. Europeans quickly found that the natives of the Western Hemisphere, Indians, resisted slavery. Also, because of war and lack of immunity to tuberculosis, smallpox, and other diseases, a significant decline occurred in the native population of the Western Hemisphere shortly after contact with Europeans. Because labor shortage was acute, most early Southern planters initially turned to a European source, white indentured servants. Whites were sold into servitude for a specific number of years by courts to serve prison sentences or to pay debts. Some whites sold themselves into servitude to pay for ship passage to America, to learn a trade, or to earn money to obtain a start in the New World. During the colonial period, between 300,000 and 400,000 Europeans migrated to the Western Hemisphere as indentured servants.[11]

White laborers dominated 17th-century plantation agriculture in continental North America. In the 1680s, Virginia had 15,000 white indentured servants compared to only 3,000 blacks. By 1700, the demand for laborers exceeded the number of white indentured servants available. Throughout the Atlantic colonies, affluent white families

increasingly imported black African slaves. Between 1690 and 1720, Virginia changed from a plantation economy primarily employing white bond servants to one using black slaves. African slavery began in continental North America in August 1619 when the captain of a Dutch ship docked in Chesapeake Bay and sold "twenty and odd Negroes" near Jamestown as bond servants. By 1782, there were 270,762 blacks in Virginia, of whom only 3,000 were free.[12] Contrary to a misconception that most of the slaves transported to continental North America were from the Caribbean, the majority came directly from Africa. However, British and French continental North America and the United States were not the major destinations for African slaves delivered to the Western Hemisphere. Approximately 500,000 were transported to continental North America, compared to 4,000,000 delivered to Brazil, 2,500,000 to the Spanish Empire (including Cuba), and 2,000,000 to the British West Indies.[13]

As the plantation economy of the pre-Civil War South increased in size and geographical extent, distinctions grew in Southern society between slaveholders and non-slaveholders. The slave states extended from Virginia to Texas and included Kentucky, Missouri, and the District of Columbia. In 1860, only approximately one-fourth of white families in the slave states owned human chattel. A few white families in the North also owned slave plantations in the South. Quite a few plantations were owned by absentee landlords. In 1860, in some counties in the hearts of the plantation regions, absenteeism was more than 50 percent.[14] Southern Indians and free blacks also owned slaves. In 1860, 8,376 African slaves comprised 14 percent of the population in Indian Territory.[15] As early as 1655, free blacks began to purchase other blacks. In 1830, approximately 10 percent of the 35,000–40,000 free black families owned slaves. Prior to the Civil War, both the number of Negro slaveholders and the number of slaves owned by them declined, in part because the most affluent free blacks left the South.[16]

Most of the slaves were in the plantation crescent, which arched southward and then westward from Maryland and Virginia into eastern Texas. The majority of Southern slaveholders owned only one or two blacks, usually as household servants. Historians frequently define "planter" as a person who owned 20 or more slaves. Allowing for young children, 20 slaves would have provided approximately 10–12 persons who were old enough to work in fields, at handcrafts, and as servants. In 1860, only 37,662 of the 347,525 slaveholders (11 percent) owned 20 or more persons. Approximately 60 percent of the 3,953,742 slaves belonged to this small group.[17] All of the slaves were not rural, and all were not engaged in agriculture. Sizable slave populations were in Charleston, Savannah, New Orleans, and certain other cities and towns.

Ownership of 20–50 slaves indicated that a family was affluent but hardly incredibly wealthy. At the pinnacle of plantation economy and

society were the large slaveholders, defined as persons who owned 50 or more slaves. Approximately one-third of the South's slaves in 1860 belonged to this small group, who controlled local and state politics and economies. Despite a theme of love of land found in Margaret Mitchell's *Gone with the wind*, Stark Young's *Heaven trees*, and other romantic novels about the South, most planters viewed plantations as businesses. Proprietorship of one or more slave plantations was not the only pursuit of most large planters. They frequently owned mercantile and other businesses and had commercial, social, and political connections beyond the South and the United States.

Hardly a homogeneous lot, large slaveholders both led efforts to modernize a stagnating Southern agrarian economy and resisted economic innovations. The South Carolina Railroad, which initially ran from Charleston to Hamburg across the Savannah River from Augusta, Georgia, was enthusiastically chartered and supported financially by a group of Charleston's merchants and planters. However, another group of Charleston's citizens responded to the innovation in transportation by banning steam engines within the city limits. The railroad's first steam locomotive was intentionally named *The Best Friend of Charleston*.

Generally, planters supported improvements in transportation, for they facilitated the marketing of crops and lowered the cost of imported items. A number of planters believed in a democratic family and the importance of education, including property rights for and education of women. By the 1830s, private educational institutes, not just for boys, but also for girls, were among the first organizations created in new towns on the Southern plantation frontier. Some planters went so far as supporting coeducation of boys and girls.

Figure 6.3
Liberty Hall, home of Alexander Hamilton Stephens, vice-president of the Confederate States of America (1861–1865). Located at Crawfordville, Georgia, which is near Philomath, the site of the Barrow family's Sylls Fork Plantation, Liberty Hall is typical of a plantation house type constructed across the Piedmont plantation region before the Civil War. The house and its grounds are now a Georgia State Park.

Figure 6.4
One of the largest houses in historic Charleston, South Carolina. This three-story dwelling with an attic and a basement was constructed about 1830 and belonged to a merchant and owner of one of the largest rice plantations. To support the big house, seven smaller rental houses, known as "the seven days of the week," were constructed in a row across the street. Two of the seven survive.

The plantations of the Old South conformed to the model established by Europeans several centuries earlier (Fig. 6.2). On most plantations the headquarters was the owner's house, or one occupied by an overseer. Owners' houses ranged from simple double-pen log dogtrots to large four-over-four frame or brick dwellings with Greek-revival porticos (Fig. 6.3). Houses of planters who lived in cities and towns were more varied and pretentious, often designed by architects (Fig. 6.4). No matter what the size, the headquarters house was often called "the big house," a term that persisted into the 20th century. Other buildings were clustered near the big house. Slaves were housed in one- and two-room cabins built of logs or planks (Fig. 6.5). Throughout the books of Frederick Law Olmsted, who wrote detailed accounts of the Southern plantation landscape, there are references to "negro settlement," "quarters," and "range of negro houses." Also, in the narratives of former slaves collected by the Federal Writers Project during the Great Depression are references to the "row of houses," "quarter," and "village."[18] In towns and cities, planters quartered their house servants in buildings behind their houses (Fig. 6.6).

In addition to the slave quarters, the buildings surrounding the big house on Old South plantations included a barn for horses, mules, and oxen. Oxen were favored in the Sea Island rice region, for, wearing leather boots, they had the strength to pull plows through muddy fields. Across the other plantation regions mules were the preferred work stock. Another vital building was the one in which the plantation crop was processed for market (Fig. 6.7). Depending on the crop, a rice mill, tobacco barn, or gin house was usually close but not always adjacent to other buildings. The settlement complex also included smokehouses

Figure 6.5
Restored slave quarters on Greenwood Plantation in St. James Parish, Louisiana. Extant slave quarters are more common in the sugar cane region than in the cotton and tobacco regions because tenant farming encouraged former slaves to abandon the quarters.

Figure 6.6
The slave quarters behind the Charleston house in Figure 6.4. The kitchen and laundry rooms are on the ground floor and rooms for slaves, who were domestic servants, are on the second floor. A similar building is across the enclosed courtyard and housed horses and carriages on the ground floor and slaves on the upper. Few examples of the quarters occupied by urban slaves survive.

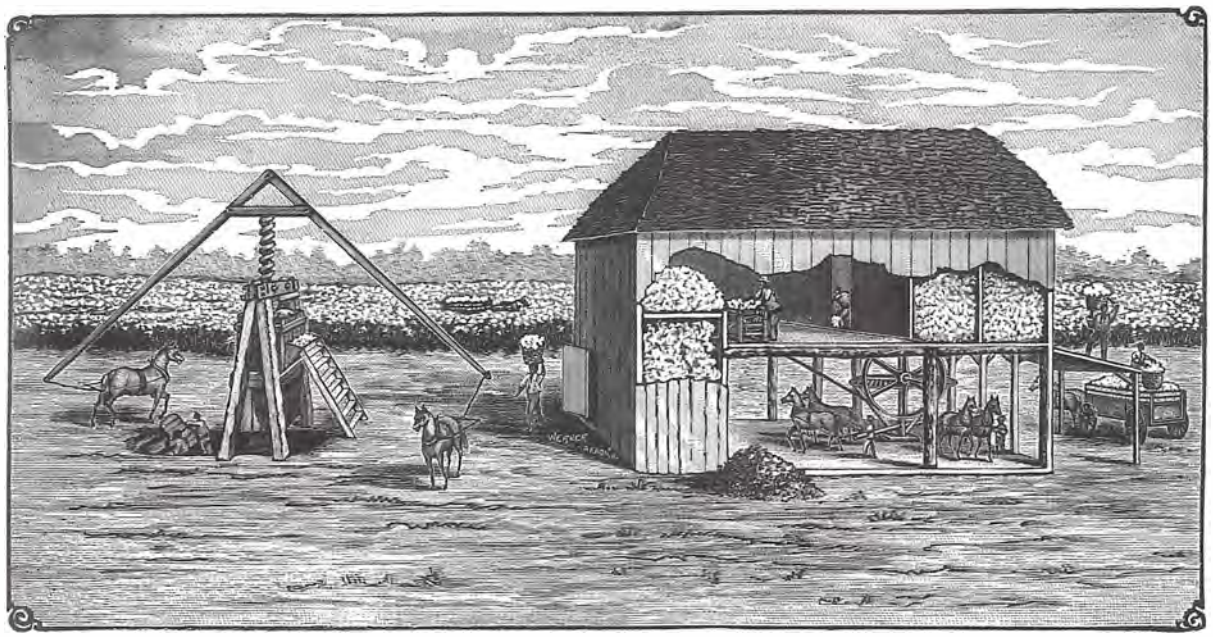

Figure 6.7
A pre-Civil War cotton gin. A planter bought a gin from one of several manufacturers and built a gin house for the machine. Mules beneath the building powered the gin. Seed cotton and ginned lint were moved by laborers using baskets. The lint was taken to an external wooden "buzzard wing" press and packed into 400-pound bales using mules to turn a down-packing ram.

for preserving pork and buildings for storing other foods. Additional structures housed carriages, wagons, plows, and other farm tools.

Except for house servants, blacksmiths, carpenters, and other slaves with specialized skills, slaves were worked in squads and gangs in the fields. A squad was a small group of slaves, often composed of extended families. A gang was a group of ten or more, over which was a driver. Gangs and squads usually worked according to the task system. A certain amount of work or a task was to be accomplished in a set period. A driver, who was the male or female slave in charge of a gang, set the pace, made certain everyone worked, and saw to it that the task was accomplished on time. Because watches and clocks were expensive, bells signaled the time on plantations into the 20th century. During summer months, the first bell, getting-up time, rang at 4:00 a.m. The second bell at 6:00 a.m. meant that everyone was to begin work. A third bell usually at 11:00 a.m. or noon (high sun time) signaled a break for food and rest. The fourth bell at 2:00 p.m. meant work was to begin again. The fifth bell at 6:00–7:00 p.m. signaled quitting time. A bell ringing at any other time, especially during the night, meant trouble on the plantation, which was often a building on fire. Slaves usually were furnished with a new pair of shoes and two sets of new clothing a year.

The "New South" plantation

Contrary to a popular belief, Abraham Lincoln's executive order of September 22, 1862, the Emancipation Proclamation, did not free the

nation's slaves on January 1, 1863. The proclamation only declared that, as of January 1, 1863, slaves were "forever free" in "any state or designated part of a state, the people whereof shall then be in rebellion against the United States."[19] The District of Columbia and areas of the South under Union control were not in rebellion, and the areas under the Confederate government paid no attention to an order from Lincoln. Ratification of the Thirteenth Amendment to the Constitution on December 6, 1865, abolished slavery in the United States.

With the exception of Gettysburg, the major battles and most of the Civil War were fought in the slave states. At the end of the conflict, the Southern plantation system, which had existed on the North American continent for more than 200 years, was in economic ruin and the entire order of a slave society had been overturned. Across large areas where the Union army had advanced, buildings were burned, fields abandoned, and livestock gone. Throughout the South Confederate scrip was worthless, and few United States greenbacks and gold and silver coins circulated. The banking system had collapsed, and business was at a standstill.[20] In the bloodiest American war, approximately 620,000 soldiers were killed, 260,000 Confederates and 360,000 Yankees. An estimated 50,000 Southern civilians also lost their lives as a result of the war.[21] A large percentage of Confederate soldiers who survived consisted of men disabled by war wounds, many having lost a leg or arm. Reconstruction, which lasted until approximately 1880, was political, not economic, reconstruction. The former slaves found themselves in a peculiar situation. Despite the widespread belief among the former slaves that plantations would be confiscated by the federal government and divided into small farms, which would be given to them, most Northern Congressmen and Senators did not support legislation that set a precedent for land reform in the United States. Also, most Northerners did not want anything to encourage migration of blacks to the North or the West. The only significant demand for black labor was in the plantation regions of the South, where planter families continued to own large tracts of land.

The 1880 United States Census includes a remarkable two-volume study of the revival of cotton production in the South. Under the direction of Eugene W. Hilgard, the founder of American soil science, the study includes innovative isopleth maps of cotton production, together with soil maps of the Southern states and reports on the labor systems that replaced slavery. David C. Barrow, Jr., was the correspondent for Clarke County, Georgia.[22] Barrow expanded his report into a more comprehensive article published in the April 1881 issue of *Scribner's Monthly*.[23] The Barrow family lived in Athens and owned four Georgia plantations: Bonar in Green County, Blowing Cave in Decatur, and Sylls Fork and the Pope or "Home Place" in Oglethorpe, which adjoins Clarke County.[24] David Barrow discussed the changes on the 2,365-acre Sylls Fork and illustrated the settlement changes with maps (Fig. 6.8).

Evolving the Southern plantation

As other planters, David Barrow, Sr., initially continued the practice of managing his plantations with overseers and attempted to employ former slaves using squad and gang systems. On Sylls Fork the labor force was divided into two squads, each under the control of a driver, now called a "foreman." The name "overseer" was changed to "supertender" [sic] by the blacks. The squad and gang systems did not produce satisfactory results. According to Barrow, the mules were "ill-treated," and the crops were not properly worked and divided in accordance with the contracts signed by the former slaves. By 1881, tenancy had replaced the gang and squad systems on the Barrow plantations.

Sylls Fork was divided into 25- to 30-acre tenant farms, which were rented to black heads of households under a signed contract. Mules and farm implements were sold to the tenants. The rent was 750 pounds of lint cotton per mule, which was approximately one-fourth of the crop. From Barrow's point of view the tenant system worked well. Each tenant was responsible for any damage to his or her farm, and the rent was paid promptly upon harvest.[25] In time, a tenant who supplied work

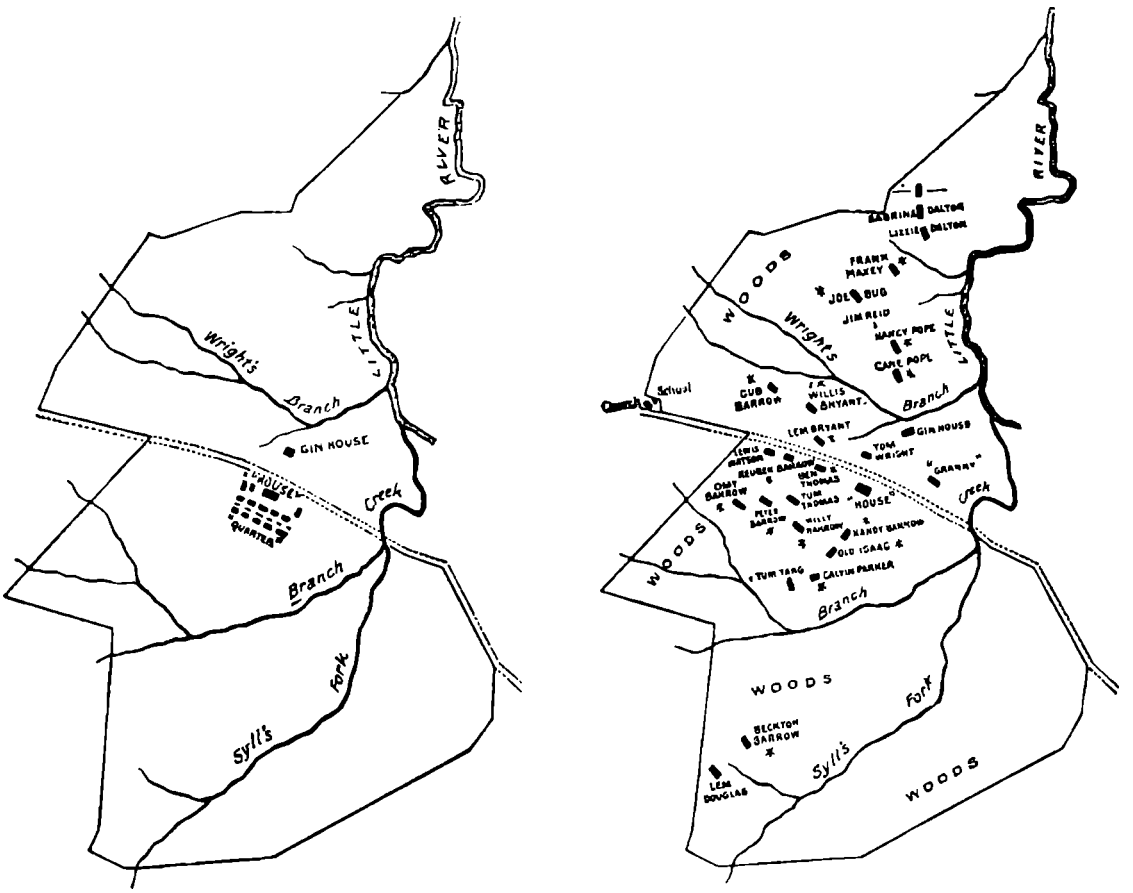

Figure 6.8
The Barrow family's Sylls Fork Plantation in Oglethorpe County, Georgia, in 1860 and 1881. The site of the plantation is on the Little River a mile from Philomath.

stock and implements and paid one-fourth of the crop was defined by the Bureau of the Census as a "share tenant."[26]

From the point of view of blacks, the tenant system was a profound break with slavery. They acquired capital in the form of mules and farm implements and were relatively free to make decisions of when and how they worked their farms, so long as they produced crops. Specific work times, paces, and tasks of slavery were gone. According to Barrow, it was "a point of honor" to pay their rent. Although they had not actually acquired ownership of land, tenancy gave former slaves the illusion of possessing their own farms. To further express their freedom, the tenants began to abandon dwellings in the slave village or quarters (Fig. 6.8). Barrow's interpretation of the settlement change was:

> When the hands worked together, it was desirable to have all of the houses in a central location, but after the division into farms, some of them had to walk more than a mile to reach work; then too, they began to "want more elbow-room," and so one by one, they moved their houses onto their farms [Fig. 6.9].[27]

For the former slaves abandonment of the slave quarters was much more than merely wanting more elbow room. The quarters were located near the house of the owner or overseer, and activities of blacks were under constant scrutiny. Though free, the former slaves were still

Figure 6.9
A tenant house on the Barrow family's Pope Plantation, known as the Home Place, in 1899. Houses on Sylls Fork Plantation were similar, except some had a small detached log kitchen.

trapped in the plantation system, and they had to find ways to express their freedom within it. In addition to tenancy, relocation of dwellings from the quarters to their farms was a spatial expression of freedom. There were two others. Between 1860 and 1881 a school and a church emerged on a small tract at the corner of Sylls Fork (Fig. 6.8). Under slavery it was illegal to teach slaves to read, write, and compute mathematically. Once they were free, a yearning for education, a desire that has never been lost, emerged among American blacks. The basic ability to read, write, and compute was a third expression of emancipation, and the one-room schoolhouse was the landscape symbol of that freedom.

Most planters considered it their duty to provide for the religious well-being of their slaves, and Christianity became the dominant faith. On large plantations religious services were planned by the owner or overseer, and the preacher usually was one of the slaves. Household servants and slaves on small plantations accompanied the planter and his family to church. Slaves sat in the balcony or at the back behind a rail. They also were buried in a section of the church or family cemetery, which usually was at the back. Upon freedom, the former slaves began to withdraw from the churches of planters and form their own congregations, which were independent or affiliated with denominations such as the African Methodist Episcopal Church (AME). The church organized on Sylls Fork is the independent Spring Hill Baptist Church. Although a few blacks never left the white churches, the congregations that they organized were a fourth expression of freedom within the plantation system.

Barrow observed that the amounts of cotton and subsistence crops raised annually by the tenants on Sylls Fork were only sufficient to place them in a marginal economic situation. Should the mule die, the tenant had to "work hard and live close the next year" in order to buy a new mule. Some tenants reminded "their landlord in pathetic terms that he is their old master" and asked to pay only half the rent.[28] From the precarious economic situation in which tenants lived emerged two institutions that permitted them to subsist from year to year: sharecropping and an annual "furnish" by the planter or a merchant.

A sharecropper, or cropper, did not own work stock and farm implements. A sharecropper had only his labor and that of his family. Because the planter supplied more to the production of a crop, the rent was one-half the crop. Many planters preferred sharecroppers to share tenants because they had more control, including close supervision of when and how they worked. From the end of the Civil War into the mid-1930s, not only were substantial numbers of blacks drawn into sharecropping, but more and more poor whites were pulled into the tenure system. When the number of tenant farmers in the South reached a peak in 1935, there were more whites than blacks.[29] The number of white sharecroppers was approximately the same as the number of blacks.

To sustain tenant farmers who usually exhausted their money and food supply from the previous crop by February or March, commissaries emerged on plantations and stores of furnish merchants in hamlets and towns. In the cotton plantation regions approximately one-fourth of plantations had commissaries; therefore, furnish merchants became the primary suppliers to tenants. Stores and commissaries stocked basic clothing, food staples, and a few luxury items including coffee, cheese, tobacco, and patent medicines. Planters and merchants secured their loans with liens on tenants' crops. The usual finance charge was 10 percent, which was easily computed and understood. Sylls Fork did not have a commissary. The hamlet of Philomath, which had furnish-merchant stores and homes of planters, was only a mile from Sylls Fork. The small towns of Woodville, Maxeys, and Crawfordville, which had large stores, were not far from Sylls Fork.[30]

Freedom of slaves brought another problem on cotton plantations, the loss of the capacity to gin the cotton crop. Originally, the term "cotton gin" referred to the machine that separates seed from lint. Today, the term means the integrated plant that processes cotton; the actual gin is now called a "gin stand." The type of gin on Sylls Fork Plantation in 1860 and 1881 consisted of a two-story gin house and an external down-packing "buzzard wing" press (Fig. 6.7). Machinery was propelled by mules with seed cotton and ginned lint conveyed in baskets by numerous workers; the method was labor-intensive and slow. Only four to six 400-pound bales of lint could be ginned a day. A slave labor force could be easily integrated into such a method of ginning, for cotton was picked on dry days and stored to be ginned during inclement weather.[31] Problems were encountered using free workers. Not only did the former slaves have to be paid, but they had to work on demand. James Spratlin, the overseer on Sylls Fork, encountered problems with ginning immediately after the Civil War. In July 1866 he wrote in his journal that rather than preparing the gin house for the coming harvest as ordered, the workers took the afternoon off to visit the Barrow's Pope "Home Place" Plantation.[32]

In the mid-1880s the labor problems were solved with the development of a steam-powered "ginning system" in which the fiber was moved by air, gravity, and belts from the time the seed cotton was suctioned from the wagon until the bale of lint was "tied-out" at the press (Fig. 6.10). A revolving double-box, up-packing press permitted continuous ginning. A ginning system with three to five 70-saw gin stands could process from 24 to more than 30 bales a day, each of 500 pounds.[33] Although a new cotton gin was not built on Sylls Fork, a large public gin at Philomath operated into the 1940s.

With the perfection of the ginning system, the revamped cotton plantation of the New South was complete. Headquarters, tenant house, mule barn, school, church, store, and cotton gin formed the reorganized landscape. With division into tenant farms and the dispersal of houses

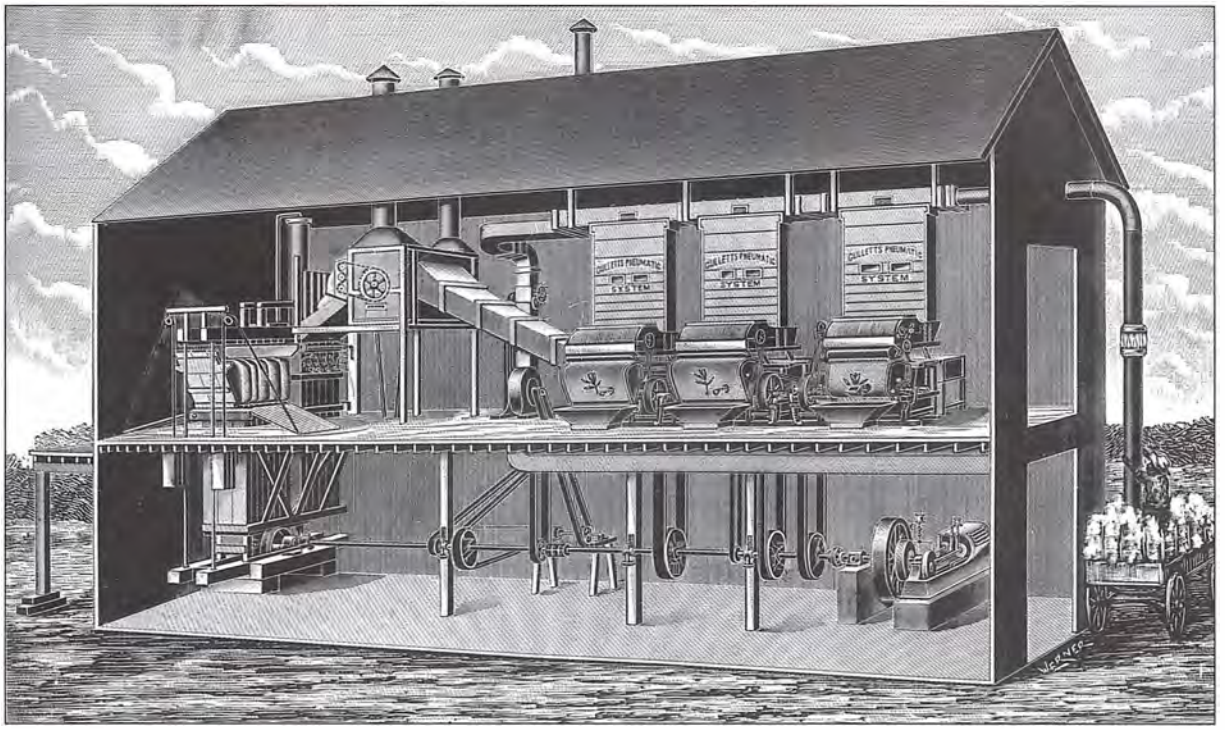

Figure 6.10
A steam-powered ginning system. With three gin stands and a revolving double-box press that permitted continuous ginning, a plant such as this one manufactured by Gullet could process four or five 500-pound bales of lint cotton an hour.

on Southern cotton and tobacco plantations, the spatial form departed from that of the world plantation. Despite Barrow's and other studies, plantations appeared to have disappeared from large areas of the South because the Bureau of the Census counted each tenant unit as a separate farm. Finally, in 1910 the Bureau of the Census conducted a special plantation census in 325 Southern counties, which substantiated the continued existence of plantations across large regions of the South.[34]

During the New South era, the embryonic railroad complex was expanded into an internet across the realm and integrated into the nation's rail system. Existing towns grew and new ones were created. Crossroad hamlets with furnish-merchant stores and cotton gins multiplied. In the cotton regions a belted network focused on gins was so well organized that it seemed simplistic and was employed by Lösch at the inception of his classic study, *The economics of location*.[35] The apogee of the New South plantation was about 1910. From 1910 into the early 1940s a significant number of technical and academic studies, fictional stories and novels, and two censuses of plantations captured the scientific and social details of the New South plantation.

Toward the modern plantation

Although New South-era plantations could be found into the 1960s, the cotton plantation began to be transformed a second time with the commencement of the Great Depression of the 1930s and the need to eliminate the labor-intensive tenant system if cotton and tobacco were to survive in the South. However, an insect, the cotton boll weevil, had already set change in motion in the first decade of the 20th century.

During the New South era (circa 1880–1945), major changes occurred in Southern plantation regions. A new cotton and tobacco region emerged on the Inner Coastal Plain from Virginia into southeastern Alabama, and a new cotton region emerged in the alluvial Mississippi Valley from southeastern Missouri southward to the Louisiana sugar cane region. Other plantation regions declined. Major decreases occurred in cotton in the Natchez district of the Loess Plains; the Suwannee Basin; the Alabama–Mississippi Black Belt; and the Alabama, Georgia, and Carolina Piedmont; and in tobacco on the North Carolina–Virginia Piedmont. Rice production in the Sea Island rice and cotton region began to decline following the Civil War, and the last commercial rice crop was planted in the 1930s. The underlying reason for the declines across these plantation regions was the failure of owners to manage their properties appropriately. The number of absentee and passive resident landlords increased substantially. On Sea Island rice plantations, planters failed to incorporate the new technology that was used in the newly emerging rice regions in the coastal prairies of Louisiana and Texas and the Grand Prairie of Arkansas. In the emerging areas, the new labor-saving machinery of grain production was employed, including reapers, binders, and tractors. The last rice crops in the Sea Island region were planted using oxen to pull plows and were harvested with cycles and scythes. In 1910, 8 acres of rice were grown per laborer in South Carolina compared to 80 acres per laborer in Louisiana and Texas. The labor cost was $12–$15 per acre in South Carolina and $2–$3 per acre in Louisiana and Texas. Failure of management to control the boll weevil, which entered the United States from Mexico in the 1890s, was the primary factor that destroyed the financial and plantation infrastructures in the cotton regions that declined.[36]

As David C. Barrow, Jr., wrote the foremost article that described the changes in the Southern plantation following the Civil War, so in 1955 Merle C. Prunty, Jr., a professor of geography at the University of Georgia, published the first study that identified a newly emerging third spatial form of the Southern plantation, which he termed the "neo-plantation" (Fig. 6.11).[37] Beginning in the 1930s, the South's plantations commenced the second revolution in their labor force, technology, and spatial arrangement. Whereas the revolution in plantations following the Civil War was one in which a free labor system replaced one of slaves, the second revolution, which began about 1935 and continued

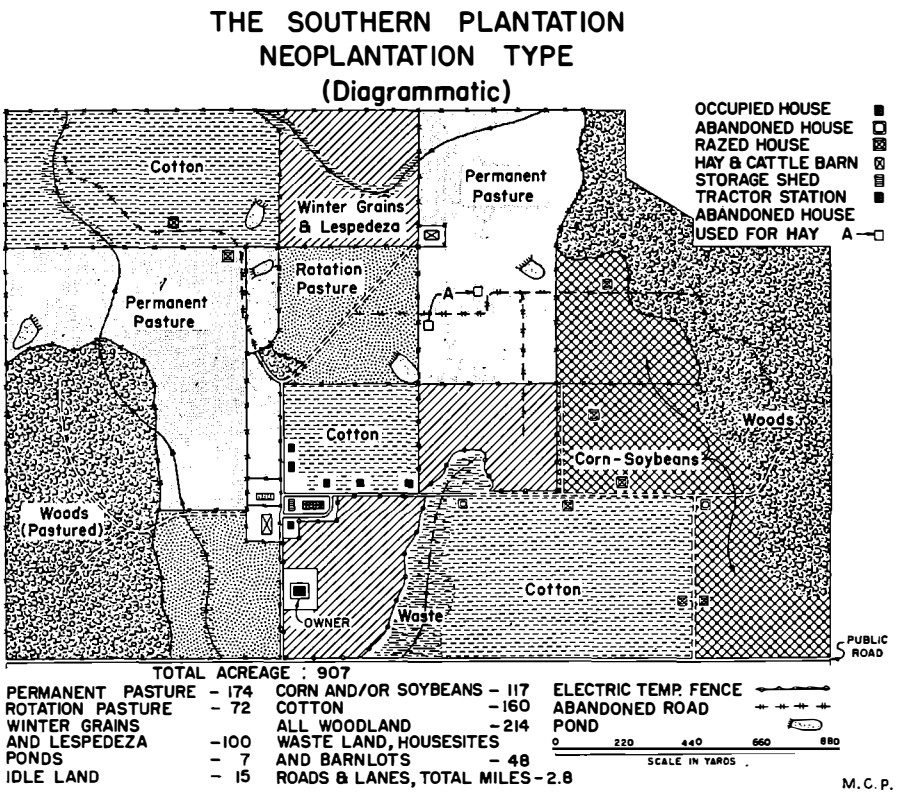

Figure 6.11
A diagrammatic model of the neoplantation. The new spatial form of the Southern plantation was actually a return to the nucleated configuration of the world plantation and that of the Old South plantation.

through the 1960s, replaced laborers with machines and chemicals. On cotton plantations the upheaval commenced in the mid-1930s with the introduction of the all-purpose tricycle-type tractor, the first that could perform all tillage and planting operations. The revolution extended through the introduction of mechanical spindle cotton harvesters in the late 1940s and the development of herbicides for grass and weed control in the mid-1950s.

Each of the three phases permitted planters to eliminate a part of the tenants, locally and regionally. By the early 1960s, there were cotton plantations in various stages of the second revolution in Southern plantation agriculture.[38] A small number of plantations were still farmed with tenants and mules. In their basic field techniques and spatial arrangement they resembled the Barrow Sylls Fork Plantation of 1881. At the other extreme was a group that had completed the transition. They had a labor force paid by the day or week and used tractors, mechanical harvesters, and herbicides. Most plantations were in the midst of the transition, employing the new technology in various degrees and maintaining small numbers of tenants and day laborers.[39]

The second revolution resulted in major spatial changes on individual plantations and across the landscape of plantation regions. Because dispersed farmsteads of tenants took up land that could be farmed

Figure 6.12
A row of tenant houses recently moved from the fields on a plantation in the Yazoo Delta in 1964.

and prevented field consolidation for efficient operation of motorized machinery, houses were razed. The ones that remained were moved into lines along roads, forming a nucleated settlement pattern (Fig. 6.12). Placing houses on roads also gave them easy access to electricity and to water piped from plantation wells.

A cotton plantation usually was reorganized in stages. With the introduction of tractors a group of tenants was eliminated, a few houses were razed, and other dwellings were moved from fields. The 4,000-acre Hopson Planting Company in the Yazoo Delta near Clarksdale was one of the first plantations to purchase two- and four-row tricycle tractors in the mid-1930s and eliminate mules and ten of the 60 sharecroppers. Twenty-two tractors replaced 150 mules. Fields were reorganized, abandoned houses were razed, and the remaining 50 dwellings were moved into lines along roads.[40] International Harvester conducted trials of its mechanical cotton picker on Hopson Plantation during the 1930s and 1940s. Mass manufacture of mechanical cotton pickers by International Harvester, Deere and Company, and Ben Pearson did not begin until the late 1940s. Adoption of mechanical pickers resulted in elimination of additional tenants and demolition of more dwellings.

The replacement of laborers using simple hoes to eradicate grass and weeds from fields proved to be the obstacle to complete mechanization of cotton production. Various methods were tried, from attempting the perfection of hoeing machines to use of flame cultivators. The introduction of herbicides to kill unwanted plants was the critical breakthrough in grass and weed control in agriculture. With grass- and weed-killing chemicals, planters could eliminate hand labor. Herbicides, together with Congressional extension of minimum wage legislation to

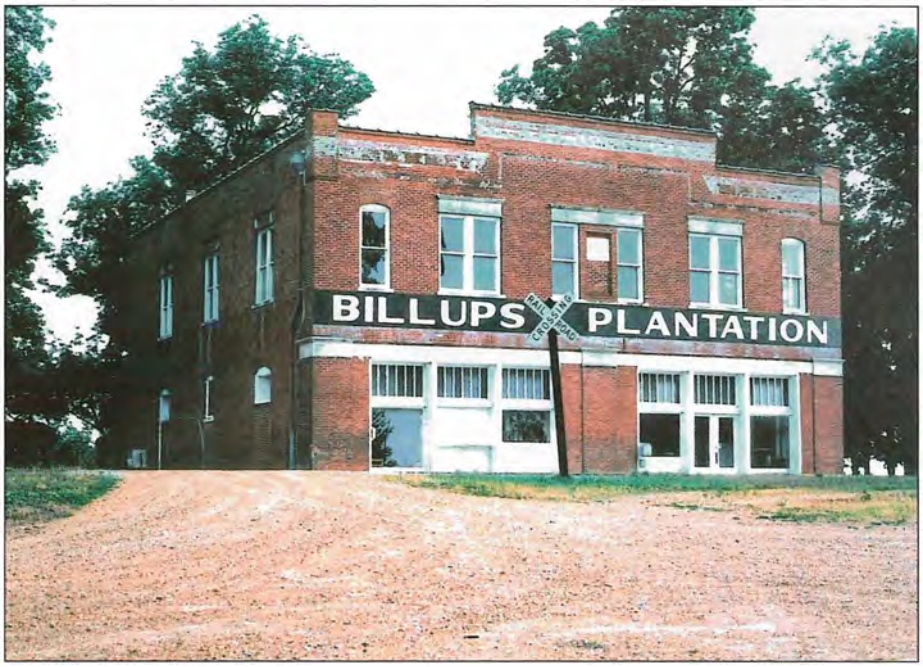

Figure 6.13
The abandoned commissary on the Billups Plantation near Indianola, Mississippi, in the Yazoo Delta in 1985. Offices on the second floor were still used for management of the plantation. The lower floor, which had housed a large furnish store, was used for storage.

Figure 6.14
A new rural convenience and general merchandise store replaced the furnish store of Pee Dee Farms Company at Gallivant's Ferry on the Inner Coastal Plain of South Carolina.

agricultural workers in 1967, caused planters to eliminate remaining tenants and day laborers.[41]

After a transitional period of 30 years, the era of the New South plantation with tenant farmers was over. Plantation commissaries and furnish-merchant stores lost their significance. Although a few survived by conversion to stores that serve a largely rural non-farm population,

Figure 6.15 Abandoned store buildings in the business district of Pace, Mississippi, in the Yazoo Delta. The population of Pace declined from 627 in 1970 to 364 in 2000. Blacks comprised 83 percent of the population, and the poverty rate was greater than 75 percent.

most were closed and stood abandoned or were razed (Figs. 6.13 and 6.14). Mule barns were replaced by buildings that housed tractors, mechanical harvesters, and other new machines. The density of small towns across the New South plantation landscape was striking. Beginning with the boll weevil disaster early in the 20th century and continuing through improvement of highways, innovations in transportation, and mechanization of agriculture, particular towns began to decline (Fig. 6.15). Towns that remained viable recruited manufacturing and service jobs to replace ones lost in the agricultural infrastructure. Municipalities that lost access to a railroad and were not close to a metropolitan area or an interstate highway were at great competitive disadvantage.

The increase of fragmented mega-farms

During the latter part of the Great Depression decade, the wife and husband team of Dorothea Lange and Paul S. Taylor traveled across rural America, to document social and economic conditions in the Dust Bowl of the Great Plains and plantation regions of the South.[42] Though Lange focused her photography on people who were "dusted off" and "tractored off" the land, Taylor saw beyond what was happening in American agriculture during the 1930s. He realized that motorized farm machinery, motor vehicles, and improvements in rural roads, including macadamization with asphalt and concrete, were laying the foundation

for profound declines in the number of farmers and major changes in the spatial configuration of farms. In 1938, Taylor wrote that "daily movement of labor between town and plantation" was "facilitated by very recent construction of graveled and hard-surfaced roads." In the Yazoo Delta, truck- and busloads of day laborers, members of tenant families displaced by tractors, were hauled to plantations from Memphis and local towns more than 35 miles over the improved roads.[43]

Taylor, who was born on an Iowa farm, turned his attention to the impact of tractors, motorized harvesters, and improved roads in the Middle West. In 1941, Taylor summarized what he had learned from research that began in 1937 in the Dust Bowl of the Great Plains and the plantation regions of the South. The new motorized machinery was multiplying the capital cost of farming while increasing the "speed" of what a farmer could accomplish in a day. Taylor observed, "Formerly it was difficult for farmers who wanted to work nearby land to move their implements from farm to farm . . . To-day the farmer whizzes from farm to farm with his rubber-tired equipment over paved or bumpy roads." Taylor continued by discussing an innovative Iowa farmer, who increased his acreage to pay for his expensive new machinery.

> Until about three years ago he operated the family farm of 200 acres. Now he has expanded his enterprise by leasing 40 acres three miles away, 440 acres six miles away, and 320 acres 75 miles away. He operates the entire 1,000 acres from a single headquarters with two hired laborers and only occasional help from his boys.[44]

By the late 1950s, Merle Prunty, Jr., had advanced his research beyond his innovative 1955 study of the neoplantation. In a 1957 paper, he discussed the problem of classification of "the multiple holding," a farm composed of "noncontiguous units, each of which is smaller than minimum plantation size but which in sum greatly exceed it, and which are centrally managed."[45] Research by Prunty's graduate students confirmed that plantations composed of dispersed parcels were becoming common.[46] By 1970, a few articles on fragmented mega-farms began to appear in popular farm magazines. In the Tennessee Valley of north Alabama, Jack Vandiver assembled more than 5,000 acres of crop and pastureland rented from 34 landlords. His 1,100-acre cotton crop was scattered over 35 parcels, including the 160-acre farm that he owned. His labor force consisted of 12 men who were paid weekly and lived on his headquarters farm in neat houses with bathrooms.[47]

In 1971, Aiken synthesized the research on mega-farms composed of dispersed parcels, naming them "fragmented neoplantations."[48] Two major factors contributed to the development of fragmented neoplantations: increasing overhead required to obtain an adequate living from agriculture and the federal crop allotment system that restricted the acreage of cotton, tobacco, rice, sugar cane, and certain other crops

which could be planted on a landholding. The increasing expenses of farming, especially the prices of tractors and harvesting machines and the cost of labor, dictated that farmers had to achieve economies of scale different from those of traditional plantations. The size of tractors and harvesters has greatly increased since the 1950s. Three or four large tractors that can plow 12 or more rows can replace 22 two- and four-row tractors, such as were used on the Hopson Plantation in the 1930s. Four- and six-row cotton harvesters have superseded the one- and two-row machines introduced in the late 1940s. Larger machines have reduced the number of workers needed to operate them and permitted increases in wages.

To support the expensive machinery and pay for labor to operate it, farmers have expanded acreages of crops and pastureland. Because crop allotments (what are now called crop bases) were tied to landholdings, assembling adequate acreages of cotton and other restricted crops required planters to rent entire farms and not just the acreages on farms to plant crop allotments. Eventually, the United States Department of Agriculture permitted the movement of crop allotments to farms within counties and within states across county boundaries. However, many landowners want their crop allotments planted on their farms, and many renters do not own or rent enough crop land to plant leased allotments.

The 3,500-acre Presley fragmented neoplantation in Tate County, Mississippi, was among the early Southern dispersed mega-farms (Fig. 6.16). In 1970, F. L. Presley owned 750 acres in four tracts. He rented 15 entire farms and the acreage to plant leased cotton allotments on six farms. His labor force consisted of a manager and five machinery operators, who were paid weekly wages and lived in houses on land owned by Presley. Presley planted 500 acres of cotton, 600 acres of soybeans, 300 acres of corn, and 200 acres of grain sorghum. He also owned several hundred cattle.

Farms comprised of dispersed parcels exist throughout American agricultural regions. Unfortunately, the United States Census of Agriculture, which is taken every five years, is outdated in format. No effort is made to collect data on the spatial form of farms. The data that are closest to revealing the importance of fragmented farms are ones enumerated on part owners and the acreages controlled by them. A part owner both owns and rents farmland. Rarely is a farmer fortunate enough to buy and rent land adjacent to his headquarters farm. In 1940 near the beginning of the introduction of motorized machinery, part owners in the United States comprised 10.1 percent of the farmers and controlled 28.3 percent of the land in farms. By 2002, part owners had increased to 25.9 percent of the farmers and operated 52.8 percent of the land in farms.[49]

The War on Poverty, launched by President Lyndon Johnson in 1965, brought major social and economic improvements in rural America,

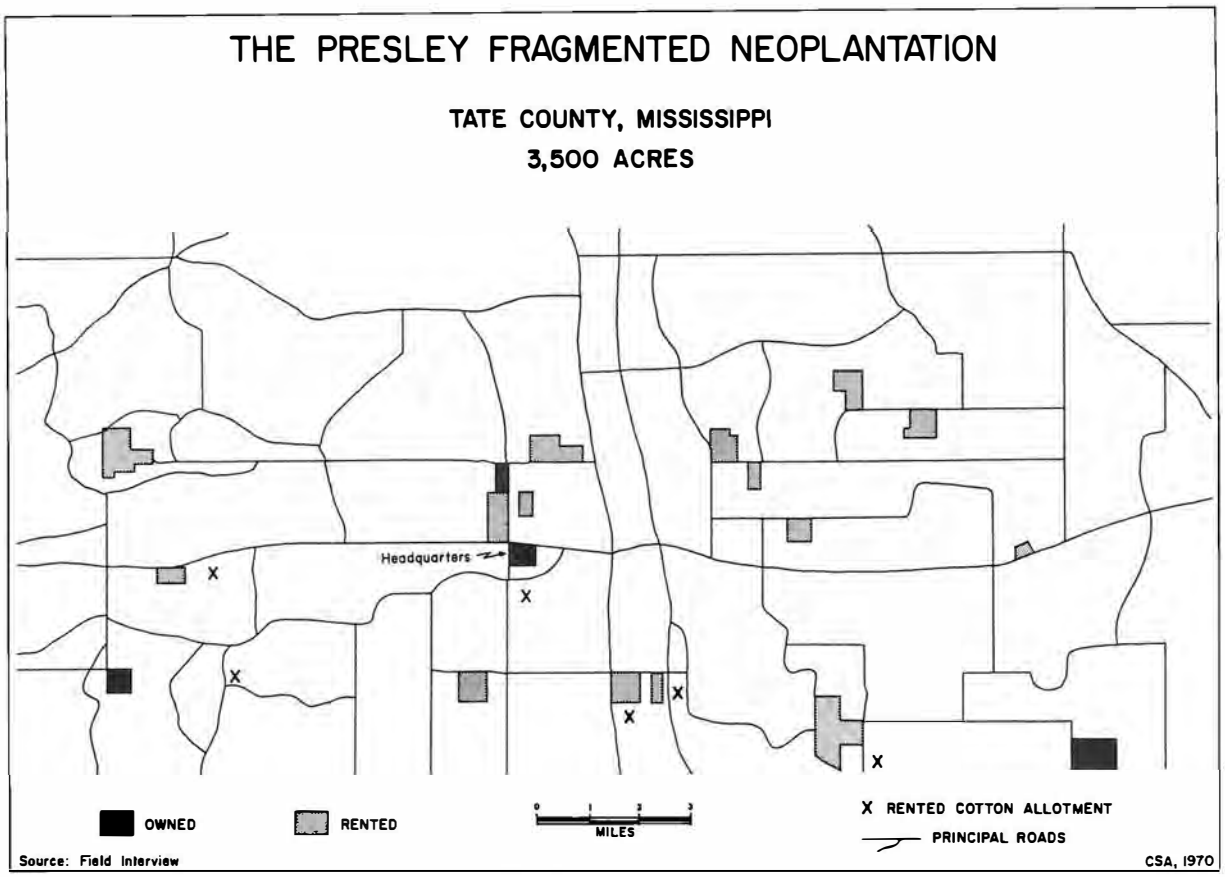

Figure 6.16
The 3,500-acre Presley fragmented neoplantation in Tate County, Mississippi.

especially in the Southern plantation regions. Among the ways in which the federal government attempted to moderate rural poverty was through improvements in housing for low-income households. The Department of Housing and Urban Development and the Farmers Home Administration of the Department of Agriculture constructed rental apartment complexes and subdivisions of single-household houses for home ownership (Fig. 6.17).[50] Although agricultural workers, most of whom are blacks, operate expensive machines, their daily and weekly wages are relatively modest, qualifying many for federally built subsidized housing. Also, planters discovered that it is less expensive to discontinue housing employees, especially if new dwellings must be constructed. Agricultural workers can live in federally sponsored rental units, purchase new houses on long-term, low-interest loans in federally sponsored subdivisions, or build dwellings in hamlets that have developed in the countryside.

A new, nucleated settlement pattern developed when houses were moved from the fields, sharecroppers were eliminated, and a cash wage labor system was introduced for machinery operators. Rainbow Plantation in Tallahatchie County, Mississippi, in the Yazoo Delta is a neoplantation that illustrates this pattern (Fig. 6.18). The nearby

Figure 6.17 Houses in White Oak, a 180-house rural subdivision in Tunica County, Mississippi. White Oak, which is three miles from the town of Tunica, was financed by the Farmers Home Administration of the United States Department of Agriculture. The houses were constructed during the 1970s. Most of the dwellings are occupied by blacks.

Goose Pond Subdivision consists of 85 houses built for home ownership by the Farmers Home Administration in 1972. The Aaron Henry Apartments are a 12-unit rental complex constructed by the Farmers Home Administration just outside the southern boundary of Webb in the 1970s. The new federal housing provides better and relatively inexpensive alternatives to traditional dwellings located on Rainbow and other plantations.

Although supplied with water by Webb, the federally sponsored housing is outside the municipal boundary. Whites feared that because blacks would be the primary occupants of the new dwellings, they would become the political majority and take control of Webb if the new dwellings were constructed in the municipality.[51]

The growth in the importance of fragmented mega-farms in the South and the increase in the number of Southern mega-farms which do not house their labor forces mean that increasingly the plantation regions where agriculture remains viable are becoming similar to the irrigated areas of the West. During recent years, the agricultural and settlement landscapes of the Yazoo Delta in Mississippi have begun to evolve to resemble those of the San Joaquin Valley in California. Fragmented mega-farms that do not house their labor forces can be interpreted as new evolutionary forms of the plantation. However, to those of us who remember the plantations of the New South and have studied the economic, social, and political changes in the South since the 1930s, fragmented mega-farms are so divergent from traditional plantations that they should be classified as a new spatial type of American farm.

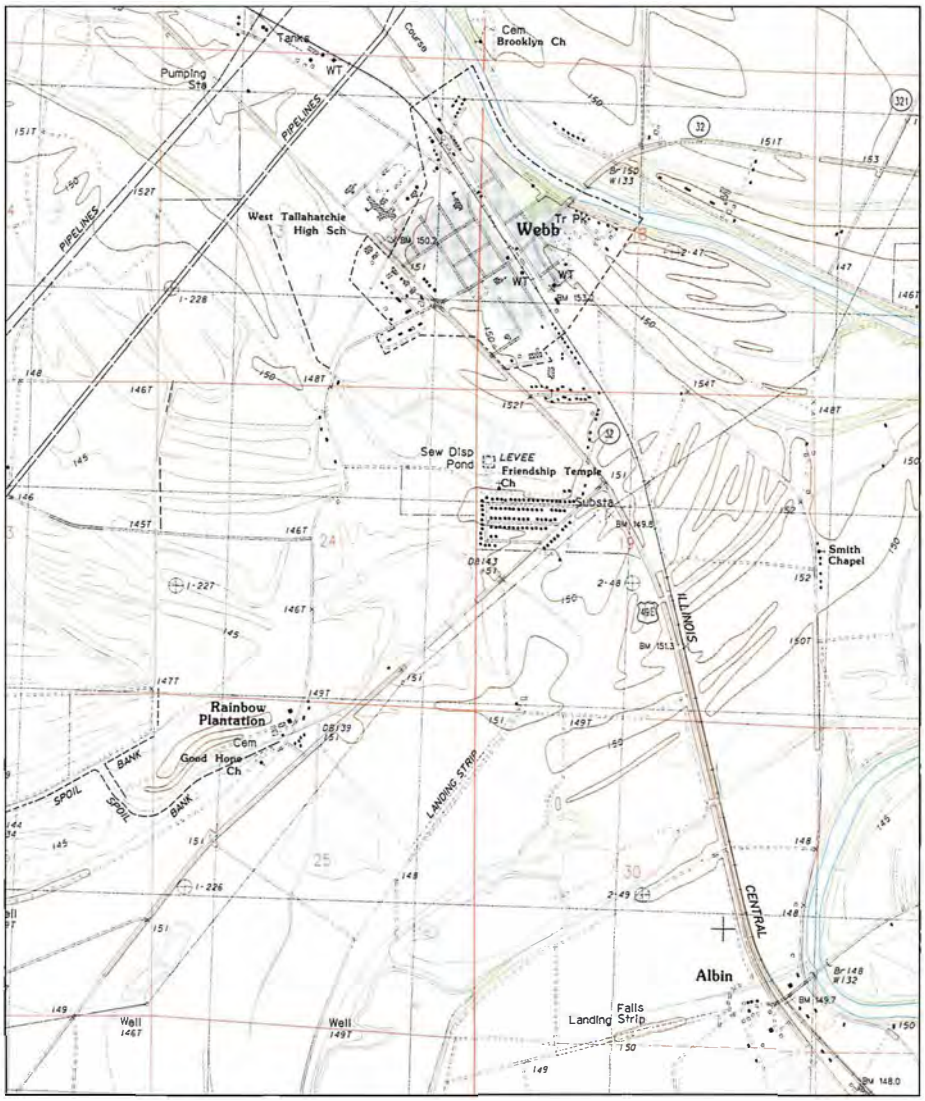

Figure 6.18
An area of Tallahatchie County, Mississippi, in the Yazoo Delta, illustrating contemporary settlement patterns. Sumner, Mississippi, N. E. Quadrangle. 1:24,000.

Chapter seven
Gridding a national landscape

HILDEGARD BINDER JOHNSON

THE ORIGIN of the United States' land survey system has been associated with Thomas Jefferson, who chaired a committee in 1784 to prepare a plan for the government of the Western Territory. His proposal divided the land into geographical square miles by "hundreds" with lines oriented north–south and east–west, crossing each other at right angles. But there was also Hugh Williamson, Congressional delegate from North Carolina who had studied medicine in Utrecht, who in the same year suggested to the committee to divide the land by "parallels, dotts and meridians." He had seen rectangular field divisions in the Netherlands, some dating from the Roman era. One can readily call the first proposal the Jefferson–Williamson plan while acknowledging the contributions by others during the debate, notably Timothy Pickering of Massachusetts, who warned astutely against having straight lines represent converging meridians.[1]

Jefferson may have been influenced by Roman centuriation and the Cartesian *esprit géometrique* during the century of the Enlightenment. But people in different places at different times can find the same solution to a problem. We should therefore consider the human context. Squares, circles, and equilateral triangles are more readily recalled than figures of irregular shape. The straight line, rare in nature, can be obtained by stretching a vine between two trees; with one end tied to a tree, we can with the other circumpace the ideal form of a circle. But circles are useless for subdividing an area when complete coverage is desired. In the 3rd century AD the Greek geometer Pappus of Alexandria considered the hexagon; but it lacks parallelism. The pervasive functionality of the right angle makes it the preferred form, and human eyes still see it when shown an angle of some degrees more or less than 90. This may be related to man walking erect, similar to his preference for the number 6, which equals our existential directions in space—up, down, forward, backward, left and right.

The square has been used for land assignment worldwide since antiquity, particularly in colonized regions. Mencius in China stipulated nine squares for eight families with the well in the central square. In 1638,

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New Haven was laid out as a square of nine blocks with a central green. The Japanese *jori* system has 36 *cho* in a square *ri*, comparable to our township, but the coordinates are often tilted, adjusting to topography. Roman centuriation in Italy, around Ravenna and in Lombardy, has *decumanus* and *cardo* run in cardinal directions, but not in Dalmatia and North Africa. Only the United States has a rectangular cadastral system with strict adherence to cardinal directions (Fig. 7.1). The coordinates were rarely tilted. The few exceptions include two military grants in Indiana and in southeastern Maine in a northwest–southeast and northeast–southwest direction; the axis adjusted to the trend of the mountains in southeastern Tennessee; to the rivers Ocmulgee and Oconee in Georgia; toward the coast in Walkulla County, Florida; and in Gadsden County, toward the River Hurricane.

A system to span the continent

The long and dramatic history of the federal government's role in shaping the land began with the "Ordinance for ascertaining the mode of disposing lands in the western territory" passed May 20, 1785 (commonly known as the Land Ordinance). The title reflects the legislators' major concern: orderly transfer of an immense, poorly

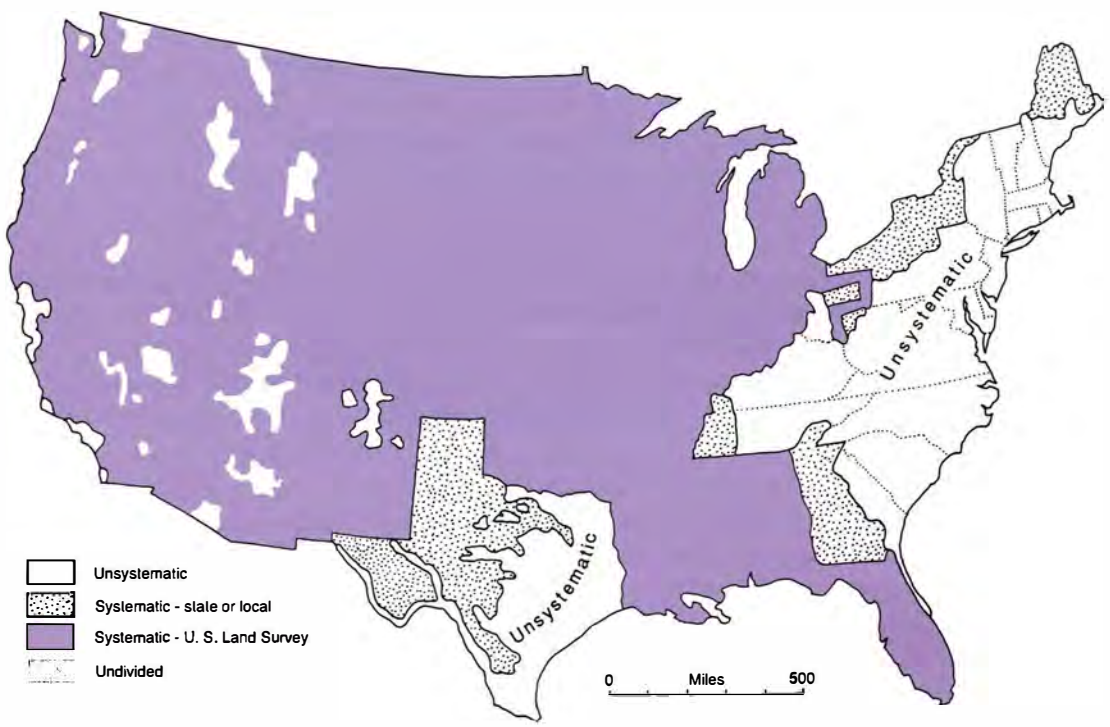

Figure 7.1
Types of land division in the United States. Except for the original 13 colonies, Texas, and some western mountainous areas, most of the country is parceled out on the township and range system.

known territory to private ownership through sales. The Treasury was heavily in debt and the country impoverished. That squares need only one measurement and thus save money was mentioned during the debate; so were some Virginians' suggestions to settle "along natural lines." But the traditional metes and bounds system caused lawsuits in Jefferson's experience. Indiscriminate location would not result in coherent settlement progressively moving westward, he felt, and might jeopardize clearly defined property titles.

Townships were reduced from 100 to 36 square miles. A surveyor from each state, working under the Geographer of the United States using their chain carriers, was to run lines due north and south, with others crossing these at right angles "as near as may be," a phrase regularly used in later legislation and instructions to surveyors. The first north–south line was to begin on the Ohio River due north of the western boundary of Pennsylvania, and the first east–west line at the same point. Along the straight north–south *township* line and the east–west *range* line, the square miles could thus be counted off as on graph paper from the initial point (for example, T2N R3E). The lines were to be measured with a chain, marked by chaps on trees, and drawn on plats. Mines, salt springs, salt licks, mill-seats, watercourses, mountains, and the quality of the land crossed by these lines were to be noted. The township plats were to be subdivided into squares of 640 acres numbered from 1 to 36, starting at the southeast corner and proceeding as the plow follows the ox, in boustrophedonic fashion (i.e. left to right, then right to left). Townships would be sold alternately "by lots and entire." The Geographer would transmit the plats to the board of the Treasury after seven ranges of townships were surveyed. The Geographer and his surveyors were to pay "utmost attention" to the magnetic needle and run all lines by the true meridian, and note the variation on every plat.

The beginning point was established on the north shore of the Ohio in August, 1785; a few miles of the baseline, later named Geographer's Line, were measured by fall. Surveying began again in August 1786, and by spring 1787 four ranges were ready for sale. Thomas Hutchins, the Geographer, resigned, and Israel Ludlow finished the measurement of the seventh range in June 1787. Inadequate protection from the army, marauding Indians, personnel problems, and the rough terrain explained the rather ignominious beginning. But original practices like using township plats on the scale of 2 inches per mile and filing detailed survey notes endured. These notes represent a record of original vegetation along compass lines at predetermined intervals. They do not follow any paths where usage would have affected virgin growth. They allowed F. J. Marschner in 1929, using 240 volumes of surveyors' notes, to produce a hand-colored composite map on the scale of 1:500,000 entitled "Original Forests of Minnesota."[2] As for the survey of the Seven Ranges, it left no noteworthy legacy in the environment, and surveying was discontinued.[3]

Ohio was a crucible for the United States survey but the new geometric system did not immediately become the prevailing method of land division.[4] For example, the Virginia Military District was surveyed by metes and bounds between 1810 and 1819, while John Cleves Symmes, who controlled a large land grant from the federal government, allowed settlers within it to practice indiscriminate location (Fig. 7.1). Several land acts and proposals for a General Land Office and a Surveyor General stalled in Congress. After the Constitution was rectified and the new government began to function in 1789, interest among members of Congress, now clearly opposed to further large land grants, revived. On August 3, 1795, the Treaty of Greenville was signed, which assured security for settlers.

"An Act providing for the sale of the lands of the United States in the territory northwest of the River Ohio and above the mouth of the Kentucky River" passed on May 18, 1796. It repeated the "north and south lines to be crossed by others at right angles." Surveying prior to sale was required and consisted of lines 2 miles apart with corners set 1 mile apart. This divided a township into 36 square miles—now called sections—with three corners marked. Townships were to be sold alternately as quarter townships or subdivided into 36 square miles, reflecting the persistent attitude toward land as a tradable commodity, defined by size.

To become an effective system of land survey and division, the tools and procedures of survey had to become standard and universally applied. The scale and complexity of the American environment ensured that this would be a slow and evolutionary process. The Act of 1796 stipulated that "[a]ll lines shall be plainly marked upon trees, and measured with chains, containing two perches of sixteen and one-half feet each, subdivided into twenty-five equal links." The chain used was Gunter's chain, already widely employed in Massachusetts and New York State. It consisted of 100 links totaling 66 feet in length or 4 rods (also called poles or perches). Eighty such chains measure 5,280 feet or 1 mile. Ten square chains make an acre and 640 acres fit into 1 square mile—a fortuitous combination of the decimal with the traditional—and 640 acres can be halved six times before reaching an uneven number. We should remember Edmund Gunter, an English mathematician and surveyor (1581–1626), because of the prevalence of 5-acre blocks in American cities and of the 2½-acre lots cherished by rural-minded urbanites.

The two-pole chain of 32½ feet could be replaced by a four-pole chain on level land. Ten tally pins 11 inches long with handles marked the length of five chains on the ground. For uneven ground the two-pole chain was preferable, "keeping it horizontally levelled and being careful when plumbing the tally pins on steep hills." Official instructions repeated frequently that the length of the line be ascertained "by precise horizontal measurement as nearly as possible approximating an

airline." Good surveyors took accuracy seriously. William A. Burt after a cold day warmed his chain in a fire to bring it up to summer heat and discovered his field chain differed by 0.4 inches from the standard chain in his office. Burt, a deputy surveyor in Michigan in 1833, found the aberrations of the magnetic needle excessive because of nearby iron ore deposits (Fig. 7.2). He invented the solar compass, which received awards from the Franklin Institute in Philadelphia and at the World's Fair in 1851 in London, and a modernized Burt's solar compass was used well into the 20th century.[5]

The problem of using straight north–south township lines for converging meridians was solved in the field. President Jefferson

Figure 7.2
Irregularities stemming from faulty survey technique reach a peak southwest of Ironton in the Ozark Hills, where sections 1–6 of Arcadia Township are far from being square.

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appointed Jared Mansfield, a mathematician, as the second Surveyor General in 1803. He arbitrarily selected a new initial point in southern Indiana, laying out astronomically a new meridian and a new baseline. This constituted a precedent for further principal meridians with guide meridians in between for determining the degree of convergence. Every twenty-fourth township line along a baseline, called a correction line, township lines from the south are shifted and continued true north. The correction line explains a peculiar, somewhat amusing section road pattern. One drives on a straight road north, suddenly turns to the right, drives on for some yards and turns sharply left to continue straight north. Correction lines are plainly visible when flying in an easterly or westerly direction.

The meandering lines of large rivers or lakes created fractional townships, subdivided and numbered as if they were parts of whole townships. An Act of March 1, 1800, established the principle that corners set by first surveyors are held to be true corners even if later surveys proved them incorrect. Just claims from earlier English, French and Spanish occupation were honored, even when legal settlement took many years (Fig. 7.3). French lots near Vincennes, Indiana, and Spanish *sitios* in Texas and Louisiana are still easily detected from the airplane.

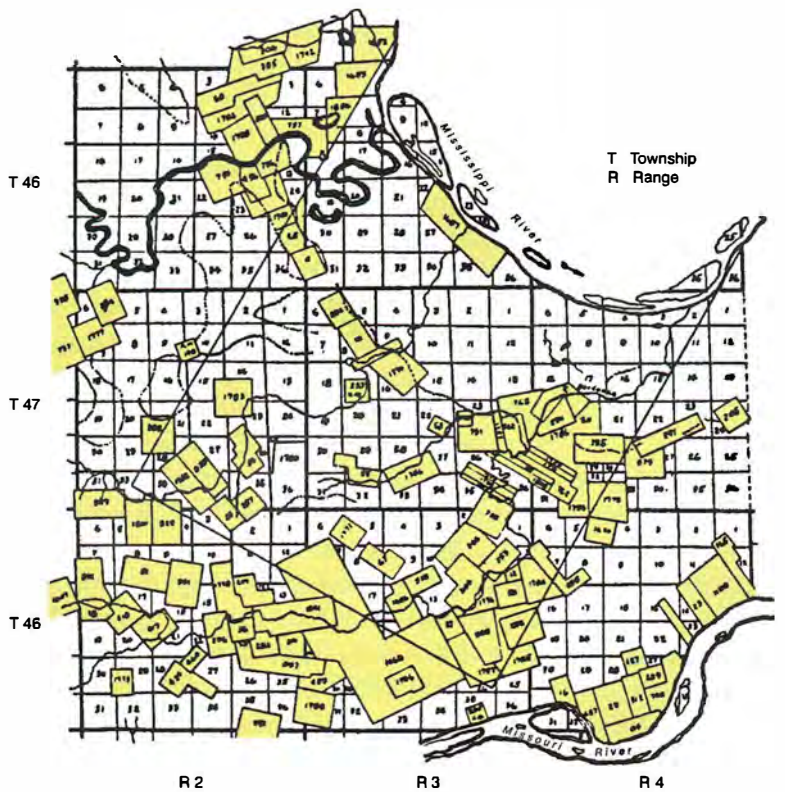


Figure 7.3
French and Spanish private claims lie embedded in the rectangular survey pattern in St. Charles County, Missouri, just northeast of St. Louis.

Edward Tiffin, Surveyor General from 1814 to 1829, established the Fifth Principal Meridian and a baseline from the initial point at the mouth of the Arkansas. It deserves mention because 164 townships as far north as Minnesota's Northwest Angle refer to that baseline.

The claims of six former colonies to parts of the Public Domain in 1785 derived from charters which granted land "from sea to sea" or "from the western ocean to the South Sea," between parallels. These phrases reflect both geographical ignorance and continental vision, which Tom Paine expressed in 1775 in *Common sense*: "The sun never shone on a cause of greater worth. 'Tis not the affair of a city, a county, a province, or a kingdom; but of a continent." Historians have not explained why delegates to the First Congress talked about *continental* currency and a *continental* army. It was, perhaps, subconscious awareness of the challenge presented by the virgin and unstoried western wilderness to be turned into the American landscape ideal, Improved Nature—a state between the overcivilization of Western Europe and the savage frontier. The Louisiana Purchase of 1803 brought the continental dream closer to reality.[6]

Louisiana presented a greater problem of pre-survey occupance than the Northwest. Thus, an Act of 1811 instructed surveyors in the territory of Orleans to lay out tracts along water bodies, measuring 48 poles in front and 465 poles in depth, continuing the pattern of French long lots. Claims of various sizes and forms in Missouri were also maintained. Until the 1830s the main concern, aside from rapid sale of the Public Domain, was to give the common man a chance to "improve nature."

A succession of Land Acts dealt extensively with administrative matters, with little or no effect on the appearance of the landscape, but a reduction of the minimum size of tracts purchasable from the government had a major effect. In 1800, the section purchasable from the government since 1796 was halved. Citizens from Ohio petitioned Congress in 1803 to divide sections by six. The popular number would have meant subdivisions of 106⅔ acres and Congress declined. In 1804, the quarter section to be enshrined later in national consciousness by the 1862 Homestead Act was legislated, and in 1820, the half-quarter section. Then, on April 5, 1832, "An Act supplementary to several laws for the sale of public land" declared quarter-quarter sections available and ordered that all fractional townships also be so divided.

On December 5, 1836, the Commissioner complained to the Secretary of the Treasury of increased work "by reason of the new and minute subdivisions of fractional sections . . . into forty acre lots, as nearly as possible . . ." Maps and diagrams had to be prepared in triplicate. Complaint of too much paperwork in Washington is understandable, but calling the 40-acre lots minute subdivisions is not fitting. The "forty" became the modular unit for settlement (Fig. 7.4). It was sufficient for an average family, and one man could clear it in about eight years. It was frequently "swapped" to "round out a farm" and, perhaps most

Figure 7.4
Square fields and straight section line roads march across the landscape of southern Michigan. Single farmsteads lie scattered within this rural grid, highly individual family islands in a sea of regimented land parcels.

important, it made it possible to adjust the shape of a quarter section to topography. Considering the cardinal directions, a quarter section can be composed of forties in 19 different ways when "located in a body," which means the squares cannot touch only at the corners but are adjacent to one another at one side.[7] Railroads sold more land than was granted under the Homestead Act, chiefly by forties. By the middle of the 20th century, the forty was preferred in general. Developers to this day buy forties; rotary sprinkling systems are designed to their dimensions.

The forty, never surveyed, was determined by pacing to the point equidistant between corner and half-mile post. A *Land buyer's guide* explains under "pacing" that to save time, "only alternative steps are counted," for the "40" of 250 double paces.[8] The Pre-emption Act of 1841 would not have been functional without the squatters' ability to pace. All claim associations made their own township plats.

Single farmsteads

The classic American family farm of between 40 and 160 acres was typically isolated in the forested country. A more neighborly settlement pattern could have resulted if, in 1804, selected sections had been divided into oblong rectangles fronting the road, as happened in Ontario, Canada. Divided again, eight farms, 1 mile long, would line the road from both sides, rather like a street village. But such alternate platting would have entailed complicated bookkeeping, and even at road corners the houses of four farmsteads were not necessarily built in neighborly reach, either.

In England and Germany, the countryside is open to the public. The

American landscape of single farmsteads is essentially a private one. It has a history of fencing fields against animals, of spending much work and wood on rail fences and too much money on wire fences which now interfere with the turning of heavy machinery. If there is an earlier path across a field, it is accessible only via the farmyard, which one respects as private property. People do not hike, they drive through single farmstead country for recreation, or to town for social functions. Hence the early initiatives in modern times to establish park, forest, and wilderness reserves open to the public and to create trail opportunities.

After the dissected Allegheny plateau in eastern Ohio, still known as the Seven Ranges, settlement spread over existing roads toward the Connecticut Reserve and from the Ohio River bottoms inland. In central Ohio, the woods opened up to prairies readily settled by landseekers, contrary to the myth that treeless land was believed to be less fertile. Much hardwood, plentiful for cabins, fuel, fencing, and for laying over mudholes in roads and across creeks, still ended up in piles for burning. Pioneers' attitudes toward the woods are described in Conrad Richter's novel *The trees* (1940), where a girl is embarrassed to mix socially with people who come to the store from open farmsteads because she is a "woodsy." Currier and Ives, purveyors of cheap hand-colored prints to hang in the parlor, presented the woodsies' dream on four prints: the first, a small cabin with a few stumps around it; the second, a Virginia snake fence in front of the house, a brush fence behind, and men working on the clearing; the third, a rectangular farmyard, flower and vegetable beds, and rectangular fields lined by woods; the fourth, a two-story mansion, barn and stables, a broad road, and fields stretching far into the background. Its caption: "The land is tamed."[9]

The homesteader could identify his plat on a map in the courthouse and recognize the surveyors' marks on the trees along his lines. Gradually, he cleaned out all the brush and saw bare ground, reflected in the word "clearing." The closer he got to his property lines, the more fields and fences ran in north–south and east–west directions. It took decades before fields and remaining woods emerged as a coherent rectangular landscape.

After the log cabin or sod house on the prairie, the farmsteader built a house of custom-cut boards, often selected from Ward's catalogue and shipped in by railroad. "The embellishment of the home and the planting of the yard were left mostly to the second generation."[10] Then the family could subscribe to a county atlas with a picture of their place (Fig. 7.5).[11] Because details were true and it was recognizable, it looked "natural," a word still used in this sense by old-timers in the Midwest. All illustrations are in one point perspective. By far the largest market for atlases was the Middle West, where draftsmen and surveyors could easily redraw township maps with owners' names. Atlases were published at first in the East; Chicago replaced Philadelphia as their center of production between 1870 and 1880. Over 4,000 different

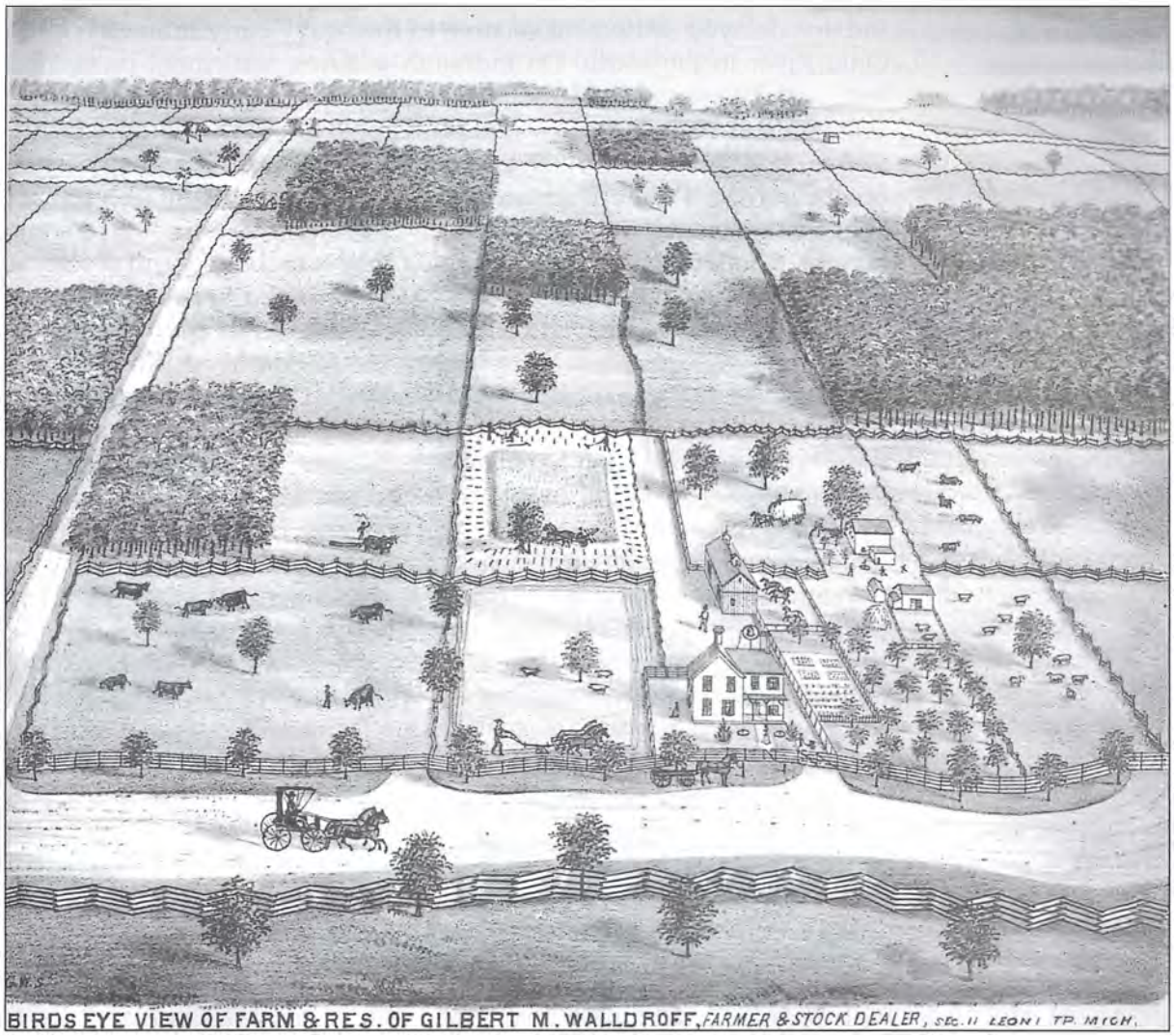


Figure 7.5
Gilbert Walldroff's farm, Leoni Township, Jackson County, Michigan, in 1874. The artist has captured the formality and seeming orderliness of the farm in this county atlas view, accentuated by neat fences and patches of woodland. Note the rectangular spread.

county atlases were published before World War I. This truly American phenomenon is directly connected with the survey. Ross Lockridge, Jr., in his novel *Raintree country*, tells of the county atlas lying next to the Bible and family photo album in the parlor. Captions under the pictures of residences show the owner's name, township, range and section number of his place; sometimes pictures have his photograph. On the illustrations, houses, carriages, gardens, ladies with parasols, etc., make the pervasive rectangularity look like the necessary background.[12]

In northwestern Ohio, land sales began in 1829. In northern Indiana

Indians delayed settlement relative to the heavy early influx from the Ohio River in the south. On Indiana's prairies, settlement proceeded fast, with farmsteads of 80 acres being the most numerous to this day. From 1820 to 1829, Indiana's land offices sold almost 5 million acres for $2.5 million. By 1900, 221,897 farms totaling 5,700,000 acres established on the former Public Domain were in Indiana.[13] In Illinois, settlers began to look for wood along rivers; in upper Mississippi country, some bought wooded forties for $50, which they subdivided and resold at $5 per acre.[14] The mixed forest and prairie changed to prairie in Iowa; South Dakota, Nebraska, and Kansas are emphatically prairie states.

As one geographer asserts outright, "the Middle West is flat" all the way between the Appalachians to the east, the Ozarks to the south, and the Rocky Mountains to the west.[15] To the west, farmsteads locate within their holdings in relation to water, because that, not land, becomes the essential resource. Water problems in the Middle West result from the unfortunate Anglo-American legacy of using rivers for boundaries. It left the nation's geographical symbol, "Ol' Man River," with two different states facing each other eight times across his shores. Only Minnesota and Louisiana occupy stretches of both banks. New France was claimed in terms of drainage basins, which Americans only learned to understand in this century.

Townsites

Schoolhouses, generally four to a township, cemeteries, and small churches on donated lots dot the dispersed single-farmstead landscape. Other social needs, however, are met by towns, which developed from trading posts, road crossings, mill sites, river landings, and natural harbors. Town speculators bought tracts of less than 640 acres before the 1870s.[16] Grid pattern plats were unavoidable and often tilted so that the main street follows the waterfront. Of 204 river places between Chester, Illinois, and Hastings, Minnesota, 193 have plats adjusted to the shoreline. One or more blocks without lot divisions and open for public use were frequently left on speculators' plats.

Land societies instructed their scouts to look for townsites by a navigable river during the steamboat age. Some of these small river ports became virtual museums after cargo shipping decreased in the 1870s.[17] Railroads and increasingly mechanized agriculture brought new functions to rural towns, and the improved economy enabled farmers to support larger parishes. The steeples of their churches added an attractive vertical to the skyline, later rivaled by less inspirational but no less welcome watertowers. The growing population needed more services, and when the threshold of 2,500 residents was surpassed, small places could acquire the civic mantle of a city. By that time, the original plat had several "additions" and special features like a fairground, hospital,

baseball park, or larger courthouse.[18]

Other towns never filled the plat, lingered on, or disappeared. They all started with one wide Main Street, the "business district," with two or three cross streets. Residential lots allowed for gardens but rarely developed city-type alleys (Fig. 7.6).

Aesthetically, Main Street was off to a bad start: it adopted the false front, a deplorable invention of the building trade. Horizontal boards covered gables and fake the appearance of a second story; they were also used for lettered signs. That stage was followed by two- or three-story brick buildings with roofs sloping toward the rear and straight-lined front façades.

Sauk Centre in central Minnesota, platted in 1863 near a gristmill, recently renamed its straight north–south running main street "the Original Main Street," crossed by Sinclair Lewis Boulevard. Lewis was born here in 1885 and his childhood home is a historical landmark. He disputed that Sauk Centre was Gopher Prairie in his novel *Main Street* (1920), but readers worldwide do not believe that, nor do the citizens of Sauk Centre. It took them years to forgive the first American Nobel Prizewinner in literature the nearly mortal blow he gave to their main street, which, in his own words, "is the continuation of Main Streets everywhere." In 1970, a reporter for the *Saturday Review* investigated social and cultural conditions in Mason City, Iowa, and found them indistinguishable from those of Sauk Centre. "The village virus"—Lewis's first title for his novel—seemingly spread to Mason City, where the hut-shaped kilns, clustered around the brick and tile plant, "add picturesqueness to the surrounding farm lands," according to the WPA Iowa state guide, printed five times between 1938 and 1959.

Railroad towns were located according to plans of the companies,

Figure 7.6
Main Street in St. Charles, Minnesota, an archetypical Midwestern small town streetscape. Late 19th-century brick business buildings, lining the straight thoroughfare for two blocks, define the shopping district without ambiguity.

and they shared the prosperity and the decline of the railways. Some depots are attractive enough to be preserved. Once these towns were the middle border between eastern cities and the yet unsettled prairie. The rails respect topography and do not tolerate right-angled corners. Engravers and printers in New York could not advertise the prairies and Great Plains through popular pastoral scenes which romanticized eastern train journeys. The producers of travel literature found the public preferred Rocky Mountain scenes; so did artists. The contrasting parallelism of rails and crossties and the verticals furnished by telegraph poles and grain elevators were first revealed through photography. Surveyors had some problems with setting posts and mounting corners on the prairies, but rarely with leveling the chain.

The section roadscape

Township platting by single lines may explain a curious omission in United States land legislation: no allowances for roads. Canada adopted the American section in 1871 with roads between all of them, 99 feet wide, changed in 1881 to 66 feet, and in 1908 to roads along alternate township lines and all range lines. Canadian surveyors do not use the word *plat*; "it changes to plan at the border."[19] Around 1850, the country had Indian traces, the National Road, military and territorial roads, ridge roads—still delightful to drive—and stagecoach roads.

The preoccupation with railroads led to the neglect of roads and left their maintenance to towns and individual landowners. The use of every section road under which survey markers got buried was "natural but wasteful," according to one report of 1869, but habit led to rejection of diagonals, although early market-to-town roads ran diagonally across fields. In 1935, the Highway Commission of Iowa was actually prohibited by the Iowa General Assembly from grading, bridging, and surfacing diagonal roads around Des Moines. However, the orthogonal survey landscape conceded a dramatic exception with the advent of the interstate highway system.

By 1900, the nation with the greatest railway system in the world had the worst roads. Many interests sought improvements: the military, cooperative creameries, the National League for Good Roads (organized in 1892), the Grange, citizens' groups, and the League of American Wheelmen, supported by bicycle manufacturers. After 1903, when Rural Free Delivery brought the all-American metal mailbox as a national emblem to country roads, mailmen urged farmers to keep roads in good condition. Some states aided counties to improve section roads. Finally, a major step was taken with passage in 1916 of the Federal Highway Act through lobbying by the most effective advocate, the American Automobile Association.

Most automobiles can climb straight 15 percent slopes, the upper

Gridding a national landscape

limit highway commissioners will approve. When one drives in the heartland one can almost sense the tension between slope and section road, which keeps its straight up and downhill direction to the limit to avoid curving. After World War I, states declared section roads to be public highways, with only minor variations in their laws. The rural population declined consistently from then on, but road mileage increased all over the United States. Most of that increase consisted of straight section roads, increasingly paved when school consolidation required good local roads (Figs. 7.7 and 7.8).

Since subsequent internal subdivisions are expected, township boundaries should be correct. The quarter section was never fully surveyed because defining the central point of sections was not legislated. When needed now, it is established as equidistant from opposite corners. States began to legislate corner perpetuation through remonumentation (remeasurement of corners) by surveyors in the 1970s; Wisconsin and Indiana project a 5 percent remonumentation annually, the most successful rate for such programs. Sophisticated instruments now measure distances with a margin of error of 2 inches in 1 mile. One wonders if section roads need such scientific accuracy in a country where farmers

Figure 7.7
A section road in Antigo, Langlade County, north-central Wisconsin, in the early 1920s. The right-of-way is not only straight but wide, framed by the double row of utility poles, and the thin tires of many Model Ts have plowed numerous spoors in the roadway.

Figure 7.8
By the 1970s, hard surfaced roads, such as this one on a former prairie in Winona County, Minnesota, etched the straightness of the section lines with even more finality.

are eager to contribute half of the width of a section road when public funds pay for paving and maintenance. Blatant surveying errors, such as the survey of Reynolds County, Missouri, are visible.[20] But the section roads look straight, despite small irregularities. "For flying, the section lines are wonderful. They make the country in reality just what a pilot wants country to be—graph paper," wrote a German American research pilot in the 1950s.[21] The overlay of interstate highways brought some interference with the graph paper.

The conservation landscape

This square world is humanly artificial, it is not a pattern rooted in Nature. For all its economic simplicity, it is far from ecologically ideal. "Square agriculture on a round earth," fulminated Hugh H. Bennett, author of the United States Department of Agriculture pamphlet, *Soil erosion: a national menace*, published in 1928 to a rousing nationwide reception. Surveyors' lines, which are also property lines, and fence lines, and field lines, all make for straight furrows. Truly flat land needs drainage, widely applied in the Middle West but rarely noticed. The prairies are seen as flat but have swells and depressions. When

slopes are steeper than 5 percent, the soil is subject to water erosion, and clean tilled fields are subject to wind erosion. By the turn of the century, insufficient crop rotation, monocropping, overgrazing, and other widespread malpractices reduced productivity. Soil loss on uplands, siltation in valleys, gullies on slopes, and flooding occurred in many regions. Agricultural experiment stations began to work on countermeasures. Bennett, first as head of the Erosion Service in 1933, then as chief of the Soil Conservation Service from 1935 to 1951, fought ceaselessly to promote "contouring," which Jefferson had called "horizontal plowing," and Bennett's term became a household word.

Three concepts guided the change from traditional practices: watershed management, voluntary cooperation, and land use capability. Earlier endeavors toward land classification faltered. For example, the resolution of the House of Representatives of May 7, 1830, that public lands be classified by their "quality" and mapped on the basis of surveyors' notes was rejected by the Commissioner of the General Land Office because the notes represented lines, not the land in between, labor would "consume incalculable time," and "the great variety of soil embraced by almost every township would render it impractical." A century later, the Soil Conservation Service began to make such maps on the scale of 4 inches:1 mile, showing soil, slope, stage of erosion, and erodibility. A new series began in 1974–1975, and the maps have been used as the basis for planning conservation farms. The conversion to contouring could be watched on Conservation Day, which became a community event. With one day's enormous input of manpower, machinery, nursery stock, and fencing material, a farm's landscape was changed from rectangularity to curves—an impressive spectacle.

Farms have become increasingly fragmented through purchase or lease of additional forties; one farmstead no longer represents the owner's property. But survey lines endure (Fig. 7.9), still recognizable under modern practices such as stubble mulching, no tilling, terracing, use of sprinklers and combines. Section lines persist, with farmyards (sometimes abandoned) and buildings oriented along cardinal directions. Shelterbelts generally guard against northwest winds. Contours often do not mesh along property lines because the layout differs between neighbors. Seen from the air, the fields' tapestry of curves and colors still shows the survey's underlying seams.

Bennett wanted farms in the same watersheds to form soil conservation districts. But no watershed is delineated by straight lines. In nearly two-thirds of the United States, boundaries for states, counties, townships, and incorporated places are tied to the survey or follow rivers—a situation bad for coordinated flood control and water management. Yet by the late 1930s, soil conservation districts were organized by counties, probably because districts' supervisors needed the advice of county attorneys.

Coming from La Crosse to Coon Valley, Wisconsin, a sign by the

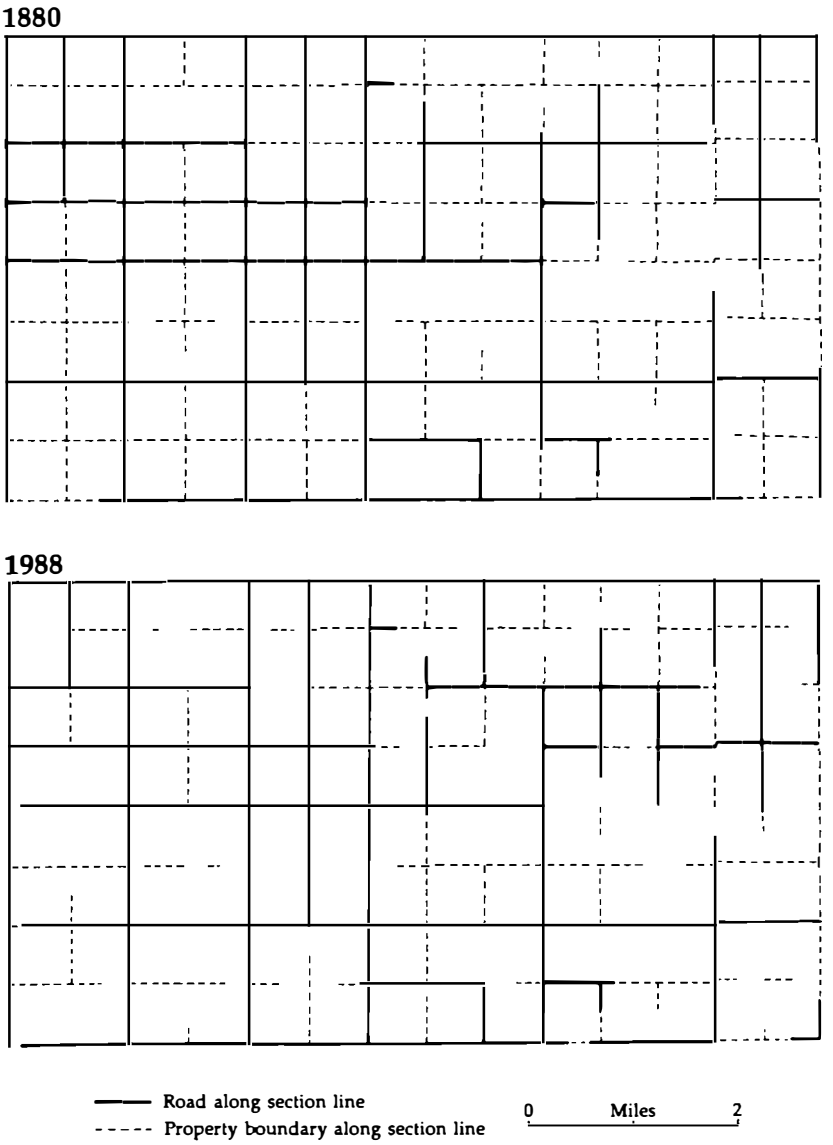


Figure 7.9
The land survey's grid lines remain stamped on the modern landscape. Many original section lines survive as road alignments and property boundaries, as demonstrated in a part of Jackson Township, Hamilton County, Indiana. The road pattern of 1880 is remarkably little changed today, but property lines, already departing from the primary section grid in 1880, have moved further away.

highway reads: "The first watershed project of the nation." The Coon Valley Erosion Control Demonstration Project, started in 1933, had about 40,000 of the total 92,000 acres in the watershed under conservation practices by 1938, which extended into three counties.[22] The Turkey Creek Soil Conservation District in southern Nebraska, proposed in 1937 and organized with over 63,000 acres 18 months later, covered 96,377 acres after one more year. This does not imply conservation measures covered the whole area, because data for non-cooperating farms were not published by the Soil Conservation Service. Since the Watershed Protection and Flood Prevention Act of 1954, watersheds not exceeding 250,000 acres are eligible for federal assistance, provided local

contributions are made first. Watershed management in soil conservation districts begins with petitions by county commissioners to the state board of conservation districts. The contemporary term for the continuing challenge of watershed management is "hydrological planning."

Voluntary cooperators may neglect and discontinue conservation practices, even destroy them—for example, pull out shelterbelt trees that interfere with machines—leading to lost investment of public funds and labor. Modern laws contain clauses for cross-compliance, including acknowledgement of owners' responsibility for subsidized conservation measures. The Soil Conservation Service still has no regulatory power, and farms that adopted conservation can and do return to straight rows.

Operators change practices for economic gain and are helped by social pressure. In the Middle West, progressives used to call laggards "square-minded farmers," who returned the compliment by calling contour-stripping "crazy-quilt farming." Numerous publications preached "stewardship" of the land. A recent survey of prairie farmers in Illinois found they ranked stewardship second, after productivity, as a criterion of "attractive" agricultural landscapes. Fifty years ago they would not have thought of the word.[23]

Toward a national landscape

The gridiron monotony of urban America is not entirely a consequence of the survey. Colonizers contributed Philadelphia, New Orleans, and other "historical" cities with geometric layouts. Brigham Young's Salt Lake City—with a monument to the Salt Lake City Meridian on Temple Square—has undifferentiated squares, quite suited for level ground. Citizens of Duluth, with streets running straight up a steep scarp, are less fortunate in Minnesotan winters. Some of San Francisco's streets are a challenge to pedestrians the year around, but they love the cable cars. Consider also the advantage of the grid pattern for numbering streets and avenues, or giving them names with initials in alphabetical order, and easily finding the one-way street going in the opposite direction.

The contemporary problem is the survey-connected suburban subdivision: unregulated, extremely wasteful of agricultural land and, in the desert, ecologically destructive. When rebellion became acute, developers advertised subdivisions with curvilinear streets, providing "an environment for living close to nature" with lanes, crescents, hollows, and groves. An Illinois architect commented in 1966, "Underneath all these contemporary trappings, much of our basic thinking is geared to a gridiron block system." He believed that a significant change in platting can come only by public or quasi-public acquisition of large areas of land and complete rebuilding.[24] Replanning subdivisions is impossible because too much capital is invested underground. Besides, physical

evidence of original corners is valid for property title. Resurveying and remonumentation is a formidable task. The federal government itself should resurvey about 50 million acres of national parks and federally owned land. So, rectangular suburbia spreads further, not only from metropolitan areas.

Air travel has given millions of Americans in our time a glimpse of the nation's checkerboard land divisions. The idea that the survey landscape represents an airview infringes on the concept of landscape as a naively given reality, postulated by Carl O. Sauer. The airview puts the survey on display; it does not make it more comprehensible. It has its own regionalism which precludes a description of sights; readers must look for themselves. Flying from east to west across the heartland, one sees how the survey lines evenly cover most of the Northwest Territory and control the agriculturally used land until stopped by the mountains. Between their ranges on valley floors, fragments of north–south and east–west lines appear, with a few buildings and roads ending somewhere, perhaps at an airstrip. The visible resemblance to the illustration of *Traces on the Rhodian shore* by Clarence Glacken is impressive. Shipwrecked Aristippus recognized geometrical figures on the sand and was cheered by these traces of men. Similarly, we are reassured that the surveyors, unable to measure all the land on their advance to the west coast, will have resumed measurements in Oregon or California. Through flying, we can experience the continental spread of the United States land system.

The heartland invites driving rather than walking tours, although the latter would undoubtedly provide better communication with the countryside. The survey landscape is thought-provoking rather than enjoyable. One thinks of its attributes: relentless, sober and geometric, perhaps ahistorical. Every square mile is documented; so is its inception on May 20, 1785. The American Congress on Surveying and Mapping sponsored a two-day historical symposium in 1985 to honor the bicentennial of the Ordinance, which predates the adoption of the American Constitution and is considered the second most important legislation ever passed by Congress.

We think of the grid-defined "Main Street of Middle America" as one of three American community types, between the New England village and California suburbia, the cosmopolitan east coast and the erstwhile frontier. Donald Meinig calls the heartland "typical America" in our auto culture. J. B. Jackson finds the grid layout of the Northwest Territory "the most imposing example" of the Great Awakening in the 18th century, and considers the survey "not an easy landscape to understand."[25] The arts might help. Foremost is the Prairie School of architecture, from Sullivan's Bank in Owatonna, Minnesota, to Frank Lloyd Wright. His Broadacre City was planned "without changing the existing land system." His homes are both in a survey landscape: Taliesin East, rather neglected in lovely Spring Valley, Wisconsin, and

Taliesin West, beautifully maintained but surrounded by the disheartening desert suburbia of Phoenix, Arizona. Of less renown is a bank he built in Mason City, Iowa.

Iowa's "mystique of geometry" lured a Swarthmore College professor away from "the vast reptilean suburb that writhes along the Atlantic" to spend his retirement in Iowa City.[26] In contrast, Grant Wood, after a fruitless year in Paris, returned to his home state and painted landscapes of billowing hills to convey the maternal roundness of Earth as "a gigantic reclining goddess," according to the catalogue of a recent retrospective exhibition on the artist. His fame derives from a 1930 picture, which became a national icon 30 years later. *American Gothic* is instantly memorized for its linear composition; with its religious inference, it is pure Middle West, and, through its innumerable caricatures, undoubtedly at present the painting most widely known in the nation.

When, in 1978, the National Endowment for the Humanities proposed recorded programs "for the listening environment of the cabin," a reporter announced he would rather look down at the real landscape than hear a talk about the heartland.[27] Travelers acquainted with the genesis of the survey might feel the same way. After all, the square has the quality of firmness, and "the four Elements, the seasons, the stages of Man's life, and especially the four points of the compass are all sources of order and the stability of the world."[28]

Chapter eight
Clearing the forests

MICHAEL WILLIAMS

OTHER THAN the creation of cities, perhaps the single greatest factor in the making of the American landscape was the clearing of the forests that once covered nearly half the country. Clearing was the first step in the creation of new farmland. The abundant timber was a ready source of domestic fuel, without which life in the northern two-thirds of the country during the winter months would have been impossible. Wood was the source of fuel for industry and transportation, and it was the major building material for houses, bridges, fences, furniture, ships, and a host of other artifacts, which included even roads! The forest was ubiquitous and abundant (Fig. 8.1). Wood and wooden products were central to and thoroughly permeated American life, so that, in 1836, James Hall could truthfully say, "Well may ours be called a *wooden country*."[1]

Several writers have explored the degree to which timber has entered into American life,[2] but the topic is much bigger than the "life from cradle to coffin" approach. It involves the whole geography, economy, and cultural fabric and ethos of America, and it resounds with grandiose themes such as deforestation, destructive exploitation, industrialization, agricultural self-sufficiency, Americanization, and environmental awareness.[3] That all these themes stem from the one great story of the clearing of the forests and the making of a new landscape is rarely appreciated and imperfectly understood.

Broadly speaking, the clearing of the forests was an outcome of three major processes—making farms and settling the land; logging to supply timber for constructional needs; and cutting to provide fuel for homes, industry, and transport. This three-fold division is valuable, but it should be borne in mind that the distinction was never as clear-cut as that. In reality, the clearing of the forests was a complex process. For example, the pioneer farmer not only cleared his land, but he supplied fuel to the growing towns, and might even have worked in a mill during the winter months, or otherwise supplied timber for building purposes. Likewise, while the primary object of the industrial loggers was to supply cheap timber for construction, the logged-over

Figure 8.1
Few stands of virgin forest remain in the United States, but some impression of the carpetlike cover forests once provided is given in this view above McDonald Creek in the Livingston Range along the Continental Divide in northwest Montana's Glacier National Park.

land, or cutover, was often sold for farming. The fuel needs of industry and transportation were often supplied by both farmers and loggers as well as specialized fuel getters. Nevertheless, for all this, the three-fold division is a useful one, as it lends order to the complexity of processes and patterns that have spanned the continent for over four centuries, from even before the beginning of European settlement to the present, and, inevitably, will continue well into the future, if only because trees are living, regenerating entities with the longest life cycle of any organism on earth.

The landscape of clearing

The conventional wisdom is that the landing of the Pilgrim Fathers and the planters in Virginia started the onslaught in the forest. The "war of the woods," as one settler called it, heightened the heroic nature of pioneer endeavor. But such a view conveniently ignores the fact that there were probably up to 12 million people in North America before

European settlement,[4] the bulk of whom lived in the forests. We can never be exactly sure of the true extent of the Indian impact, but with these numbers it must have been great. Early explorers' accounts of "meadows," "fields," "openings," "flats," and "savannahs" leave one in no doubt of the extent of clearing, of the thinning out of the forests, and of the change in its composition with repeated firing.[5] One account of many must suffice. William Strachey described the country around the present site of Hampton, Virginia, as

> ample and faire contrie indeed . . . the seat sometime of a thowsand Indians and three hundred houses, as it may well appeare better husbands [farmers] than in any part ells that we have observed which is the reason that so much ground is there cliered and opened, enough alreddy prepared to recieve corne and viniards of two or three thowsand acres.[6]

War, alcohol, disruption of tribal society, and, above all, disease wiped out most of the Indians, hence the already cleared fields which Strachey saw, and the Europeans moved easily into the clearings and cultivated the land. The Indian fields, together with Indian crops such as maize, potatoes, squash, watermelon, and kidney beans, and the cultivation of them in Indian fashion in mounds and rows with a hoe, enabled the European to gain a toehold on the continent. The Europeans' debt to the Indian was immense.

Soon, however, the press of new migrants became greater and farm-making occurred everywhere in the forests along the eastern seaboard. A few acres were cleared quickly during the first year, either by clear-cutting the trees—more common in Northern states and hence known as Yankee clearing—or by girdling the bark, which was more common in the Southern states. In the former, the stumps were left to be pulled out of the ground when they rotted; in the latter the deadened trunk stood gauntly in the field and toppled over in time. Crops were cultivated in mounds between the stumps and fallen trunks, and stock were left to roam and graze in the surrounding forest. Clearing was long, hard, and gradual, and, as each year passed, so a few more acres would be opened up and added to the farm, so that in ten years about 30–40 acres were cleared, depending on a variety of factors such as the size of the trees and the degree of family help.[7] More might have been cleared, but one must remember that the pioneer farmer had other tasks than simply felling trees. He had to be fairly self-sufficient and provide nearly everything on the spot from his block of land—a house, crude furniture, food, fencing, and a stock of fuel wood to bide him through the winter months. Moreover, initially there was little point in clearing more ground than was necessary to raise food for his family. In time, as settlement expanded and service centers grew up in the vicinity, a

local market existed for his surplus food and fuel wood. Then it became worth his while to clear more land.[8]

The forest experience of the pioneer was the basic element in American geography and history for the first two and a half centuries of settlement. Chastellux, who traveled extensively through the East in the 1780s, said that the sight of "the work of a single man who in the space of a year" had cut down several acres and built himself a house was something he had seen "a hundred times . . . I never travelled three miles without meeting a new settlement either beginning to take form or already in cultivation."[9]

Nevertheless, despite the fact that the felling of the forest and the making of a clearing in order to begin cultivation was the common experience of millions of Americans, by the beginning of the 19th century, the realities of this everyday, mundane task of the ordinary people are difficult to pinpoint and to understand. Perhaps the essence of the experience is conveyed best in the series of four sketches made to illustrate Orsamus Turner's *History of the Holland Purchase of western New York.*[10] These sketches represent intervals of six months, two years, ten years, and "the work of a life time" in the making of a farm in the forest. They are like four "stills" in the continuously moving picture of the making of the American landscape.

In the commercially oriented plantations of the South, the slave replaced the pioneer family farmer as the clearer of the forest. Commonly, a slave was calculated to be able to clear 3 acres during the Fall, split the timber for fences and posts, and then prepare the ground for planting in March.[11] Although clearing was done by slaves, there is no reason to think that it was done without expense, as slaves had to be bought, housed, and fed, so what the Northern farmers paid for in hard labor the Southern planters paid for in hard cash.[12] Generally, clearing in the South was in large fields, big enough to accommodate the slave-operated crops of cotton and tobacco. But because these crops, particularly tobacco, were heavy consumers of nutrients and even made the soil toxic, and because no manure was put back into the ground, yields soon declined drastically and the planters moved on to clear fresh forest land after an interval of 10–20 years. Consequently, they rarely thought it worth grubbing up stumps because the field would soon be abandoned to weeds and the regenerating pine forest. This continual clearing and shifting on was worthwhile as tobacco yielded high returns and new forest land was cheap to buy.

It is difficult to estimate the total amount of land affected by clearing: no tally was kept because, among other things, clearing was regarded as the first step in the "natural" process of "improvement" that was not worth recording because it was so obvious and commonplace. Nevertheless, in the forested eastern half of the country the amount of "improved land" in predominantly forested counties is a good indicator of land cleared (Table 8.1). Before 1850 (when accurate figures became

Table 8.1 Improved land in farms in forested and non-forested counties (in millions of acres)

	Forested areas	Non-forested areas
Before 1850	113.7	—
1850–1859	39.7	9.1
1860–1869	19.5	19.4
1870–1879	49.3	48.7
1880–1889	28.6	55.7
1890–1899	31.0	41.1
1900–1909	22.4	51.6

Source: Primack 1962.

available), it is probable that over 113.7 million acres had been cleared. In the ten years between 1850 and 1859 there was a big upswing in clearing, when a remarkable 39.7 million acres were affected. During the turbulent decade of the Civil War, the amount of forest cleared and settled fell to 19.5 million acres, but rose again to its highest intercensal amount in 1870–1879, when 49.3 million acres were affected. After that, more acres of open prairie land rather than forest land were settled, a mere 1.5 man-days' labor being needed to break the sod and plow an acre of prairie, compared to about 32 man-days of labor to clear an acre of forest.[13] Henceforth, agricultural clearing as an element in the making of the landscape diminished in importance compared with other processes, and the demand from the relatively treeless plains for construction timber and fuel stimulated the commercial lumber and fuel-providing trades.

In emphasizing the destruction and removal of the forest, it should not be forgotten that the timber was also a resource of the highest value for housing, fencing, fuel, and, if the farmer was fortunate to have access to a ready market nearby, also for selling cordwood, making potash and pearl ash, collecting bark for tannin, turpentine, and pitch, and even for selling lumber.

The pioneer farmers' most urgent need was to provide shelter for their families. The log cabin, the symbol of American pioneer farming life, was probably introduced into the Delaware region by the Swedes during the late 17th century, and it became universal in the forested areas of the country.[14] It was extravagant in its use of wood, but because it required no nails, holes, or shaping, it was easy and quick to construct, both great advantages on the frontier. With about 80 logs of between 20 and 30 feet in length and a few helpful neighbors gathered together for a logging "bee," a cabin could be erected in under three days.[15]

The details of the corner notching and stone chimney style varied from region to region and from one ethnic group to another to produce distinctive vernacular architecture, but the basic plan of one large room,

perhaps with a division for sleeping quarters, was general.[16] Only the floorboards, doors, and furniture consisted of sawn, or more likely, hewn timber. Furniture and utensils of wood were added as time permitted and need dictated, the most important of which were the two great beds that seemed to dominate most cabins and which "receive[d] the whole family." Later, as the locality became more settled, water-powered sawmills and sufficient quantities of sawn timber became available for the methods of construction to change. Elaborate and elegant clapboard houses (which had nearly always been the norm in the New England coastal settlements) built around carefully constructed timber frames became more common, and log cabins were abandoned or sometimes built over and incorporated within the clapboard house (see Figs. 8.2a, 8.2b and 8.2c).[17]

Fences were essential to keep out the free-ranging cattle and hogs that roamed the uncleared and unclaimed forest. Once the trees were felled, crude makeshift fences of tangled branches, rolled logs, and piled-up stumps gave place in time to more elaborate and permanent structures. The Virginia fence, also called the worm, snake, or zigzag fence because of its shape, was used everywhere in the East. It consisted of slender logs or split rails laid in a zigzag pattern and intersecting with each other at right angles. There were anything from six to ten rails in each segment and heavy bracing logs were sometimes placed at the intersections. The Virginia fence required great amounts of timber and took up large areas of land. For example, a square field of 160 acres required 0.5 mile of fencing on each side (a total of 2 miles), but nearly half as much again if fenced in right-angled zigzags. Therefore, a ten-rail, 10-foot-length zigzag required at least 15,000 rails. The advantages of the Virginia fence were that it required no post-holes, pegs, notches, or ties, and it was easy to repair and move to new locations—an important consideration in the incremental enlargement of clearings in the North and the shifting tobacco cultivation in the South. Because no posts were embedded in the ground, it was said to last for 20–30 years. More importantly, it was hog-proof.[18]

Post and rail fencing was more economical in timber use—8,800 rails and 200 posts would enclose a 160-acre square field—but it meant more labor for the farmer, who had to dig the holes as well as split the rails and slot the posts. The invention of the spiral augur after 1800 increased the popularity of post and hole fencing, particularly when farmers reached the treeless prairie edge after 1830 where wood was scarce and imported supplies very expensive. Not until the invention of barbed wire did the prairie farmer solve his fencing problem satisfactorily and cheaply.[19]

As the clearing expanded and coalesced, farmers were left with remnants of woodland on their steeper slopes, poorer ground, or extremities of their farms (see Fig. 8.2d). Even up until the beginning of the 20th century, after nearly three centuries of clearing, anything up to half or

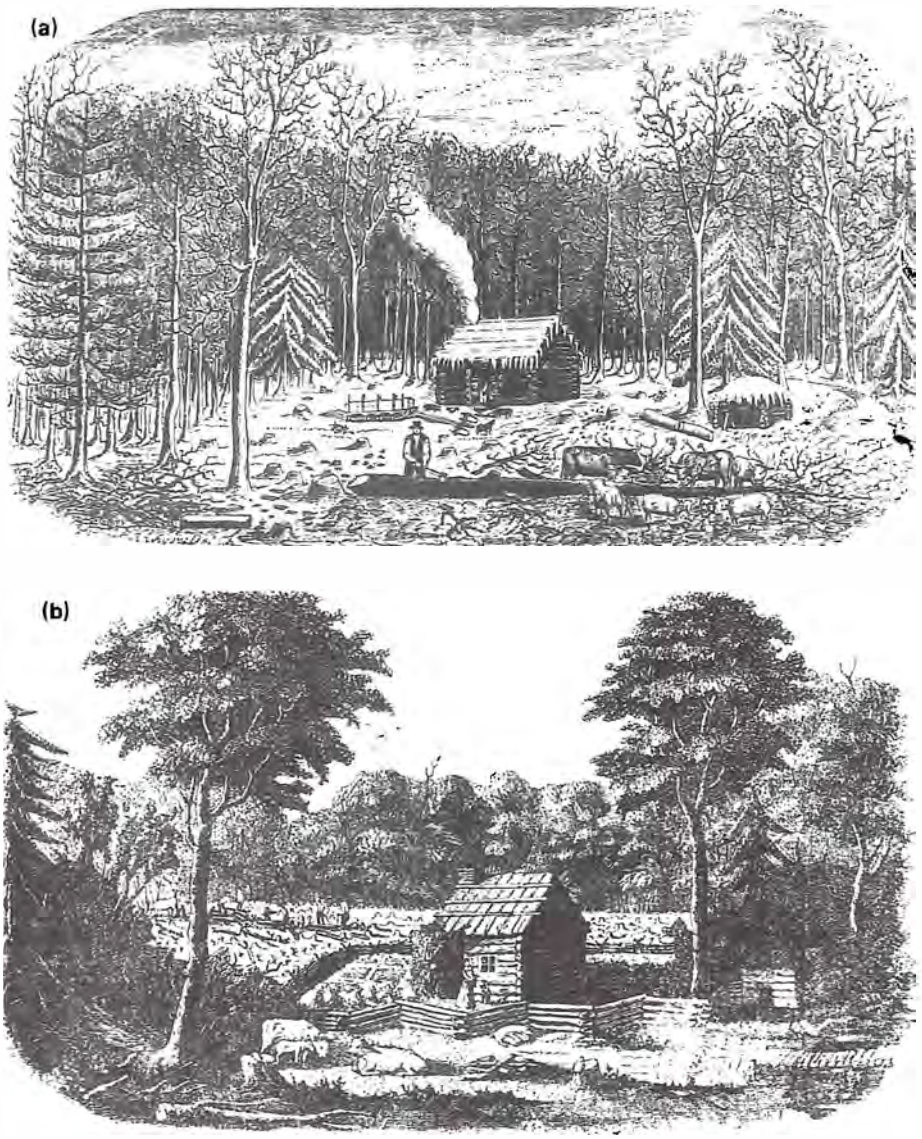
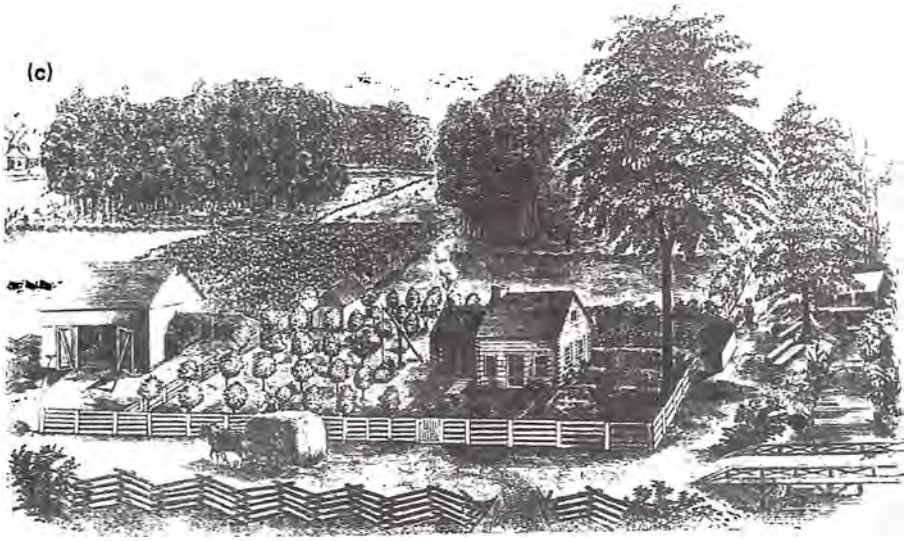
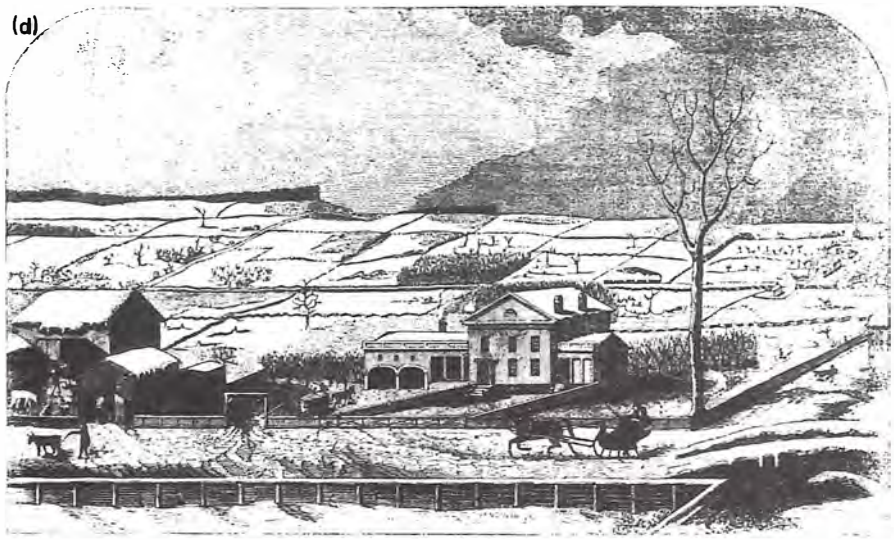


Figure 8.2 a–d Orsamus Turner produced these four etchings of the life cycle of a pioneer woodsman in upstate New York in 1851. They represent the same scene at four intervals: six months, two years, ten years, and "the work of a lifetime." These delightful etchings teem with detail about the pioneer's life, from the arrival of children and neighbors (b) to the arrival of the railroad (d). They encapsulate the essential experience of millions of woodland farmers.

more of the land in farms in the South and northern Lake States was still in woodland, as was 10–20 percent of the farmland in the Middle West and Middle Atlantic States.[20] To clear more would have been ecologically impossible given the regrowth rate, and economically unsound given the value of wood to the farmer. The woodlot, depending on its size, was a valuable source of rough grazing and browsing for stock (particularly in the South), a source of shelter from cold winds and heat, a source of construction timber, and, above all, a source of fuel.[21] The woodlot remains a prominent feature of the landscape (Fig. 8.3).

The cold winter months made cheap and abundant fuel indispensable for settlement in the northern two-thirds of the country, and even in the South winters were cold enough for dwellings to require heating.





The remedy was, said one settler, "not to spare the wood of which there is enough," and great blazing fires halfway up the chimney were a common sight in pioneer cabins on all except the warmest summer days.

Initially, of course, fuel was the incidental by-product of clearing. Consequently, there is little evidence of how much wood was cut, gathered, or burned. Probably, the average farmer devoted between one-eighth and one-fifth of his work time to chopping, splitting, and stacking cords of wood once his initial farm-making activities were over.[22] An annual consumption of 20–30 cords was common for a rural household and larger farms used double that.[23]

Fuel wood was also an important source of cash for the pioneer

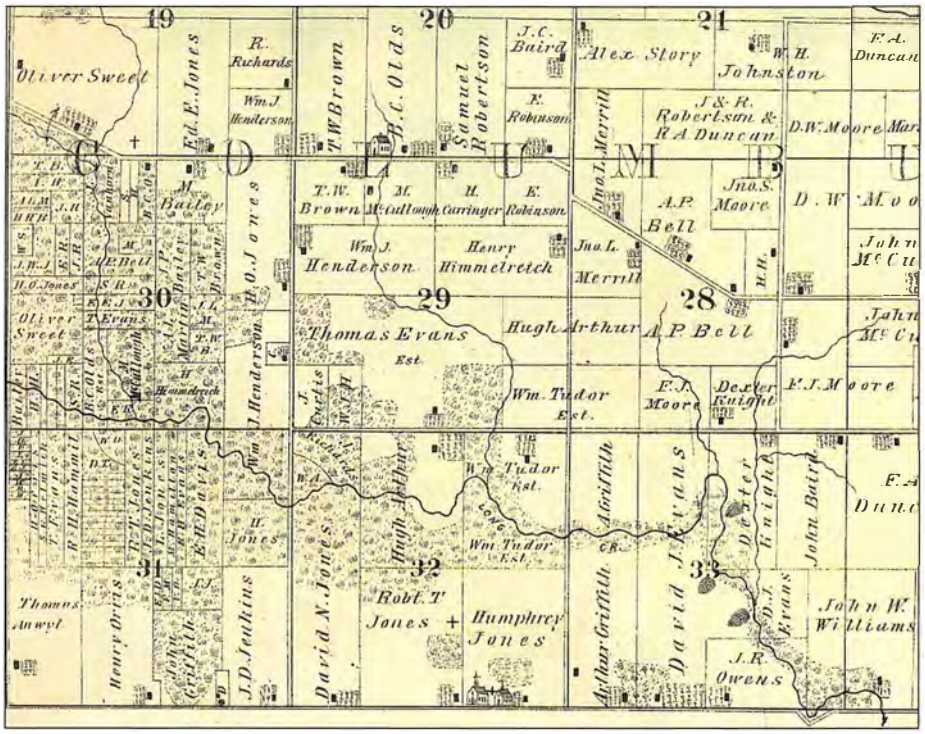


Figure 8.3
Woodlots along stream courses bordering open prairie in Louisa County, Iowa, in 1874. Note that Henry Himmelreich (NE Sec. 29) also owned a woodlot athwart Long Creek (SE Sec. 30).

family. Even if they did not live near a large town, such rural industries as blacksmith shops, tanneries, and iron works could provide a market. Certainly, all the larger towns on the eastern seaboard were short of fuel from the early 17th century onwards, a situation which got progressively worse, and land haulage was found to be practical for up to 25–30 miles.[24] During the colonial period, firewood was moved further only if water transportation was available, either by river or along the coast. Wood for New York City came from Maine and New Jersey.[25] Merchants who cornered this lucrative trade relied on the farmers to send their cordwood downstream from the interior. After the Revolution, the scarcity of fuel wood became even more acute in the older settled areas and prices rose, making it profitable for farmers to haul cordwood from even greater distances than before.[26]

While emphasizing the theme of deforestation as a major formative process in the landscape, it should be recognized that, in recent years, and particularly since the mid-1930s, the forest has regenerated over vast areas where once it had been cleared. Abandonment of marginal and unproductive farms, the elimination of damaging fires, decreased dependence on wood, some aforestation, and better forest management all round have meant that in the 31 easternmost states 65.5 million acres of cleared farmland have reverted to forest between 1910 and 1959, against which can be balanced the clearing of 21.7 million acres (often for suburban growth).[27] Since 1959 another 16.9 million acres net have

Table 8.2 Measures of forest regrowth, 1944–1979

Measure	1944	1979
Commercial forest (million acres)	461	483
Non-commercial forest (million acres)	120	254
Standing timber (billion board feet)	1,601	2,569
Annual net growth (bill. board feet)	6	36

Source: U.S. Congress. Senate 1982.

been lost to agriculture and inevitably gained by the forest. Some measures of these gains are shown in Table 8.2. Indeed, much of what we take to be virgin forest today in the eastern and southern states is barely 40–50 years old and it is growing out of old fields. The vitality of the forest is astounding and its rebirth is extensive.

The landscape of logging

Until the early years of the 19th century, lumber activity and agricultural settlement were coincident. The pioneer farmer was a part-time lumberman. The timber he cut was sold directly to consumers or more likely to small local mills; he sold cutting rights on his land and sometimes found seasonal employment working in the woods for a professional lumberman. Where rivers such as the Hudson, Delaware, Susquehanna, or Savannah and their tributaries flowed past an area of pioneering and onward to a market, many farmers individually or in small groups cut timber and rafted the logs downstream, returning on foot with essential supplies bought from the proceeds of the sale in the urban market. Consequently, with this localized, sporadic and uncoordinated logging, there was no distinctive landscape of logging in the early settled areas, only a landscape of farm-making.

But the situation changed with the advent of commercial, large-scale logging in New England and New York at the beginning of the 19th century. The new scale and form of logging was a response to the increasing demand for lumber from a growing population and an increasingly industrialized economy and society. From a mere 0.5 billion board feet cut in 1801,[28] the amount of lumber cut rose to 1.6 billion board feet in 1839, and the rate of cutting quickened at each successive decade to form a new and upward sloping curve which reached 8 billion board feet in 1859, 20 billion in 1880, and a peak of 46 billion board feet in 1904, an amount never reached since.[29]

The ability to supply these enormous quantities of lumber rested on a host of new inventions, techniques, methods of transportation, and forms of business organization, all at a new, larger scale of operation. The lumber and forest products industry, like industry everywhere in

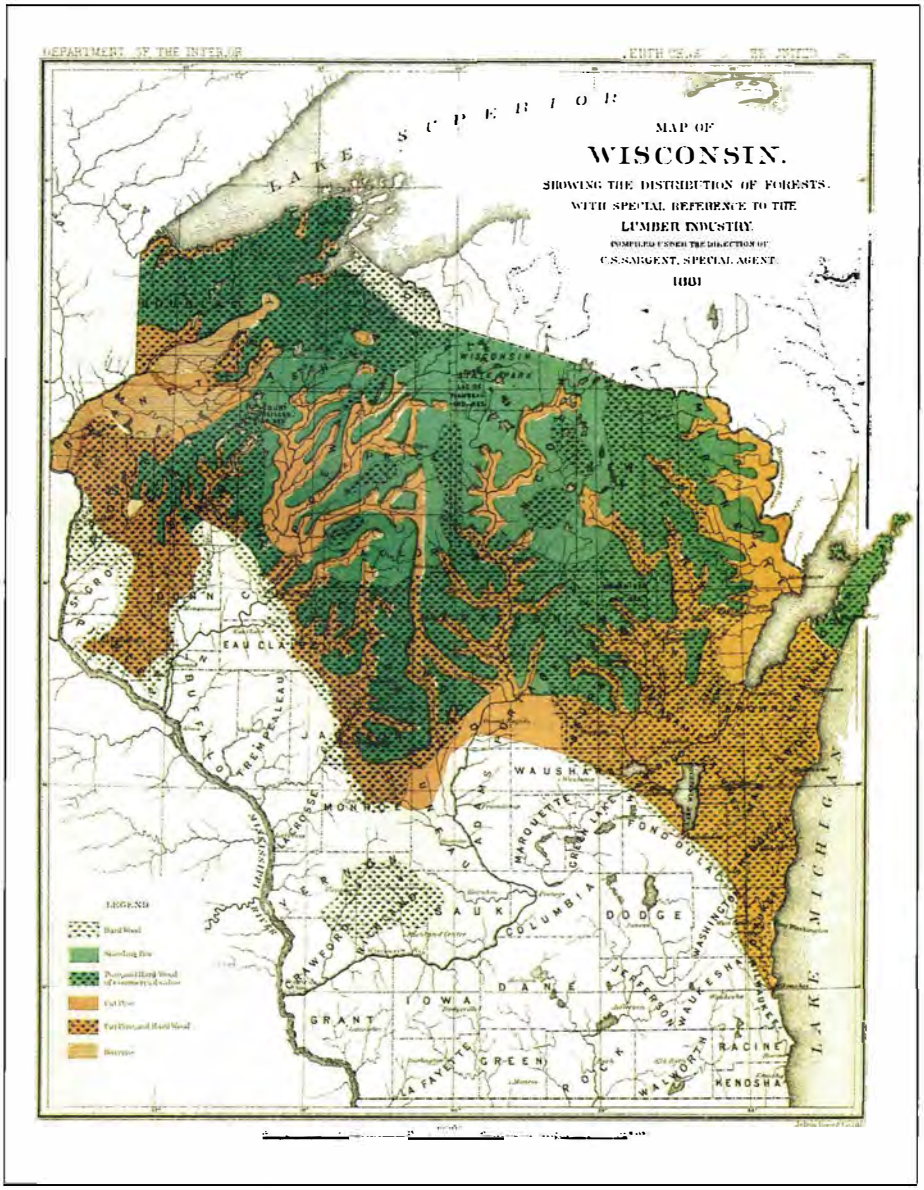


Figure 8.4
The finger-like penetration of the Wisconsin Northwoods by loggers working progressively upstream—and the extensive cutover zones thus created—is dramatically captured in this map from the U.S. Census in 1880.

the United States, was entering a phase of vigorous expansion in the era of industrial capitalism.[30] For example, steam power meant the concentration of industrial activity and the beginnings of corporations and monopolies; steel meant better and more efficient tools; the railroad meant reliable, fast, and more flexible transportation; all meant increasing specialization of activity, concern for efficiency in an era of cut-throat competition, tighter contractual agreements, and the mass production of a standardized manufactured end-product. In the forest, the systematic cutting of large areas replaced the cutting of individual trees, and the large-scale ownership of standing timber enabled this

monopolistic exploitation to take place.[31] The old scale of cutting was swept away.

In the mills, the water-powered single-bladed, up-and-down saws that cut between 200 and 3,000 board feet of lumber daily were replaced during the 1850s by steam-powered circular and gang-saws, which raised output up to 40,000 board feet or even double, especially with round-the-clock operation which was now possible as the mills were released from the vagaries of daily and seasonal river flow. Steam replaced water as the major power source just after 1870. Friction feeds, edgers, drying kilns, and a whole host of inventions increased the quantity and quality of the output and reduced waste, which was usually about half the timber in a tree.[32] On the rivers, the rafting of a few logs lashed together was replaced by the log drive, where the whole river was utilized as a transport network for all the logs cut throughout the basin (Fig. 8.4). Logs were cut, hauled to the river's edge, and then sent downstream on the spring thaw, often being given a surging start with the release of the water pent up behind the specially constructed splash dams, to be sorted out at the pens or "booms" at the mills many miles downstream. The logs were identified and credited by an elaborate system of markings notched into them.

The log drive required a great deal of cooperation and regulation. Driving, river improvement, and boomage charges were levied, and strict laws enforced over the date of the start of the log drive, the methods of sorting, and the disposal of "strays."[33] Without the spatial system of the log drive as a part of the new production pipeline, the new high-output mills could not have functioned efficiently and met the demand. While the log drive operated at the "local" level, a new system of continental proportions evolved linking the areas of lumber surplus—mainly the Lake States—with the areas of lumber deficiency in the Northeast and the prairies. Most eastern seaboard states were experiencing shortfalls by the 1830s. New York, for example, imported over 500,000 tons annually by 1850, and double that amount ten years later. The shortfall was made up by imports, first from neighboring states and Ottawa, and then eventually from the Lake States.[34] Lumber was sent by lake steamer to be offloaded at Buffalo or Tonawanda, and then it went by the Erie Canal to Albany (which grew into the largest wholesale lumber center at the time), and then down the Hudson to New York. In the west, Chicago grew after about 1845 to become the gateway through which the lumber of eastern Wisconsin and western Michigan went to the prairie states to the southwest and south. A subsidiary arm of this western transportation system was that whereby the lumber of Minnesota and western Wisconsin went down the Mississippi in enormous 4- to 5-acre size rafts to be offloaded at the westbank ports for milling and then distribution over the plains to the emerging settlements in Kansas, Nebraska, Iowa, and even as far west as Colorado during the 1870s and 1880s. Initially the Chicago and Mississippi subsystems functioned independently but

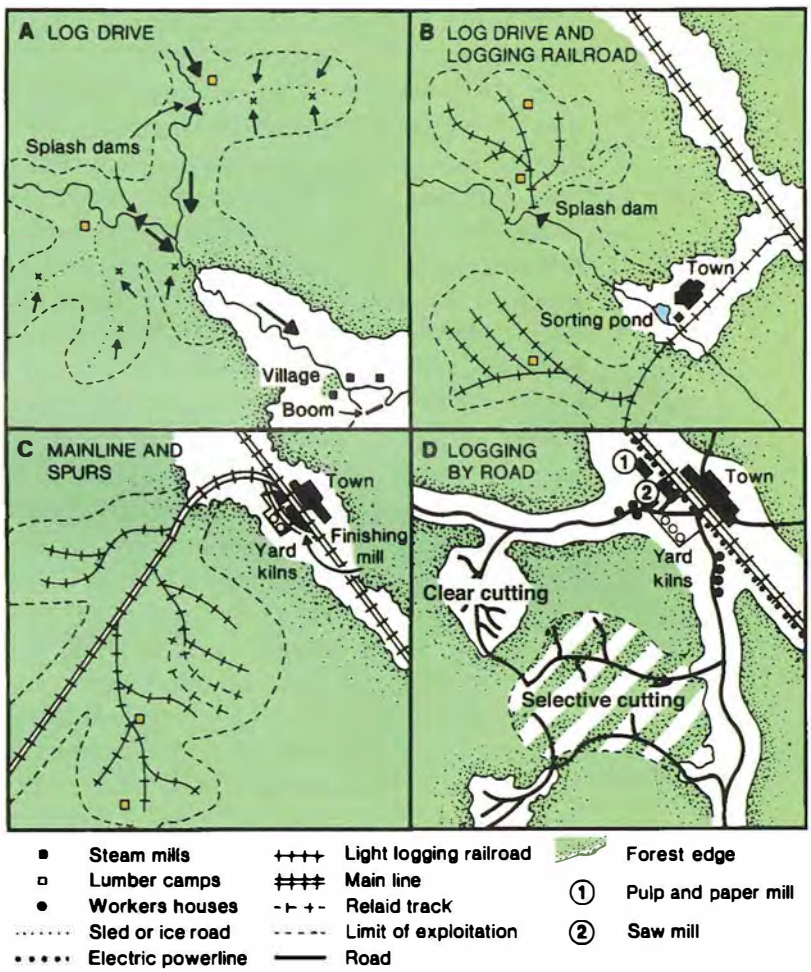


Figure 8.5 a–d

Distinctive landscapes in the evolution of American logging (these phases were often overlapping in any one region): (a) before 1850: pre-stream, using the river for transport, characteristic of New England, New York, and early Lakes States logging; (b) 1850–1880: the addition of logging railroads, steam mills, and permanent settlements, characteristic of later Lake States and early Southern logging; (c) 1880–1920: integration of logging railroads with mainline carriers, breakdown of processes at mills, characteristic of the South; (d) 1920 onward: logging by road, trucks, tractors, and mechanical hoists, addition of pulp-making at the mill, characteristic of the Pacific Northwest.

when Chicago's railroads splayed out across the Middle West they came into direct competition.[35] Later, during the 1880s, when the Lake States were in decline and the South came "on stream" as the major supplier of Middle America, the railroad system linked all areas and dominated the distribution of lumber.

The landscape of commercial logging reached its characteristic form and epitome in the Lake States where the assiduous application of new inventions, with the addition of steam skidders, ice roads, and logging

railroads, enabled exploitation to proceed efficiently and ruthlessly. The logging landscape had two faces: there was the landscape of the processes of exploitation and the landscape of depletion.

There is no one example that one can point to of the typical logging landscape, but Figs. 8.5a, 8.5b, and 8.5c are a composite picture of many 19th-century accounts. In Fig. 8.5a, the landscape of the log drive is depicted; its main characteristics have been described in detail already. But, in addition, there were the ice roads, made by sprinkling water over specially graded tracks so that sleds with loads of up to 30,000 board feet could be drawn by horse and glide easily with a minimum of friction to the water's edge during the winter months. The lumber camps, specialist settlements to house the workers in the forest, are also shown. At first, these were crudely built composite, one-building structures of bunkhouse, dormitories, and stores. But in time they became more complex groups of structures, each with a specialized function, so that the lumber camp came to resemble a village in the woods.[36] With the advent of the railroad during the 1860s, the ideal site for a mill became the bank of a log-driving stream where a railway crossed it, and by the end of the century the conjunction of the two explained nearly all the larger concentrations of lumber activity in the Lake States and even in Maine. Accompanying the mill was the inevitable lumber town to house the workers. The lumber towns grew haphazardly, although in later years whole towns were created by mill owners *ab initio* in order to house their workers and retain a captive workforce.[37] In the forest above the splash dams, lightweight logging railway tracks were laid in all directions, and, once the immediate forest had been felled, the lightweight track could be taken up, and relaid a few hundred yards further on. The final stage (Fig. 8.5c) came with the construction of spur lines from the main lines without any break of gauge. Exploitation was quickened and maximized. Mill owners found it profitable to install drying kilns to assist seasoning, and planing mills to finish off products which could then be transported directly to the customer, and they even began to produce complete, ready-to-assemble wooden houses, churches, stores, and other buildings in a number of styles.

The heady boom of cutting in the Lake States, which doubled production of the white pine from about 4 billion board feet in 1870 to over 9 billion in 1890 only to fall continuously from then on to a mere 1 billion board feet in 1920, left a landscape of depletion behind it (Fig. 8.4). Although many mills turned to other types of wood, particularly hemlock and hardwoods, dozens of once flourishing villages and towns went into decline and the smallest disappeared. Some of the more enterprising, such as Eau Claire, Oshkosh, and La Crosse in Wisconsin or Grand Rapids in Michigan, for example, managed to diversify into other manufactures and a whole array of wood-using industries like door-, blind- and sash-, and furniture-making sprang up,[38] but many more were like Cheboygan and Alpena in Michigan, which became

ghosts of their former selves. In 1886, Cheboygan had been a bustling town of over 6,000 inhabitants, 16 mills, and numerous wood-using industries, but in 1916 there were only two mills left and the number of employees in industry had fallen to barely 1,000. Alpena suffered similarly. Whereas the town had seemed "made of sawdust," it now scratched for a living with the depletion of the forests:

> Mills which formerly selected only the stoutest pine trunk now welcome the slender log, the crooked log, the rotten log, and the sunken log fished up from the river bottom. In place of beams for the western railway bridge or huge rafters for the Gothic church, Alpena busily turns out planks, shingles, spools, pail handles, veneering, and the wooden peg for furniture. It also makes manila paper out of hemlock pulp. It brings hemlock bark to its tannery. It combs its brains for inventions to utilize by-products, as does the Chicago pork-packer.[39]

In addition to the decline and disappearance of the settlements, the forests themselves had deteriorated. The great piles of slash waste left on the forest floor after the cut-out-and-get-out exploitation were ready fuel for the devastating fires that spread repeatedly through the region. The great Peshtigo fire of northeastern Wisconsin in 1871 devastated an area of 50 square miles and killed 1,500 people, and the Michigan fire of the same year consumed 2.5 million acres. In 1885, nearly all the Wisconsin Valley was swept by fire, and in 1894 there was the great Hinckley fire in Minnesota that caused 418 deaths, and so it went on almost annually.[40]

As the forest diminished and communities waned for lack of raw material supplies, the desire to conserve the forest in some way or another rose from being a quiet murmur of the slightly eccentric and intellectual to the loud cry of practical people who saw their livelihood threatened.

Finally, there was one other outcome of forest exploitation which was manifest in the landscape—that was the cutovers; they probably totaled over 50 million acres, stretching across the middle and northern parts of the three Lake States, from the Red River in Minnesota in the west to Lake Huron in Michigan in the east. Unlike the hardwood forests to the south, which had been taken up immediately for agriculture once they had been cut, these lands were marginal to farming in all senses of the word. Cutting had been careless, so that the ground was strewn with debris and massive stumps often cut many feet above the ground. Fires had been devastating, the soil was indifferent, poor, glacial outwash sands and gravels for the most part, and the climate averaged only 100–130 frost-free days, which was too short for growing corn but just sufficient for growing grass and hay. Most of the cutover was simply too far north for agriculture.[41]

But the timber companies wanted to wring the last penny out of the land, and, moreover, they wanted to get rid of it because it was liable to state taxes. It could be abandoned, of course, but that threw an intolerable burden on surrounding tax-paying areas. The railway companies wanted settlement because new farms would increase revenues, and the state governments, imbued with concepts of progress and improvement, were not prepared to allow northern portions of their states to "revert to wilderness with the passing of the lumber industry."

All three advertised the virtues of the cutover widely in America and Europe, particularly in Scandinavia. The literature was boosterish; it sidestepped the difficulties of the environment and promoted an image of a rural paradise that rivaled the Middle West or better parts of the Great Plains in its productivity. Thousands of unsuspecting migrants came and struggled to make a living in impossible conditions. There was a high rate of failure, and the remainder hung on leading a wretched life trying to eke out an existence.[42] The cutovers were (and still are in places) dotted with unpainted and sagging farmhouse structures, some mere tar-paper shacks, and derelict fences. In the deserted fields, occasionally one still sees a lilac bush or a heaped-up pile of stones where a chimney once stood, both markers of an abandoned homestead, the whole scene a mute and a melancholy testimony to abandoned hopes. Only after the mid-1930s were reclamation efforts made in the cutover to return the land to the crop it grew best—trees.

The Lake States were the first region to show the degree to which man could alter the landscape by logging, but it was not the only region affected. Just as the wave of production (and firms) had shifted progressively from New England to New York and Pennsylvania by the early 19th century, so, as the output of the Lake States declined after 1880, the wave of exploitation moved on to the Southern states, particularly to Georgia, Alabama, Mississippi, Louisiana, and eastern Texas. Then, when that region faltered after about 1910, production moved on to the Pacific Northwest.[43] The South was the epitome of industrial capitalism in the lumber industry. Forest exploitation was almost entirely railroad-focused, except along the few rivers that penetrated the region, such as the Savannah and Alabama in Georgia, the Pearl and Pascagoula in Mississippi, and Calcasieu in Louisiana.[44] Mainline railroads were laid from Southern ports to Northern markets, usually in competition with the Mississippi steamboat trade, and many spur lines of 40–50 miles in length were laid out in the surrounding pine forests with preselected sites for mills at 3- to 5-mile intervals along their routes, the mills sometimes being built ahead of the railways so that the stock of lumber would be ready once the connection was made. Mills were generally larger than in the Lake States and exclusively steam powered. Haulage was more mechanized, usually by massive steam-operated skidders that ran on the railway tracks. These had long grappling arms and derricks from which steel cables could be run out into the surrounding

forest and attached to logs, which could then be dragged to the railside and hoisted on to the trucks.[45] As the skidders harvested the logs in a circle around them, so they ripped out all the young growth that might have allowed the forest to regenerate and scraped the thin soil bare.

Just as the big companies owned the land, the trees—in fact whole counties—so they owned the towns and their inhabitants, too. There were hundreds of little company towns, all with their center of a church or two, lodging houses and the commissary, the single department or general store owned and operated by the company where the employees bought the bulk of their food and goods, often at inflated prices, by coupons paid in lieu of wages. Most laborers were ex-slaves or poor whites coming off low-income farms. No all-male lumberjack camps with the aura of rugged and heroic individualism existed in the South. It was a docile labor force of family men in small towns who could not protest about their isolation and exploitation.[46] They were mere cogs in the machine of industrial lumbering.[47]

With important social differences, then, the landscape of lumber exploitation in the South conformed to the pattern in Figure 8.5c, usually without the river. Additionally, because of the generally flatter terrain of the South, the felling of the forest was more regular and methodical, logging lines being laid at intervals of less than 1,000 feet in order to strip the land bare of every merchantable tree.

When the forest was stripped of its timber, the companies moved their mills and their key workers and let the town die. The mills, once the "pulsing hearts" of the settlements, sagged at their foundations and the railroads rusted from disuse. In the towns, grass began "to grow from the middle of every street and broken window lights bespoke deserted homes." The mill had "sawed out."[48] The sequence of birth and death of sawmill towns in the Calcasieu basin, western Louisiana, between 1895 and 1955 is shown in Figure 8.6.[49]

In the cutover, what the skidders had not destroyed, fires in the lumbering debris finished off. How much land was left in cutover is difficult to calculate. In 1907, it was said to be an astounding 79 million acres, of which only one-fifth was restocking with trees. In 1920, the figure was revised to 55.4 million of which just over half was restocking with trees.[50] Whatever the truth, one thing was certain, logging had left a vast area of derelict land throughout the forest of the South.

In the Pacific Northwest, the company lumber town reigned supreme in the logging landscape, and because there was little agriculture there were few other settlements. Initially, most of the lumber towns hugged the coast, relying on exporting their cut timber south to San Francisco and throughout the Pacific, but when the lumbermen moved inland into the broken terrain and steep slopes of the ranges, other means of exploitation had to be devised.[51] Hauling could not be done easily by river or rail, and therefore water flumes were constructed to link the high ground in the ranges to the lowland mills. Stationary donkey engines

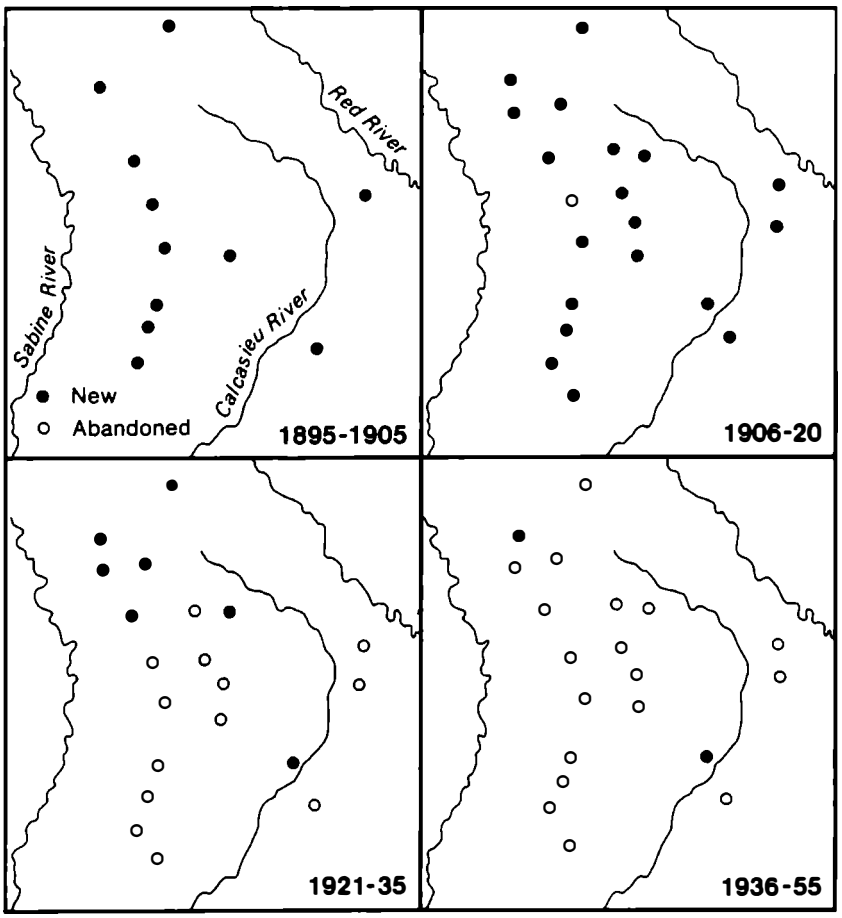


Figure 8.6
The creation and abandonment of lumber towns as stands were cut out in the great Southern pine forests of the Calcasieu Basin, western Louisiana, between 1895 and 1955.

and overhead skyline skidders were used to negotiate the difficulties of yarding in the forest. By the 1920s, however, significant innovations were underway in log haulage, particularly in the Douglas fir forests of the Cascades and Coastal Range, with the advent of tractors (later with great A-frame hoists behind) to snake out the logs, bulldozers to make rough tracks, and trucks to take the logs to the mills (Fig. 8.5d). The cheapness, mobility, and relatively small labor force needed revolutionized logging. While the big companies used these methods, so, too, could individual small-scale loggers, and the landscape of heavy capitalization in equipment and permanent way was replaced by one of flexibility and few permanent features.[52] Such practices spread to most other logging regions by 1940.

On the whole, there was far less cutover land in the Northwest than in any other region. The logging companies knew that there were few farmers willing to take on the steep slopes, massive stumps, and high rainfall of the region, and they did not try to promote agricultural settlement. In any case, the forest grew back so quickly and the product was so valuable, and they knew that there were no other regions to which

Figure 8.7 Clear-cutting on a hillside near the Middle Fork of the Willamette Valley southeast of Eugene, Oregon, in 1990. Note the roadside sign stating that the trees in the stand alongside the highway were planted in 1985, highlighting the growth achieved in five years.

they could move on as in the past, that they made the best of what was there. Many companies attempted to adopt conservation techniques of cutting in order to promote regrowth in time (Fig. 8.7). Thus, the Pacific Northwest was different to the other logging regions.

The landscape of fuel gathering

While the cutting and gathering of wood for fuel has probably consumed more wood than any other use to which the forest has been put, even to the present day, it has produced few distinctive landscapes. Fuel was the incidental by-product of agricultural clearing and, to a lesser extent, of logging. It was subsumed in the bigger and more spectacular themes of change in the forests, although occasionally we do have an example of effects of domestic cutting, as when John Thomas of New York was taken by a landowner he knew to view "over one hundred acres of land, once densely covered with timber, but now entirely cleared for the sole purpose of supplying his family with firewood during the forty years he has resided there."[53]

But this was rare, and only in the cases where mineral deposits impinged on the forests, large towns made exorbitant demands on the surrounding area, or specific routeways funneled the concentration of steam-powered locomotives or boats, can one point to definite inroads due to fuel getting.

Iron-making caused denudation and thinning of the forest on a local scale, especially as the use of charcoal for fuel lingered on in the United States well into the late 19th and early 20th centuries when it had long since disappeared in other industrialized nations.[54] The slow death of charcoal iron-making arose from the sheer abundance of wood as a fuel, but also from the fact that charcoal-made iron had positive qualities of heat resistance, toughness, yet also malleability.[55] It was a good all-purpose iron for use on the frontier, as it could be made into boilers, tools, and implements and could retain a good cutting edge.

In 1865, there were 560 iron furnaces in the United States, of which 439, or 78 percent, were still charcoal fueled, and these were concentrated in the Hanging Rock district of southern Ohio, in the Allegheny Valley northeast of Pittsburgh, in the Juniata Valley, in south-central Pennsylvania, and in the Berkshires on the New York/Massachusetts/Connecticut borders. The bulk of the remainder of the furnaces burnt anthracite and were concentrated in eastern Pennsylvania.[56] In time, most of these charcoal furnaces were abandoned or converted to coal of some sort or another, but charcoal iron-making did not die out entirely and continued to flourish in the South, and particularly in northern Michigan and Wisconsin, in conjunction with the high-grade iron furnaces of the Superior ranges until as late as 1940.

Large supplies of wood were needed to fuel these furnaces, and iron "plantations" or estates of 30,000–100,000 acres of woodland around or near the furnaces were common. These would be cut in a rotational fashion, and there is plenty of evidence of exhaustion of supplies through overcutting as in Scioto, Jackson and Vinton counties in southern Ohio or in the Ramapos Mountains in New York/New Jersey, and of the abandonment of furnaces for want of fuel as a consequence.[57] The amount of forest cleared specifically for iron-making depended upon the density of the trees and the efficiency of the furnace, but at a modest estimate of 150 acres for every 1,000 tons of pig-iron produced, the amount of acres affected could have been as low as 25,000 in 1862 and as high as 94,000 in 1890, although it should also be borne in mind that many forests near furnaces were cut over at 25- to 30-year intervals, or sometimes less. For example, a detailed survey of the 837 square miles of Vinton and Jackson counties in the Hanging Rock district of Ohio shows that 60 percent of the forest was cut clear between 1850 and 1860 down to 4-inch diameter trees, and that the forests regenerated sufficiently for recutting to be carried out again at the beginning of the 20th century.[58] Either way, taking the larger or smaller estimate, the amount of forest cut had relatively little impact on the forest as a whole. Even if we total all the known charcoal iron production between 1855 and 1910 (20.4 million tons), it would have only consumed 4,800 square miles of woodland, or 3,000 square miles if a 25-year regrowth had been employed. Impressive as this is, it should be compared to the amount of land cleared for agriculture during the same period. It is a

mere 1.3 percent of that or 0.8 percent if regrowth is considered. Having said that, however, charcoal iron production was concentrated and the effects on the forest were noticeable; it was an industrial intrusion into the rural landscape and thus commanded special attention and comment. Locally, the furnaces and the thinned and cut forests were visually prominent, and charcoal iron, rather like fuel for locomotives, could be pointed to as a great destroyer of forests. Nationally, it was a mere pinprick.

Steamboats, steam engines and locomotives also consumed large amounts of wood fuel, but how much is difficult to ascertain. Because of the relatively late start to industrialization in the United States, there was little demand for generating steam in stationary engines. By 1850, 65 percent of all mechanical work output still came from wind and water and the remainder from wood and coal, and it was not until 1870 that the proportions were reversed.

Bulkiness was an important consideration of substitution, particularly in locomotives, as 1 ton of coal could replace about 4 tons of wood, but the sheer abundance of wood along the railroad routes delayed adoption.[59] Along the major rivers, ample supplies of timber powered a complex steamboat system. The distribution of the number of cords sold and entering into commercial trade in 1840 shows that the counties adjacent to the Mississippi–Ohio account for 16 percent of the total of 5.3 million cords entering the trade in that particular year, the line of above-average-producing counties paralleling exactly the course of these two rivers across the continent.[60] However, just as the wood cut for charcoal, the wood cut for fuel for mechanical purposes was a minor inroad into the forest compared to that cut for domestic purposes. It is far more probable that timber cut for railroad ties exceeded many times the timber cut for fuel on the railroads.

In 1879, domestic fuel use was 95.5 percent of a total of 147.2 million cords cut during that year, the remainder being divided between charcoal for iron smelting (1 percent), manufacturing and railroads (1 percent each), steamboats (0.5 percent), and mineral operations taking up the remaining 0.4 percent.[61] Which brings us full circle. The greatest impact on the forest—domestic fuel use—is the impact that we know least about because it is the combination of millions of individual unrelated actions, and it is submerged in the bigger and grander topic of agricultural clearing. Only where there was a complex coastal trade, as between Maine and Boston and New York, or between the New Jersey Pine Barrens and New York, do we know about the areas affected by cutting. Domestic fuel getting and marketing is, as the historian Arthur Cole has suggested, a "mystery" in that it was so important and ubiquitous but so little is known about it.[62] Nevertheless, the conclusion must be that fuel getting exceeded by far all other demands on the forest, lumber included.

The balance sheet

At the most conservative estimate, over 350 million acres of former forest have been cleared for agriculture and another 20 million acres for industry, communications, mining, and urban spread. In all, this destruction must have eliminated one-half of the original forest cover of the United States, which should give us pause to think when we bewail the present deforestation of the tropical world.[63]

But what of the landscape of clearing today? Simply, it is the normal landscape that surrounds anyone who travels in the rural parts of the United States where trees grow naturally. It requires an enormous effort of imagination to see the forests as they once were (Fig. 8.8). Unlike other activities of man in changing the landscape that leave a permanent legacy in the form of buildings, embankments, draining channels, survey lines, and roads, for example, the end result of clearing is the elimination of the landscape feature under examination. The result is nothing, or, at least, the norm: the tamed, domesticated landscape of fields, meadows, intervening patches of woodland and woodlot, of settlements, and suburbs. As for the artifacts of clearing, they have nearly all gone. The log cabins and zigzag fences are found occasionally in remote rural areas as in upland Appalachia, but increasingly they are to be found only in museums and preserved historical sites. Splash dams, booms, and logging railways are increasingly things of the past and are replaced by highways, trucks, tractors, and chain saws. Only the massive mills with their log ponds and piles of sawn timber remain as visual reminders of the logging landscapes of the past. Lumber towns still exist, particularly in the Pacific Northwest, but they are functionally and socially much more heterogeneous. The cutovers are reverting to forest everywhere (Figs. 8.9a–d and 8.10). Despite the massive destruction of trees by agriculture, logging, and fuel getting, the forest is still a dominant feature of the American visual scene. To imagine an America without trees is to imagine another world.

If we try to draw up a balance sheet of the positive and negative aspects of forest clearing then the following is clear. The forest supplied the raw material for industrial growth during the late 18th and most of the 19th centuries. The forest that was cleared supplied the land that has supported the agriculture that has made America the foremost food producer in the world, and the lumber has provided cheaply the houses and helped the means of transportation that are major features of American life. The forest has other attributes. It and the pioneer farmer or backwoodsman have provided potent symbols of American life and ethos in terms of self-sufficiency, effort, and practicality. It is a great esthetic and leisure resource, for to indulge in recreation out-of-doors means going into the woods for most Americans.

Balanced against these immense benefits have been many, but less tangible, losses. The subtle relationships between forests and runoff

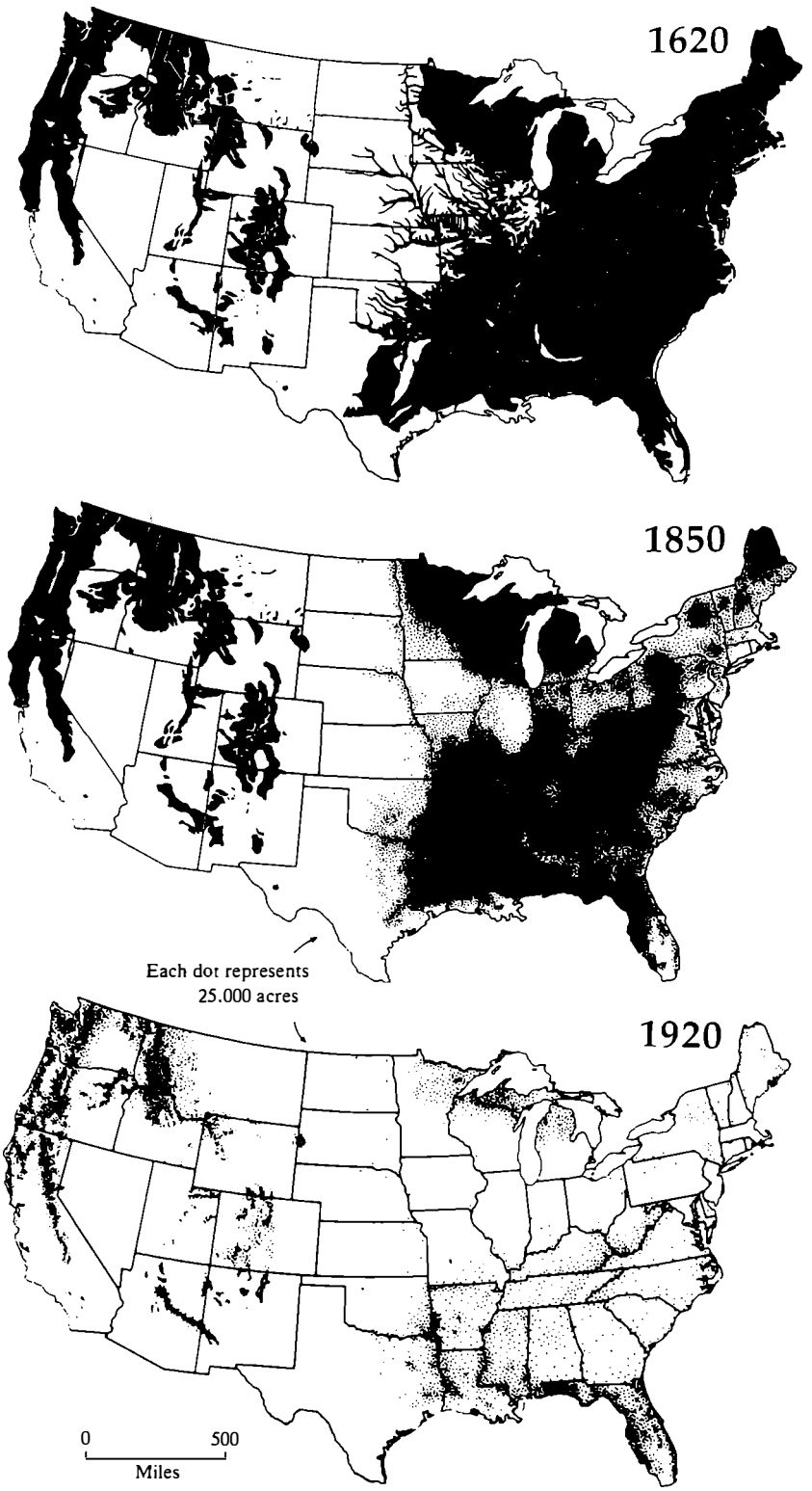


Figure 8.8
Area of "virgin" forest in 1620, 1850, and 1926. These were a stark and graphic portrayal of deforestation, but in a sense they were misleading. Forests are dynamic, living entities, and although the original "virgin" forest may have been cut, the new forest grew back. Therefore, the picture of 1926 is a gross understatement of forest cover, although the others were more or less correct.

A

B

Figure 8.9
Natural regrowth is far more vigorous than most people realize, so that today the United States probably has about 60 million acres net more forest than it did in 1910. Shown here are four scenes somewhere in the Pacific Northwest, taken at roughly ten-year intervals between 1930 and 1960.

C

D

Figure 8.9 *continued*

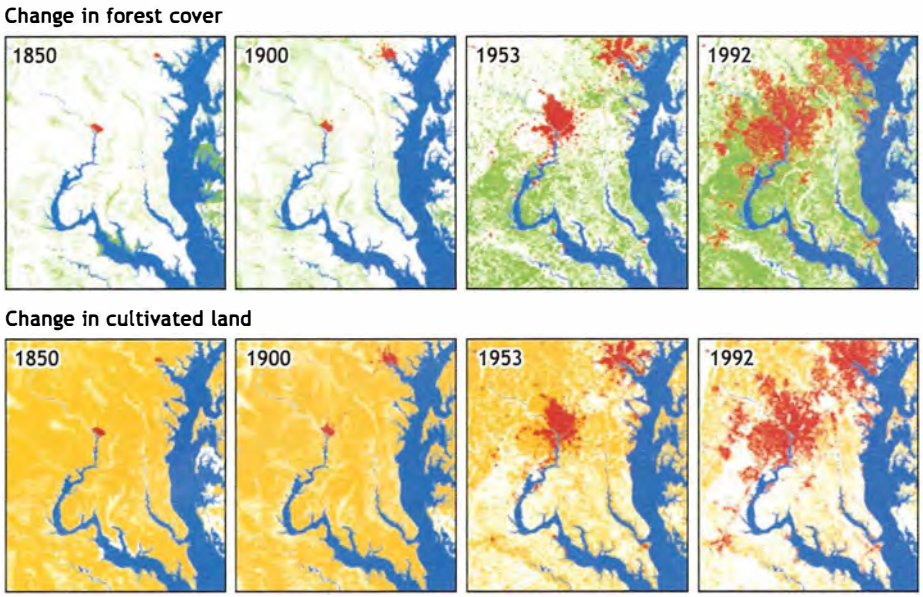


Figure 8.10
Landscapes have changed dramatically along the eastern seaboard during the last 150 years. Long cleared for cultivation (tan), the forest (green) has been creeping back as cultivation lost out to western competition, especially since 1900. The Virginia–Maryland region shown here also reveals the urban inroads made by Megalopolis (red).

floods, rainfall, soil formation, erosion, and micro- and macro-climatic occurrences have never been clearly quantified, but it is certain that rivers have filled with sediments, floods have been more frequent and greater, and large areas of fertile land and sloping ground have been degraded. Wildlife has been lost—in fact, the whole ecological balance has been upset. But even out of this has come some good. Trees produce strong emotions in most of humankind, and the wholesale destruction of the past centuries was not done without protest. The first stirrings of the conservation and environmental movement as we know it in the Western world today began in the American forests in the years just prior to, and just after, the Civil War.

Chapter nine
Remaking the prairies

JOHN C. HUDSON

THE GEOGRAPHY of settlement in the American grassland reveals two fundamental relationships. The first is that the largest share of its area is devoted to crop production because the grassland offers the most fertile, least hilly, and generally most suitable farming country found anywhere in the United States. The proportion of land in crops increases markedly as one moves from forested areas to grass, and the contrast is even stronger if the comparison is made in terms of the acreage simply in grain crops. Second, the economic potential of these prime farmlands was well known during the railroad-building era of the latter 19th and early 20th centuries. As a result, there developed within the grassland a strong correlation between the number of miles of railroad and the number of acres in crops. The better the land, the greater the value of its produce and the more money railroads stood to earn hauling it to market. Each new line of track was dotted with new towns, most of which were built at the time of railway construction. Thus, the better the land, the greater the crop acreage and the finer the "mesh" of the town-and-railroad network. Each organized county had to have a seat of government; the location and spacing of the county seats, most of which are the largest towns in their respective counties, create a striking general pattern of towns (Fig. 9.1).

These linkages define the settlement system of a broad area beginning along the western edge of Indiana and spreading, fan-like, west from there to include nearly all the land between the Red River of the North and the panhandle of Texas. The largest number of towns within this region were sited by railroad companies whose purpose was to create linked chains of marketing points where farmers would deliver crops for the railroad to haul to distant urban centers. Competition between railroads led to a uniform spacing of towns along a line, as well as a uniform placement of the lines of track. This was the process that produced the "central place" network of states such as Iowa in the latter half of the 19th century. Because of the comparative recency of these developments and the lack of sweeping changes that might have produced newer forms, the landscape still has this organization.

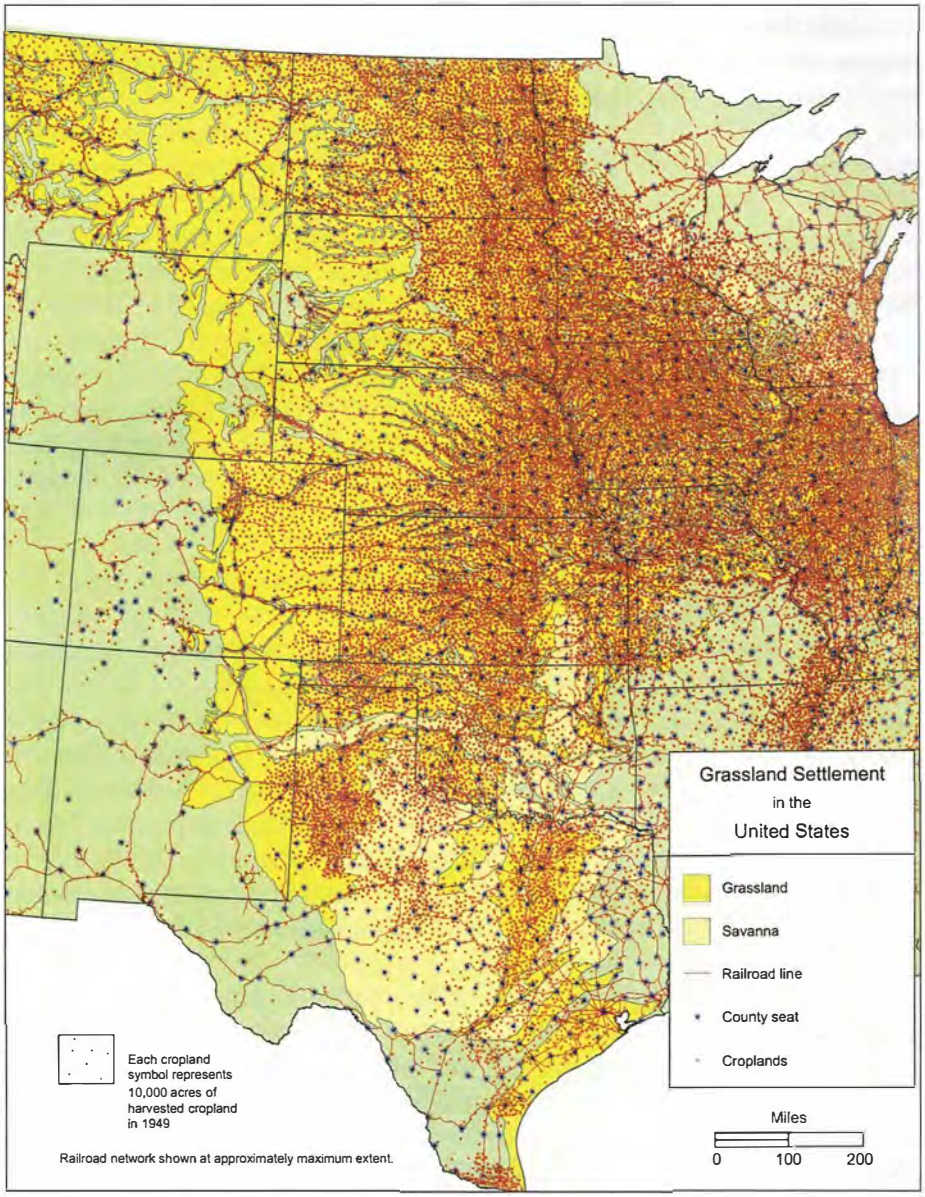


Figure 9.1
Grassland settlement in the United States.

In central Montana, western South Dakota, south-central Colorado, and most of Wyoming and New Mexico, grasses dominate, but they grow on soils so marginal for agriculture, and which receive so little rainfall during the growing season, that crop farming is not economical in most years. Although these western short-grass plains have been plowed up and planted during periods of high prices and strong demand for grain cereals, the land is devoted largely to stockraising today just as it was a century ago. Only transcontinental or other long-distance railroads ever served such areas; towns are few in number small in size, and spaced like beads on a string. What differentiates this

region from that to the east is its poor prospects for crop farming, which, in turn, discouraged westward extension of the railroad-settlement grid beyond the crop-producing areas.[1]

The grassland settlement pattern is also demarcated on the northeast and southeast by clear boundaries at the forest margin.[2] Deciduous forest occupies a wide swath across Wisconsin, but it narrows practically to disappearance in northern Minnesota. North and east of this, in turn, lies the coniferous forest, a land almost totally unsuited for grain crops. Hilly lands southeast of the grassland region, especially the Ozark Highlands of Missouri, define another sharp transition in settlement systems coinciding with the prairie–forest border. In south-central Missouri, as in northern Minnesota, Michigan, and Wisconsin, lands that would not support commercial grain farming did not attract railroad builders except for purposes of resource extraction.

Vegetation and settlement

The grassland settlement region can be delimited with reference to vegetation, croplands, and railroads because the linkages between these three explain more than does the usual schema in which precipitation and population density are compared. Nevertheless, after more than a century of scholarship on the American grassland and its mode of human settlement, "rainfall determinism" remains dominant in much of the literature. This explanation claims that grasslands result from a deficiency of precipitation; semi-aridity restricts agricultural options; and thus limited economic possibilities set a ceiling on population density.

In truth, however, moisture deficiency alone cannot even explain why the grassland exists, let alone reveal why it is best used for some things and not others, or account for why people built certain kinds of settlements there. More than four decades ago, Carl Sauer wrote that the "climatologic description of grasslands is not at all satisfactory," and in a few paragraphs demolished the circular reasoning that had led to concepts such as "grassland climate."[3] Sauer, following the works of Shaler and Hilgard half a century before, identified fire as the primary cause of the central North American grassland. Sauer's hypothesis has remained controversial, perhaps because he insisted that fires on a scale necessary to produce the grassland must have been set by early man. A recent survey of Holocene vegetation history in the Middle West concludes "that topography, fire, and soil are proximal factors controlling the exact timing and local expression of vegetation change."[4] Although fire remains the best explanation we have of why grass vegetation became established on gently rolling uplands, climatic factors offer a convincing explanation of the regional limits of this vegetation type, especially the grassland's wedge-shaped penetration of the continent as far east

as the southern tip of Lake Michigan. John Borchert demonstrated correlations between this "prairie peninsula" and the relative dominance of adiabatically warmed Pacific air east of the Rocky Mountain front during the growing season.[5] Drought is particularly common in the area most dominated by this Pacific air stream. Thus, climate alone does not explain the grassland, but neither should climate be omitted from the explanation.

The grassland is less extensive today than it was just before Euro-American settlement began. It has shrunk because the practice of extinguishing fires has allowed trees to survive farther and farther away from protective crags and crevasses. More important in the disappearance of the treeless grassland has been the habit of tree planting that white settlers brought to the plains. Shelterbelts and plantations of various sorts have been made throughout the region; accidental fire or deliberate removal, rather than desiccation, have caused the demise of some of these plantings.

The American grassland contains remnants of another human modification of woody vegetation. Wood for fencing was in short supply on the prairies. Experimentation with hedges, ditches, and embankments began in Illinois in the late 1830s and continued until the late 1870s when economical barbed-wire fencing was introduced.[6] This period, which covers the dates of initial settlement as far west as central Nebraska and Kansas, was characterized by mixed crop and livestock farming over most of the region, and thus the need for confining animals was widespread. The most popular of the hedge varieties was the Osage orange (*Maclura pomifera*), a tough, hardy shrub that grew well as far north as central Iowa, and its survival along fencerows from Illinois to Kansas can be observed today (Fig. 9.2).

It is the forest patches on steep valley sides and isolated buttes that hold the key to landscape history, however. The gorge of the Niobrara River in northern Nebraska, the buttes of the western Dakota, and the abrupt breaks of the Canadian and Cimarron rivers in northeastern New Mexico are examples of places receiving precipitation of approximately 15–20 inches per year, well within grassland norms, yet these sites support healthy, spreading forests. Such sites have offered sanctuary for more than trees. It was in the woodland of Palo Duro Canyon, along the Prairie Dog Town Fork of the Red River south of Amarillo, Texas, that Francisco Vasquez de Coronado and his party rested in the spring of 1541 (Figs. 9.3 and 9.4). Their long trek across the flat and featureless Staked Plains (*Llano Estacado*) in search of the mythical city of Quivira produced no riches, but in the sheltered canyons they found the more or less permanent settlements of Texas Indians who cultivated beans and gathered the wild grapes and plums that grew there in abundance.[7]

The "unbroken sea of grass" is a powerful image, and there were no doubt many places where the early Euro-Americans could view such a scene, but few chose to live at such sites unless there was some sort

Figure 9.2
A relict Osage orange hedge marks a field boundary along a section-line road in Lyon County, Kansas. Rail, or worm, fences dominated this county in the 1870s when as much as 10 percent of the county's area was in timber; by 1880 more than 60 miles of hedge fencing was reported here.

of nearby woodland. The exploitation of isolated forest patches took place on a broad scale in the settlement of North Dakota, for example. Open-country homesteaders who came there in the 1880s from the upper Middle West, eastern Canada, or Scandinavian Europe took trips of up to 60 miles to reach the aspen-covered Turtle Mountains along the Canadian border. Protected valley walls along the Sheyenne and James rivers and the forested moraines south of Devils Lake also attracted settlers from every direction. Wood cut one autumn was corded for drying, while that from the previous year was loaded aboard wagons or sleds for the trip home. Some North Dakota pioneer settlers recalled that a week or two was allocated for this annual activity.[8] When those same settlers built their first dwellings, the overwhelming choice of building material was sawed lumber brought in by rail from Minnesota. The typical house was of simple frame construction and it was covered with tar-paper on the roof and sides.[9]

The habits of two other groups of North Dakota settlers offer a marked contrast to this pattern of behavior. The *métis* (French–Ojibwa) who lived in Manitoba and northern North Dakota were accomplished parkland (prairie–forest mosaic) dwellers who often made a living selling firewood. They hauled wood long distances in their high-wheeled Red River carts for sale to Anglo settlers unwilling to break

Figure 9.3
The *Llano Estacado* in Randall County, Texas. Coronado and his party crossed here in 1541 and reported marking their route across the featureless plain, "a land as level as the sea," by using buffalo bones and dry dung, "there being no stones or anything else." Men became lost from the party and disoriented if they were drawn apart by as much as half a league (about 1.5 miles). The edge of Palo Duro Canyon lies just beyond the horizon.

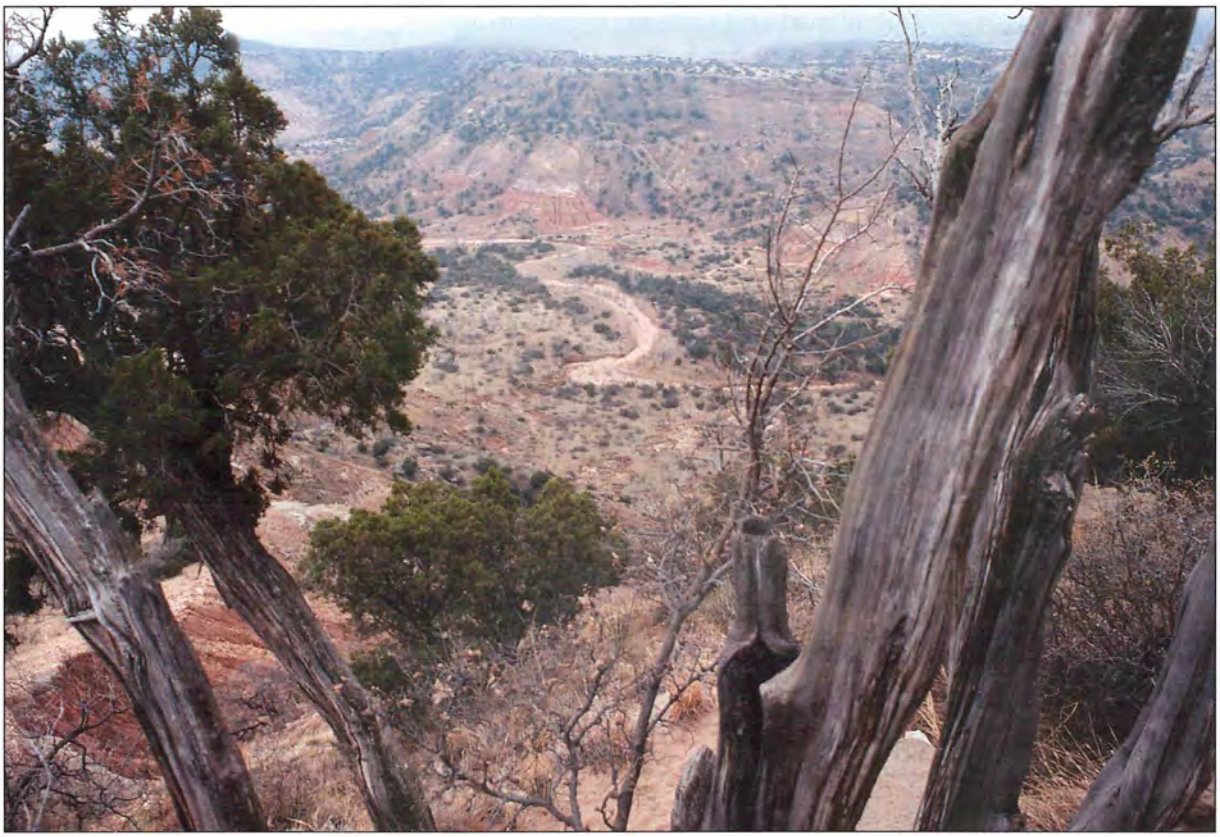


Figure 9.4
Palo Duro Canyon, where Coronado found Texas Indians practicing agriculture in the sheltered valley bottoms (downstream from this view near the head of the canyon). Pinyon (*Pinus cembroides*) and juniper (*Juniperus spp.*) are found on steep slopes such as these throughout the western plains.

their longstanding habit of wood-burning. The typical *métis* dwelling was a log structure that was often covered with willow branches and then plastered with mud to keep out the elements; it was topped by a sod-and-pole roof. A third group, the Russian–Germans, arrived in the northern Plains after several generations of grassland experience in south Russia. They brought to North Dakota the practice of sod and rammed-earth house construction (Fig. 9.5); their common fuels were *mist* (a compacted brick of dried livestock manure) and tightly twisted marsh-hay bundles; and they seem to have been attracted to southwestern North Dakota by the presence of lignite, a resource that few others recognized as valuable.

The contrasting practices these three groups exhibited in a single climate–vegetation zone suggest the possibilities, rather than the restrictions, that "treeless" conditions presented. Sod houses, far from being necessary, were viewed with contempt by Germans and Anglo-Americans who did not know how to build such structures and harbored no desire to live in something that dripped water inside for days after a rain. The Russian–Germans, many of whom were recruited to the Plains by railroad and state immigration agents, had few adjustments to make. They expected a hard life and they neither modified nor modernized

Figure 9.5
Sod house with proud owners, Custer County, Nebraska. Note the imported sash windows, possibly ordered from a merchandise catalog, designed for a taller frame house.

their farming practices as much as their German, Scandinavian, or Anglo-American neighbors did. The *métis*, who had resided in the parkland for generations, made no attempt to live beyond easy access to wooded patches and they used the prairie mainly for seasonal hunting. Human ingenuity, habits, and preferences, rather than environmental limits, are most obvious in these glimpses of early grassland settlement.

Migration patterns

The history of American agriculture has been witness to an almost constant shift of farmers toward the flattest, richest, grassiest lands available. Since the grasslands were the product of fire, and because fire spreads rapidly across a flat to gently rolling surface, grasslands tend to be gently rolling and practically never steep. Fertile soils (typified by the order of Mollisols) on undulating prairie define the best cropland existing in the United States today. The "prairie peninsula" is thus also a cropland peninsula bordered by hillier, forested lands to the north and south. To this zone of vegetation types there corresponds a region of pioneer settlements based on settlers' birthplaces.

The prairie/deciduous forest border across Illinois, Wisconsin, and Minnesota was settled by westward-migrating Yankees between 1840 and 1870 (Fig. 9.6). They made the prairie fringe a wheat specialty zone, just as the area of their birth, in western New York State, had been earlier. The early Yankee settlers assembled their farms by choosing a variety of land types, ranging from open prairies to upland copses or wooded valleys, and thus made use of the full range of ecosystems (environmental types) available to them.[10] The wheat frontier moved rapidly along the prairie–forest transition zone in Wisconsin and Minnesota in the two decades centering on the Civil War, and by 1870 Yankees were firmly established frontier wheat farmers in western Minnesota's prairies. The Red River Valley of the North, in turn, became a wheat-specialty region in the 1880s.

The wheat frontier moved west with the tide of New York-born pioneers until 1870; from then until the 1880s its westward push resulted from the children born to this population and to the westward migration of first-generation Norwegians and Germans born in southern Wisconsin or Minnesota. Wheat monoculture was a frontier practice that could not be sustained for many years because of the inevitable appearance of wheat rust and other crop diseases that followed a few years behind the frontier itself. The introduction of more disease-resistant European wheat varieties, plus the constant experimentation to achieve new and hardier strains, enabled northern North Dakota and Montana to become stable, long-term zones of spring wheat production (Figs 9.7 and 9.8). The old wheat frontier from Wisconsin across Minnesota eventually became part of the dairy region.[11]

Figure 9.6
Upright-and-wing, Greek Revival-style farmhouse in Rock County, Wisconsin, along the prairie–forest margin settled by wheat-farming Yankees from New York in the 1840s. This style of house, found on farms as well as in villages, is common in the Middle West's Yankeeland.

A second culture hearth for the grassland's pioneer population was southeastern Pennsylvania. Ideas about farming that spread west from there were based on crop rotation and livestock husbandry practices that the Germans, Scotch–Irish, and others who first settled the Pennsylvania (or Midland) hearth had brought from Europe. Whereas Yankees tended to favor wheat and dairy farming, Midland farmers raised both corn and wheat in rotation and fed part of their grain to fatten meat animals (Fig. 9.9). This particular combination of crop and livestock production was carried west to the Miami Valley of Ohio by southern Pennsylvania-born farmers early in the 19th century, and from there it spread rapidly westward across Indiana, Illinois, and Iowa.[12] The Corn Belt, as this region became known, was characterized by prosperous farms of substantial size centered around a cluster of specialized-function buildings (Fig. 9.10).

Midland or Midland-stock settlers dominated the prairies south of a line running from Chicago to Omaha, although northern Illinois and northern Iowa had a substantial Yankee minority as well. Within this zone there were extensive areas of wet prairie—lands that would

Figure 9.7
Headquarters of a wheat ranch in Choteau County, Montana, part of the Wheat Triangle near Great Falls, a region devoted almost exclusively to wheat and barley production. The area was settled in the decade centering on 1915. The farmhouse follows the bungalow style popular in American cities at that time. The cluster of small buildings includes grain and seed storage sheds and several machinery sheds but no livestock barns. The absence of fences also is typical of a cash-grain operation.

Figure 9.8
Farm scene near Wilton, North Dakota. Note the baled straw, grain storage bins, and numerous low metal structures that characterize this farm operation.

eventually produce large grain crops, but which first had to be artificially drained.[13] Eastern Illinois evolved as a cash-corn specialty region: cash-crop-oriented Yankees abandoned wheat in favor of corn, while corn–livestock Midlanders abandoned meat animals to concentrate on crops. The cash-corn specialty region of Illinois was established by 1880 and it remained unique in this role for the next century (Fig. 9.11). Today, however, a cash-grain region (based on corn and soybean production) extends from northern Ohio to western Iowa, a product of recent agricultural trends that have made crop production more profitable than livestock in much of the Middle West.[14]

Figure 9.9
Feeder livestock barn near Weeping Water, Nebraska. Probably the most typical of Corn Belt farm buildings, this barn may have originated in the Upland South. It resembles the Appalachian-style corn crib with shed wings added. The feeder barn is found in areas of beef (as opposed to dairy) cattle production in the Middle West. Hay is stored in the upper story, ear corn at ground level; animals and machinery are sheltered in the wings at the side.

Figure 9.10
Buildings belonging to a mixed crop–livestock farm, Sibley County, Minnesota. The large barn on the left is a typical "basement" style that housed dairy cows on the lower level; the large hayloft has a protruding gable to allow easier loading of baled hay. Flanking the barn are silos used to store chopped green corn (ensilage). The corn crib in front of the barn stored ear corn; today, corn is more often shelled before storage and the corn crib has largely been replaced by round, metal bins.

The association between wheat and the Yankee's frontier and grain–livestock and the Midlander's frontier extended west of the Missouri River into Kansas and Nebraska. A combination of political and economic factors projected the Midland agricultural complex into eastern Kansas by 1860. The Missouri Compromise of 1820 had made that state an extension of slave territory, while the Kansas–Nebraska Bill of 1854 allowed slavery to be an open question west of the Missouri border. The first of these two developments made the grasslands and forested valleys of northern Missouri a frontier with deep Southern roots; many

Figure 9.11 October corn harvest in Bureau County, Illinois. A century ago, this county already had more than 200,000 acres in corn, but farm income depended heavily on hog production. Today, corn acreage is somewhat larger, production per acre has more than tripled, and nearly two-thirds of Bureau County's farm income now comes from crops, predominantly corn. The present number of farms in the county is half of what it was in 1880; the average size of farms has doubled.

of its first settlers were born in the Bluegrass region of Kentucky, which was, in turn, a late 18th-century extension of Virginia. North–South tensions were strained nearly to the breaking point by 1854 when Kansas and Nebraska were opened to settlement. By then, population growth in the early Corn Belt of Ohio and Indiana had produced a substantial population that was ready to move to the next frontier. Midlanders thus jumped across Missouri, which had already been settled, and took land in eastern Kansas.[15]

The wheat belt of Kansas runs through the central portion of that state, just west of the lands settled initially by Midlanders. The winter wheat region emerged in the 1880s where Yankees had been settled by railroad companies and where Mennonites and others of German stock who had come from the grasslands of south Russia began to establish farms and villages of their own. Wheat continued to move west in Kansas under the influence of this already diverse mixture and with the addition, after 1890, of northern Missouri-born farmers whose parents and grandparents had settled that state after 1820.[16]

After 1900, grain farming was extended into the grasslands of western Oklahoma and Texas. Settlers were lured to both of these areas by Chicago-based railroad companies and this produced a stronger component of men bred in the North than would have been true had the trend of westward migration within the South continued unchallenged. The result was an unusual grain and cotton mixture in the Texas panhandle

that reflected a merging of regional agricultural practices. There was a brief period of optimism that began when the large cattle ranches were subdivided for agricultural settlement, but optimism turned to despair during the droughts of the 1930s. Billowing clouds of dust kicked up on the surface of these red, sandy soils spelled disaster for thousands of farmers. Some predict that another Dust Bowl, just as in the 1930s, is possible; wind erosion remains a problem in western Oklahoma and the Texas panhandle, barely held in check by modern conservation tillage practices. The region specializes in grain sorghum (raised for cattle feeding) and irrigated cotton. The meat-packing industry, which moved west with the expanding Corn Belt, continues its westward shift toward the supply of fed cattle and is now well established in western Kansas and Texas, the heart of the former Dust Bowl.

The western Plains

Yankees, Midlanders, and Southerners moved into the American grassland following routes that are roughly predictable given the overwhelming tendency for settlers simply to "move west." None of the three groups paused noticeably at any particular precipitation level or line of longitude—including the 98th meridian which Walter Prescott Webb claimed as a cultural "fault line."[17] Familiar crops were taken west, as would be expected, but experimentation also occurred when the old cultures proved unsuited.

One of the most successful adaptations to semi-arid conditions was dry farming.[18] In its fullest development it was a complex series of soil and moisture conservation procedures involving deep plowing, subsurface compaction, and frequent cultivation; but dry farming came to be recognized best by the practice of sowing alternate, parallel strips of land in alternate years thus creating striped patterns of fallow and cropland. The idle strips store moisture and are cultivated to control weeds. Dry farming was widely adopted in the northern Plains, where railroad companies and agricultural colleges stressed its benefits, and in Montana the techniques became practically coextensive with the wheat and barley growing areas of the state (Fig. 9.12).

Precipitation declines steadily (at a rate of approximately 1 inch per 16 miles of westward distance) across the central grassland, although there are few areas where a lack of moisture alone has prevented agriculture; soils and topography are just as important a limit. For example, wheat has been raised for 80 years in the short-grass plains of western North Dakota and eastern Montana; but in western South Dakota, at the same level of precipitation, wheat is confined to a few narrow upland strips where soils permit cropping. The Nebraska Sand Hills have a tall-grass prairie vegetation like central Iowa, but their dune sand surface

Figure 9.12 Wheatland County, in the Judith Basin district of Montana, is true to its name. Fallow strips on the dry-farmed wheatfields are kept free of moisture-robbing weeds by a combination of summer tillage and chemical weed control.

cannot be broken if wind erosion is to be prevented. These sections of the Plains have long been the domain of the cattlemen.[19]

The range cattle industry originated in two distinct regions of Texas, the better known of which is Hispanic south Texas, where large ranches were established early in the 19th century. The word "ranch" itself, along with such terms as "corral," "lariat," "lasso," and "rodeo," are of Spanish origin and their common usage down to the present indicates one measure of Hispanic influence.

Recent research shows that, at the same time as the Hispanic cattle industry was beginning in south Texas, there also took place a migration of Anglo cattle raisers from middle Tennessee to northeast Texas.[20] The Anglo cattlemen contributed traditions such as the use of open range, large herd sizes, branding, and annual roundups. The two groups began mixing after 1850 and, as the industry grew and spread northward, the two complexes became one. Northward cattle drives were undertaken for the purpose of reaching summer pastures and to reach distant markets. Railroads were extended east to west across the plains beginning in the 1860s, and where the lines of track met the south-to-north cattle trails a series of "cow towns" grew up—places like Dodge City and Abilene, Kansas. By the mid-1870s, the Texas-style ranching complex had reached north to the Dakotas. Over-stocking of the range,

Figure 9.13
The once-extensive open range on the High Plains has been replaced by periodic feed lots dotting the landscape, as seen here outside Amarillo in the Texas panhandle. Not a blade of grass remains within the compound containing the cattle, whose feed is distributed by conveyor belt and other capital-intensive mechanical equipment.

blizzards, and drought in the mid-1880s and the steady westward push of agricultural settlement brought an end to the open range by 1900 (Fig. 9.13).[21]

Town settlement

The creation of towns in the American interior began during the era of waterborne commerce, prior to the arrival of railroads. Most towns founded up through the 1840s were speculative ventures, the work of one person or a small syndicate of investors who hoped to create thriving commercial centers along the navigable streams.[22] The first railroad across the grassland was the Illinois Central Railroad's Illinois main line constructed in the 1850s. This, and all subsequent lines, instantly placed the formerly inaccessible prairies within easy shipping distance of major cities. At the same time, there emerged a new set of procedures for the creation of towns. No longer the isolated and uncoordinated attempts of small-time investors, towns along the railroad were sited, planned, and sold under the watchful eye of the railroad itself.[23]

Railroad companies (or their designated townsite affiliates) sometimes made substantial real-estate profits from lot sales in the new communities, but a railroad's principal goal was to increase the volume of traffic moving over its lines. Towns in the grassland region were thus uniformly spaced, often after careful calculations had been made as to the trading volume each town might sustain. The railroad's purpose in town-founding was to create trade centers for the surrounding farm population, a fact reflected in the internal structure of the towns.

Land along the tracks in a town generally was not sold, but rather it was leased for grain elevators, lumber yards, and fuel dealers who needed direct rail access (Fig. 9.14). These businesses themselves were often owned by line-chain companies whose headquarters were in major cities. Some Minneapolis-based line elevator companies, for example, owned more than 100 country elevators along the tracks of a single railroad company. Each town thus acquired several grain elevators as a result of the railroad's practice of leasing adjacent elevator sites to competing line chains (Fig. 9.15).

Commercial and residential lots on the townsite were sold by railroad townsite agents. It was the agent's task to lure to each new town the proper mix of businesses that would make a viable trading point for farmers. The town's main street was divided into strips of narrow business lots, 12 to the block-face. The result was a series of identical-looking, false-front store buildings each housing a small, specialized business such as a hardware or grocery store, a bank, or a print shop. Grain elevators and railroad depots were often the first town buildings, followed by an infilling of structures along the business street.

Because railroad-town real estate was sold before the town started to function, the town had to have a plat that looked convincingly like a town ought to look in order to give prospective merchants an idea of where to locate. Two plat designs were common. The earliest idea was a symmetric arrangement with business buildings lined to face the tracks on either side. In time, however, railroad companies realized the limitations of locating tracks in the busy center of town and the railroad-centered plat lost favor. The most common railroad town design was a

Figure 9.14
Timken, in west-central Kansas, typifies the traditional small grain-shipping town built up in the first half of the 20th century. Established on a Santa Fe rail line in 1887, it boasts two generations of grain elevator, a wooden one (behind the tree) and a larger, white concrete structure behind. The tiny business district, seen at left, runs parallel to the tracks.

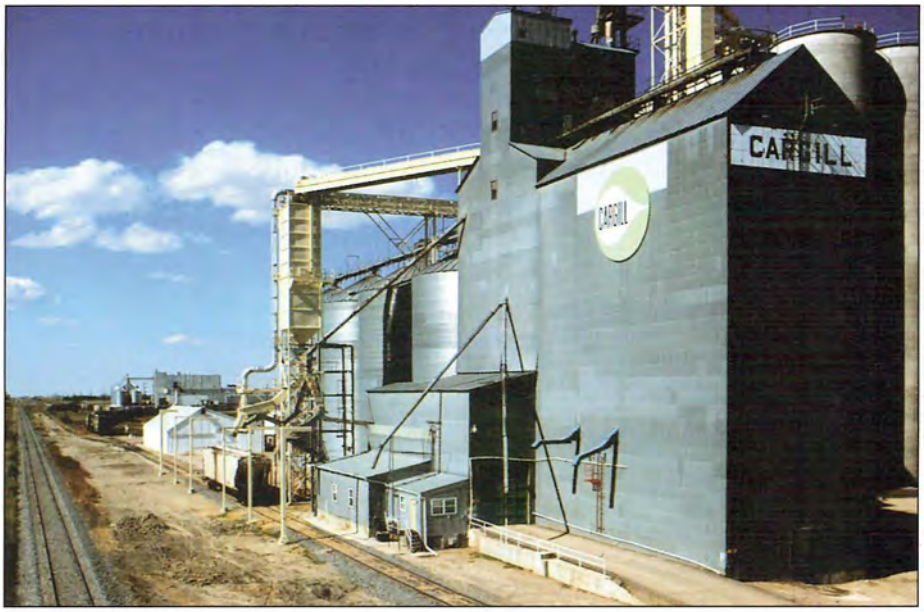


Figure 9.15
Today, many elevator sites have been consolidated into mammoth complexes, such as this facility at the northern edge of Carrington, North Dakota, on the Soo Line.

T-shaped configuration in which the main business street met the tracks at a right angle, with the railroad depot itself located at the intersection (Fig. 9.16).

Common to both the symmetric and T-town designs was the priority of the railroad as a formative element of the plan. While the surrounding countryside remained ordered according to the township-and-range checkerboard, the railroad town was an obvious exception; its own internal geometry of rectilinear streets invariably followed from the location of the tracks (Fig. 9.17). Because commerce was concentrated in the heart of town, railroads rarely set aside any of this valuable property for parks, squares, or other amenities of urban design. Lots for churches, schools, and courthouses, as well as for parks, were donated by the townsite company and were taken from unsold land at the margins of the initial plat. All the functions of a town were thus incorporated into the designs provided by the railroad.

Conclusion

The landscape of the American grassland today reflects the history of its human occupance in nearly every stage. The past can be read with accuracy, perhaps better here than anywhere else in the nation. Rolling grass-covered hills that stretch toward unbroken horizons suggest a natural landscape, one that humankind has not altered, much less dominated, yet we know that even the plant cover itself owes much to human occupance. The sparse look, too, reflects human designs rather

Figure 9.16
Corning, located on the Burlington Northern Railroad in southwest Iowa, exhibits the typical T-town design. Most of the town's businesses began on this street and remain there today.

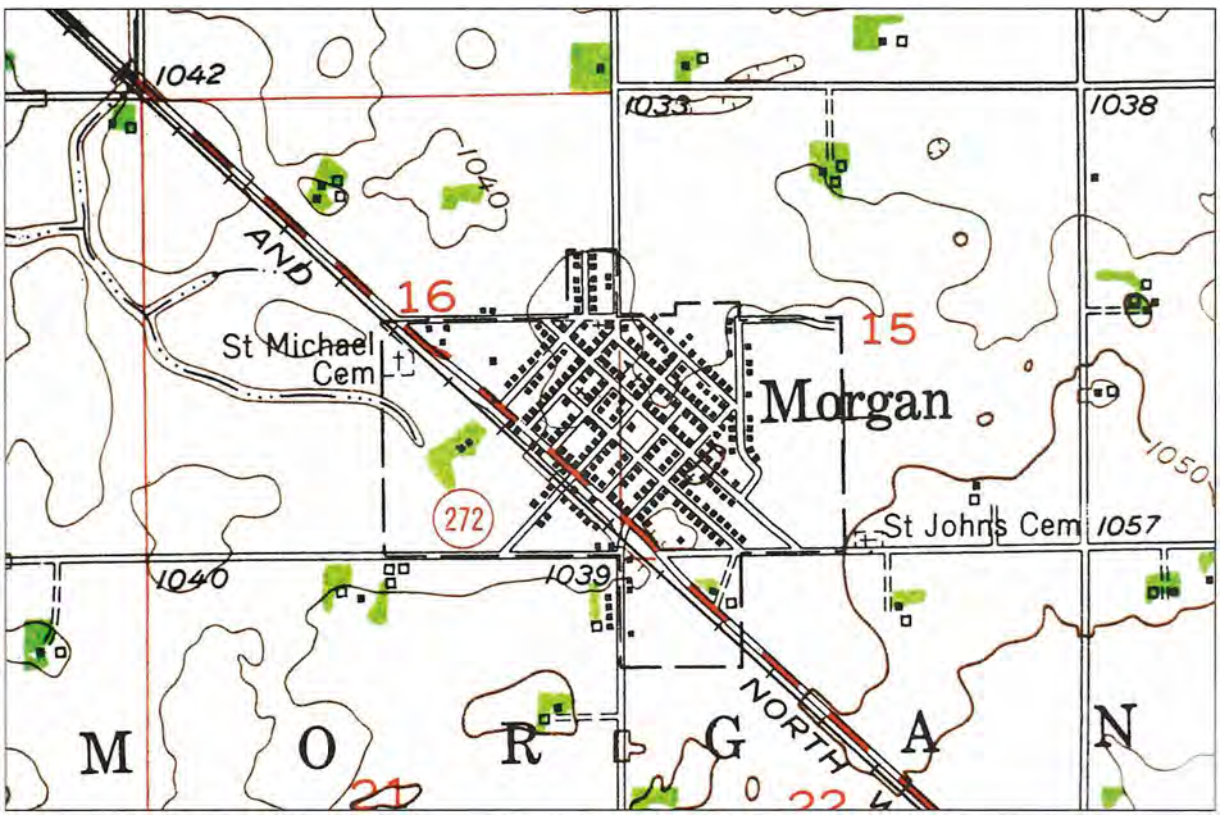


Figure 9.17
Morgan, Minnesota, as shown on a 1:62,500 government topographic map published in 1953. Morgan's orientation to the Chicago & Northwestern Railway's tracks was retained even in subsequent additions to the town. Only its recent "suburban" streets depart from the railroad's geometry and return to the township-and-range grid.

than neglect. A gigantic plain of unequaled productivity, the grassland was parceled into farms and laced with routes of trade and commerce by governments and railroad corporations whose broad-scale plans for the region envisioned a settlement fabric that has endured to a remarkable degree. White settlement in the region is comparatively recent, even by American standards. In hundreds of towns and on thousands of farms, one can find some of the first, substantial structures still in productive use. The region's past is so suffused into the present that deliberate attempts at historic preservation often seem out of place, literally. It is a region that has caused worry from time to time: the land and its people have not always seemed to live in balance; technological change and shifts in world commodities markets have produced severe shocks to the system. Yet, compared with the Northeast, the South, or the Far West, landscape changes in the grassland have been more in degree than in kind. Whatever the future holds for this region, it is likely that continuity, rather than change, will offer the more enduring perspective.

Chapter ten
Watering the deserts

JAMES L. WESCOAT, JR.

THE DESERT conveys important lessons to "those who see." This message pervades both ancient and modern accounts of desert experience. Current American fascinations with Sunbelt living, "Marlboro" men, and Monkey Wrench activism carry forward the 19th-century lore of irrigators, cowboys, and desert rats. The rhetoric in that lore draws in turn upon biblical images of paradise and prophetic traditions to portray the promise and perils of desert landscapes. In literature these traditions have been enlarged over the years by a rich body of western fiction, history, and nature writing; and in visual terms by western films, art, and photography. Idealizations of the desert have swirled through the national consciousness, influencing public perceptions and policies.

Of particular interest are stories about how, with proper tending, the desert will bloom as a rose.[1] Reclamation enthusiasts see desert cultivation as an aesthetic and technological triumph over nature, a previously inconceivable extension of the national frontier. It was alleged that irrigation produced small farms, cooperation, and a mode of rural life that would transcend the social ills of rural isolation and urban industrialization.

These portraits of reclamation are countered by warnings about the risks and improprieties of arid-zone development.[2] Deserts place limits on human settlement to be ignored only at great consequence. Suffering and death stalk alongside desert romance and utility.[3] In the "True West," deserts provide refuge for those who fail utterly in society.[4] Cynics remind us that few American desert settlements have endured long enough for assessment of what has been achieved. Quite enough time has passed to point to the apparent failures: abandoned settlements, depleted resources, social conflicts, and degraded environments that mock the rhetoric of challenging the desert.

But the emphasis on success and failure in the desert may be misleading. Marginality, constraint, and intensification occur in most environments. Arguments that "water is different" and that irrigation projects reclaim otherwise useless lands have come under increasing criticism.[5] Even granting the special significance of water in desert

environments, it is sometimes difficult to recognize when the challenges of aridity have been successfully met. Historical endurance and geographical spread do not necessarily mark great achievements, nor abandonment an unqualified failure.[6] Indeed, the dramatic spread of desert settlements in one period may later prove a great folly. And then there are projects, such as Glen Canyon Dam on the Colorado River, that are simultaneously regarded as heroic or horrible by different social groups.[7]

In light of these problems it is tempting to put aside the desert rhetoric; to travel through arid landscapes without prejudice; and to try to observe the material forces and situations that have shaped what one can see. From this point of view, the lessons for "those who see" are to be gained by "those who look." It would be a mistake to think, however, that a landscape approach can operate entirely without prejudice or that it can stop short of making critical judgments about the history of desert development. Using the word "desert" immediately invokes the full vocabulary of challenge, accomplishment, and failing just noted. Desert rhetoric can only be abandoned when we discover that people in places such as Phoenix, Arizona, have at various times not thought of themselves as living in deserts at all.

The intuitions brought to this chapter revolve around the notions of challenge, success, and failure in desert water development. In exploring the prehistoric, Hispanic, and modern landscapes of water control, one encounters surprisingly similar desert irrigation features: ditches, wells, and dams. There is at the same time great variety in the geographical configuration of desert water features and institutions. Patterns of growth and decline in these varied contexts remind us that deserts pose a fundamentally agrarian challenge to society. Where are the American deserts and their oases? How have they been shaped by irrigators, and what implications do they carry for those who see? These questions call for an overview of the places considered to be deserts, with an emphasis on obstacles and enticements for human settlement. The greater part of the chapter then explores four contemporary landscapes that reflect major processes of desert water development.

Finding the desert

The term "desert," like "wilderness," has been applied to a broad range of places in the United States, including mid-continent grasslands during the early 19th century and cities at various times. Although this chapter limits itself to areas of extreme moisture deficit—where short-grass prairies give way to xerophytic shrubs (i.e. those adapted to arid conditions) and succulents—there remains a significant semantic problem.

In physical terms, the most arid areas of the United States are found in the shadow cast by the mountains of the Pacific coastal ranges. Continentality, cool Pacific Ocean currents, and high atmospheric pressure systems help explain the aridity of the southwestern and intermountain regions (Figs. 10.1 and 10.2). The culture histories of these regions reveal a keen appreciation of variations in aridity, however, from prehistoric times onward. Initially this meant an understanding of streamflow and channel patterns on perennial tributaries; familiarity with how large rivers inundate their floodplains; discovery of seeps, springs, perched water tables, intermittent creeks, and other favored

Figure 10.1
Major desert provinces and case study areas.

Figure 10.2 San Felipe Pueblo lands, looking westward from Bernalillo, New Mexico, reflect the general aridity of the intermontane region.

niches; and, lastly, a knowledge of native plant and animal habitats outside the oases. Prehistoric groups occupied the full range of natural desert landscapes, modifying nature and varying their mix of subsistence activities in tandem with environmental and social change.

Experimentation in desert environments continues in various forms during historic times. In each period, deserts are re-explored in light of contemporary human interests, and their nature rediscovered. Early surveys focused on territorial and agricultural opportunities; ways of traveling between and enlarging the oases of the West. Delineations of the desert have often employed crop production indicators, reflecting national interests in agricultural settlement (e.g. the 10-inch rainfall boundary, Thornthwaite's aridity index, and the Palmer drought index). Modern maps testify to the timing of social interest in river basin development, transportation, mineral exploration, military testing, groundwater development, and desertification.

Political partitioning of the West has also had profound impacts on the distribution of water resources from the 17th century onward. The historical unfolding of Hispanic and Anglo systems of water rights established complex local patterns of water surplus and scarcity.[8] The incongruity between political and river basin boundaries has led to protracted struggles over regional entitlements to the Colorado and Rio Grande.[9] Federal water claims for public lands and Indian reservations

represent the most recent processes of redistribution in over-appropriated basins.

These natural and cultural dimensions of desert waters come together in four major provinces and their outliers: (a) the Sonoran Desert of Arizona (and the associated Colorado Desert in southern California); (b) the Mojave Desert of southeastern California; (c) the Chihuahuan Desert of west Texas and the Rio Grande Valley; and (d) the Great Basin Desert of Nevada, Utah, Wyoming, Oregon, and southern Idaho (Fig. 10.1). Each arid province shades into grasslands, mesic shrub communities, and montane forests—gradually in most areas but sharply in the vicinity of hydrologic oases. The four deserts and their oases have distinct personalities, traceable in large part to the historical processes operating within them.

Transforming the desert: looking at dams and ditches

Landscape changes during the 20th century, when a common formula of federal irrigation subsidies, river impoundment, highway development, and defense expenditures stimulated oasis expansion throughout the West, can be considered in broad national terms. A more focused perspective is needed, however, to understand how these national processes have been played out in specific desert arenas.

The prehistoric legacy in central Arizona

What were the prehistoric water systems like, that thrived along riverine corridors in central Arizona? Riparian (riverbank) vegetation and wildlife today are drastically modified; farms have little relation to the predominantly urban economy of the region; streams appear unpromising.[10] The route from Tucson to Phoenix follows one of the northward trajectories that characterized southwestern settlement up to the mid-19th century (Fig. 10.3). Modern travelers along this path are likely to pass by the Snaketown site near Florence, Arizona, and to arrive in downtown Phoenix with little grasp of what has arisen from the ashes and what has been buried beneath them.

Although not limited to perennial streams, large prehistoric canal sites such as Snaketown lie along the northeastern fringe of the Sonoran Desert, the moist rim of a basin which wraps around the Gulf of California up into the lower Colorado River watershed. Debate rages over the relative importance of indigenous innovation and Mesoamerican influence on prehistoric Hohokam irrigation.[11] Somewhat less controversial is the rough sequence involving early canal systems around the confluence of the Salt and Gila river basins, an outward spread of increasingly complex canal networks along riparian corridors during the Colonial and Sedentary periods; regional retraction during the Classic period:

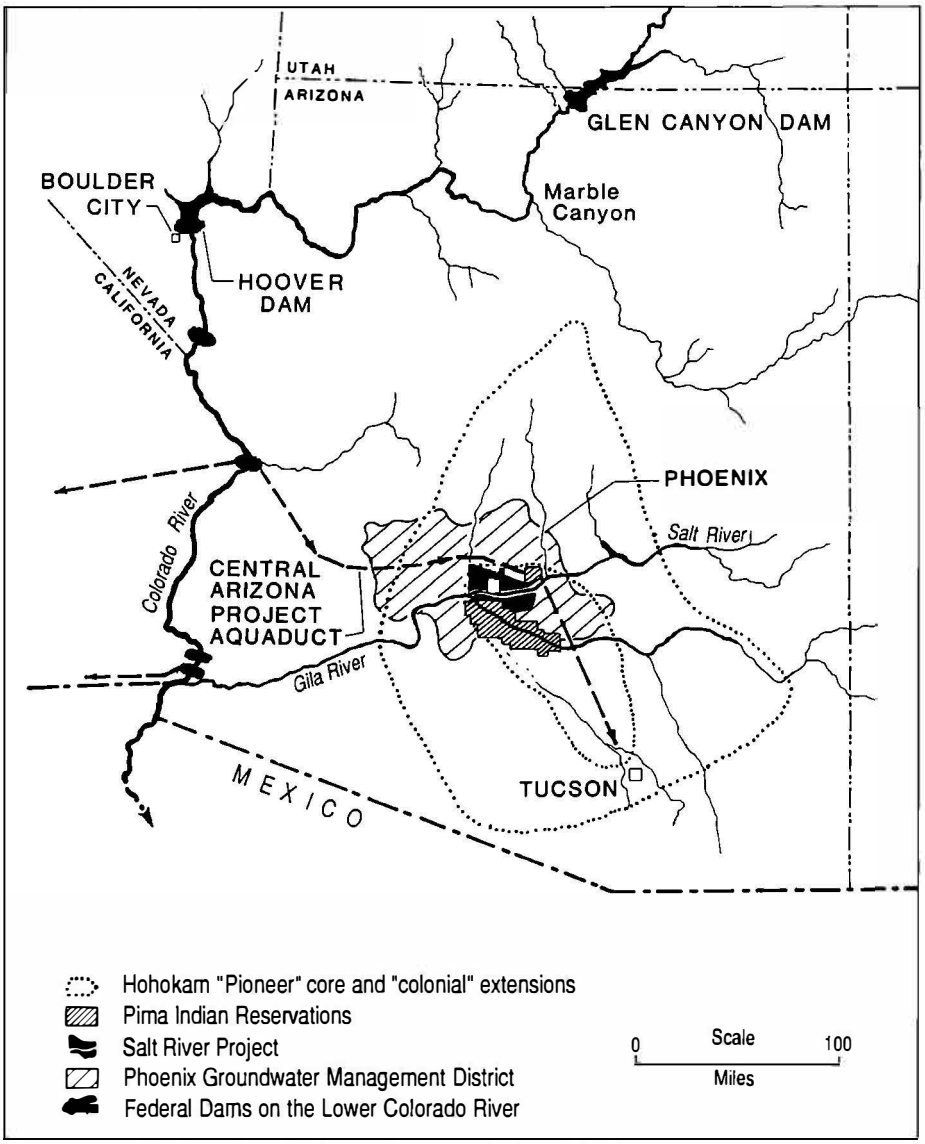


Figure 10.3
Water development in central Arizona and the lower Colorado River Basin.

and then abandonment in the mid-14th century. The onset of Hohokam irrigation is also under dispute, with estimates ranging from 300 BC to AD 500. Puzzling questions have arisen over changes in settlement distribution, size, architecture, burial practices, and ceremonial features during the Sedentary–Preclassic transition. Particularly troubling, however, is the collapse of Hohokam settlements from some unknown combination of forces.

Excavators at Snaketown have inferred that Indians used brush dams to divert water through earthen canals to fields lining the river terraces. Canals extended as much as several miles in length, with cross-sectional dimensions up to 20 feet in width. Very few of the ancient irrigation

works remain visible today. Canals have been realigned, reshaped, and paved over in urbanizing areas; brush dams have long since disintegrated; and few settlement sites have been excavated.

Nevertheless, prehistoric canal patterns provided the tracery for an irrigation revival by Pima Indians in the early 19th century, and later for the Phoenix of Anglo settlement that rapidly displaced Indian irrigators. How did 19th-century Pima irrigators revive the prehistoric canal technology and infrastructure? Pima Indian *rancherias* (settlements) were described as few in number, small in population, and widely dispersed at the time of Spanish contact in AD 1700.[12] Spanish missions penetrated no further north than Tucson and thus had limited influence on Pima irrigators in the Salt–Gila area.

Pima renovation of prehistoric water systems marked an entrepreneurial response to the fledgling food market that was expanding with east–west travel across the Sonoran Desert during the mid-19th century. Canal renovation proceeded in a fragmented and incremental manner. Although associated with population growth and tribal social stratification, irrigation did not radically overturn the dispersed *rancheria* pattern of settlement.[13]

Pima irrigation systems exhibited a functional continuity with subsistence in the surrounding desert. In drought years and drought-prone locations, the Pima drew upon the strikingly rich plant resources of the Sonoran Desert.[14] In moister years and locations irrigated crops were substituted for gathered foods. These fluid modes of desert occupance reduced vulnerability to geographical and historical fluctuation.

Few elements of Piman irrigation remained in operation after the rapid in-migration of Anglo irrigators into the upper Gila during the late 19th century. Some Indians moved from the Gila River reservation to the Salt River, but the reservation there suffered similar problems. Depletion of Indian water supplies predated Arizona's adoption of a water code that assigned water rights on the basis of seniority (the prior appropriation doctrine).

Between 1860 and 1900 Anglo grain production increased in direct proportion to the Pima decline.[15] Agricultural production then escalated rapidly throughout the Salt and Gila River valleys with transportation improvements and the growth of national and international markets for cotton, citrus, and field crops. In addition to historic Pima and Hohokam canals, large-scale diversions were made from the Salt River. Although some roads and field patterns followed the alignment of prehistoric and Piman canals, the broader grid of urban streets and platted blocks bore little relation to earlier settlement patterns or canal networks.

The expansion of Anglo irrigation during the last decade of the 19th century, coupled with a severe drought, drew one of the first projects under the Reclamation Act of 1902. The federal project included construction of a large masonry dam on the Salt River, modifications in the historic canal network, and hydropower production (Fig. 10.4). Federal

Figure 10.4
Citrus fields on the Western Canal, Salt River Project south of Phoenix, looking west.

projects have several distinct landscape characteristics. Power production and generous repayment rules subsidize irrigation, promoting a larger scale of agricultural production than would otherwise occur. Water on federal projects is also appurtenant to the land, meaning that water rights remain attached to specific parcels of land regardless of changes in land use. With the rapid pace of urbanization in the Salt River Project after the 1940s, irrigated fields have been converted to lawns, pools, golf courses, and such urban recreational curiosities as the artificial surfing complex in Scottsdale. Conflicts have arisen between farmers and suburbanites,[16] but the process of reallocation is projected to be completed by AD 2030 (Fig. 10.5).

During the past three decades surface-water features have gone through a process of technical elaboration as ditches are lined, diversion structures are automated, and measurement devices are installed

Figure 10.5
Central Arizona Canal and recreation corridor in suburbanizing area of Phoenix.

physically and legally to monitor agricultural water use. Furrow irrigation now employs siphon tubes or gated pipes that deliver water to individual furrows. Many orchards have been converted from basin irrigation to sprinkler and low-pressure trickle irrigation. Although these technical innovations have decreased ditch seepage and improved crop water delivery efficiency, their most significant social impact has been on farm labor.

Groundwater pumping is pushing irrigation into areas with limited physical or legal access to surface water. Groundwater levels in Arizona have dropped precipitously since the 1950s, producing ground fissures and chronic well-deepening. The Central Arizona Project, an ambitious diversion from the Colorado River and the most recent catalyst for growth in the region, was not approved until Arizona adopted a law to "manage" groundwater withdrawals. In an ironic twist, Central Arizona Project waters originally intended to augment Anglo irrigation will instead be employed to fulfill Indian water claims and to offset groundwater mining. Anglo irrigators may purchase whatever is left over.

Thus, for the third time in 2,000 years an irrigation system has grown in an impressive fashion only to dissolve under some combination of stresses. A rich array of hypotheses has been explored for the Hohokam collapse of the mid-14th century: climatic variability, river channel incision, warfare, population pressure, disease, salinization, and internal social change.[17] In addition to this litany of explanations for agricultural collapse, there is an intriguing link between Preclassic settlement changes, foreign inmigration, and the possible subordination of agricultural activities within Hohokam social organization.[18]

The Piman irrigation crisis is far clearer. Decline stemmed from an upstream–downstream conflict in which downstream Indian canals were dried up and food gathering was enframed within reservations subject to increasing ecological disturbance.

The contemporary irrigation decline exhibits, at first sight, a quite different set of processes. The growing urban economy easily overshadows agriculture in the competition for land, water, and labor (Fig. 10.6). If anything the process has been slowed by institutional constraints on the transfer of land and water rights, as well as by governmental subsidies to irrigators.

And yet these three periods of irrigation decline may share a common characteristic. In-migration of foreign populations initiated radical shifts in settlement patterns and agrarian stability. Given the declining significance of agriculture within contemporary Arizona, the dwindling proportion of the population engaged in agriculture, the pressure for reducing groundwater withdrawals, and continuing urban growth, there seems little question that irrigation agriculture will decline in scale. The important question is whether and how it might be meaningfully transformed in response to contemporary landscape forces in central Arizona.[19]

Hispanic settlement in the Rio Grande Valley

Spanish explorers threaded northward through the Rio Grande Valley through the second half of the 16th century. From its semi-arid and montane headwaters in Colorado flowing south to El Paso before angling southeast to the Gulf of Mexico, the Rio Grande River passes through the northern extension of the Chihuahuan Desert. This corridor represents the most enduring region of Hispanic desert occupance in the United States (Fig. 10.7).

Figure 10.6
An instant golf course under construction beside the Superstition Freeway in Phoenix, Arizona, courtesy of an abundant imported water supply.

Figure 10.7
Hispanic village near Taos, New Mexico. Adobe residences surround a plaza and its church on three sides; small irrigated fields usually under 10 acres are irrigated by surface ditches and laterals off the Rio Hondo. This centralized settlement pattern stands in contrast to the dispersed pattern of modern ranches and farmsteads in the Rio Grande Valley.

Spanish explorers encountered concentrations of pueblo settlements in the upper Rio Grande Valley of northern New Mexico. They observed Indian farmers employing small canals, checkdams, and flood irrigation.[20] In contrast to central Arizona, however, what the Spanish saw in the Rio Grande Valley did not constitute the prehistoric center of Anasazi irrigation.[21] More extensive water control systems had existed in the upland sites such as Chaco Canyon until the mid-13th century. Unlike Snaketown canal irrigators, Anasazi cultivators developed technologies of runoff control with distributaries on to irrigated terraces. But like those of the Hohokam, these upland and tributary systems were more sophisticated than those flanking the major river corridors of the Rio Grande and Colorado.[22]

Spanish administrators avoided settling in the Rio Grande Valley, establishing their headquarters at the start of the 17th century in San

Gabriel and later at Santa Fe (Fig. 10.8). The mix of indigenous and Spanish architecture in the Rio Grande Valley took place instead through the construction of mission churches in pueblos such as Sandia and Isleta, and smaller visitas at Puaray and Alameda. Indian converts constructed the earthen ditches (acequias) at missions, while Spanish rural land grantees used conscripted Indians and slaves.

The Rio Grande riverfront remained an unfavored location for Hispanic settlement until the 18th century, due in part to the problems posed by large floodflows and heavy sediment loads. During the late 17th century, individual rural land grants (estancias) began to fill in the riverfront between the Sandia and Isleta pueblos. This process and the material landscape culture of the Rio Grande were radically disrupted, however, by the Pueblo Revolt of 1680. Estancias were sacked, churches desecrated, and in retaliation the pueblos were burned. The Spanish return to New Mexico in 1691 was officially a return to Santa Fe, but several attempts were now made to settle the Rio Grande Valley. Larger-scale ranchos replaced the estancia settlement system, substituting Hispanic for forced Indian labor.

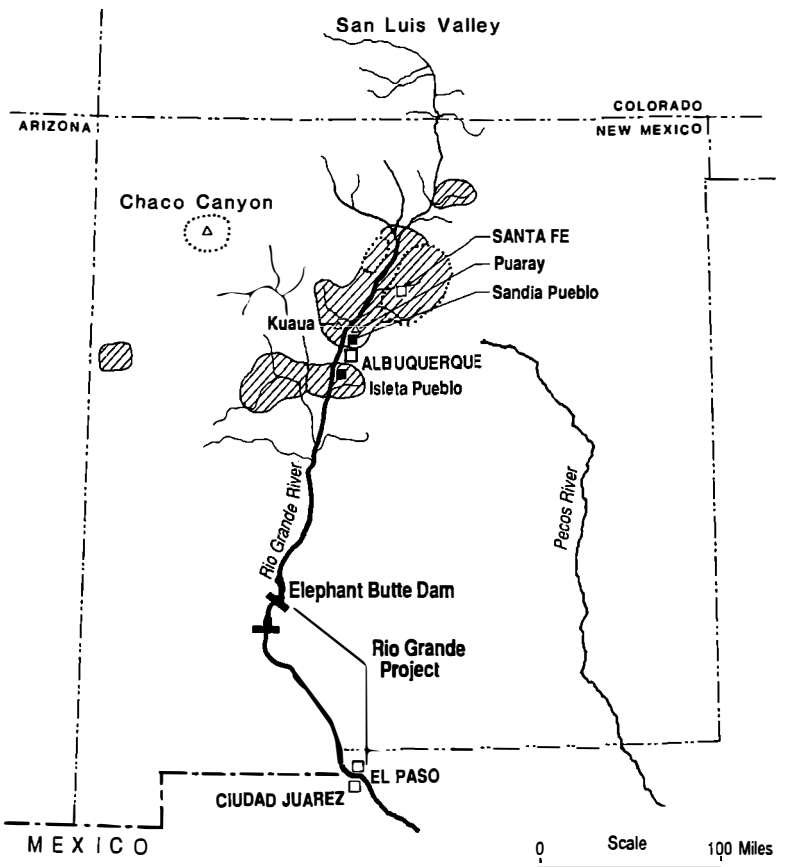


Figure 10.8
Water development in the middle Rio Grande Valley, New Mexico.

Finally, the villa (village) of Albuquerque was officially founded in 1706. There seems some doubt, however, that Albuquerque had fulfilled the town planning requirements of the Recompilacion de Leyes de los Reynos de las Indias at its founding. When the city sought a land grant on the basis of its status as a villa, and more recently "pueblo water rights" which automatically increase as water demand increases, its claims were denied.[23] At the time of its founding Albuquerque was little more than an assemblage of ranchos located near a main irrigation canal (acequia madre) that had been started before the Revolt.[24]

Whereas insecure tenure plagued the water systems of central Arizona up through the 19th century, Spanish settlers in the Rio Grande Valley began with an institutionally sophisticated system of recorded titles to land and water.[25] Irrigation of Spanish settlements (vis-à-vis individual ranchos) was a community undertaking that introduced a mix of Roman and Islamic water institutions to the Southwest. The acequia madre and its distributaries were public works, constructed by a community, and supervised by a ditchmaster or mayordomo. The acequia madre generated long, narrow field patterns which, unlike the arpent long lots of the Mississippi River Valley, were tied into canals rather than to river frontage.

The Hispanic irrigation network physically impressed early Anglo explorers such as Zebulon Pike, who in 1807 compared it to the irrigation works of Egypt (hardly an apt comparison). Mexican independence in 1821 further opened the upper Rio Grande Valley to Anglo contact and trade. Then in 1848 the Treaty of Guadalupe Hidalgo established an international boundary at Paso del Norte where only vague upstream–downstream competition had previously existed. In principal, Hispanic land and water uses were to be respected after 1848, just as Spanish law had called for respect of Indian resource uses.[26] In practice, the tensions between Hispanic water claims and those which preceded and followed have given a multifaceted character to irrigation in New Mexico.

Anglo settlement transformed the Rio Grande Valley during the second half of the 19th century, as it had central Arizona. The railroad station at Albuquerque led to the construction of a new town—separate in form, location, and character from the "Old City." This "dual city" pattern characteristic of 19th-century southwestern cities marks a transition away from agricultural production for local markets toward a more diversified trade economy.[27]

The delineation of boundaries between New Mexico and Texas and Colorado, coupled with agricultural growth in Colorado triggered interregional conflicts over the Rio Grande. A riot between American and Mexican farmers at El Paso revealed that there was little understanding of the upstream origins of the problem as late as 1877, but after the drought and depression of the 1890s this had changed. It was in this geographical context that the Harmon Doctrine was formulated by the United States Attorney General's Office, asserting that an upstream

country had no obligation to let water pass to a downstream country. Demands for equity and comity led, however, to a series of actions formally allocating the Rio Grande waters among various political entities, including: a preliminary treaty with Mexico in 1906; a state water code adopting the prior appropriation doctrine in 1907; path-breaking state groundwater laws in 1931; the Rio Grande interstate compact in 1935; and a more concrete water delivery commitment to Mexico in the Treaty of 1944. These broad policies laid the groundwork for massive federal projects such as Elephant Butte Dam, as well as an expanding process of a state bureaucratic administration.

Regional growth and politics continue to generate water conflicts. In the 1980s, the city of El Paso filed for hundreds of well permits in southwestern New Mexico. New Mexico's rejection of these applications was discarded in the Federal Court as a violation of interstate commerce. While that dispute has been settled, water scarcity in the Rio Grande Basin has led to further transboundary struggles between New Mexico, Colorado, Texas, and Mexico.

What makes the Rio Grande Valley distinctive is its combination of Hispanic and Indian settlement forms and its enduring Hispanic water institutions. This tradition of collective water management contrasts sharply with the individualism of Colorado and Arizona, and even more deeply with the former "rule of capture" in Texas groundwater development.[28] And yet the New Mexico landscape displays a separation of cultures—between pueblo and Hispanic, villa and rancho, Anglo and Hispanic—that has not been fully bridged by the general commitments of dominant communities to recognize the claims of those that preceded. Adjustments in the New Mexico landscape show how past and present can grapple alongside one another.

The Mormon desert

Mormon emigration to the semi-arid eastern fringe of the Great Basin Desert fueled town development in tiers of intermontane valleys and in more distant outliers across the West.[29] Taken out of their landscape context, Mormon irrigation ditches display few distinctive features. What sets these ditches apart from others is how they fit within the fabric of Mormon town planning and resource management.

Unlike in the Salt and Rio Grande valleys, Mormon settlers could not draw upon local irrigation precedents. They had minimal capital and virtually no irrigation experience. Thus, what one sees in Mormon irrigation are the physical manifestations of a remarkable vision and of the social organization that realized it. Upon entering the valley in 1847 Brigham Young made the powerful pronouncement that, "This is the place." Just four years earlier explorer John C. Fremont had described the Great Basin as a wasteland. Although by no means a retreat to desert solitude, for Salt Lake City was conceived rather as a hub for

expansion,[30] the desert here did offer insulation against the types of harassment experienced in Illinois and Missouri.

What then was the physical and social context of Mormon irrigation? The "Zion plan" established at Salt Lake City in 1847 revolved around a temple set within a grid of large blocks and wide streets, cardinally oriented. Street names and numbers marked the location of a block in relation to the temple (e.g. 6th West St. is the sixth block west of the temple). Town blocks were subdivided into large residential lots on which garden homesteads were built and watered by ditches taken off from local creeks (Fig. 10.9). A belt of larger irrigated fields surrounded the town. This geometrically ordered rural town plan stood in marked contrast to the dispersed farmsteads of Anglo settlers and Spanish ranchos.

As one plat was settled, new plats were added following the same plan until the Avenues Area of Salt Lake City broke with tradition.[31] New towns followed a similar sequence. Church elders would issue a "call" to selected individuals to found a new town, and in this way settlement proceeded southward and into the higher valleys.

Land and water were allocated by the church leadership on the basis of "stewardship," labor contributions to ditch construction, and "beneficial use." Although resources were allocated to individuals, they initially remained under collective control. The beneficial use rule represents an important contribution to western law, for it insists that resources claims must not be speculative or wasteful.[32] Although widely adopted in western water law, Mormon application of this criterion to

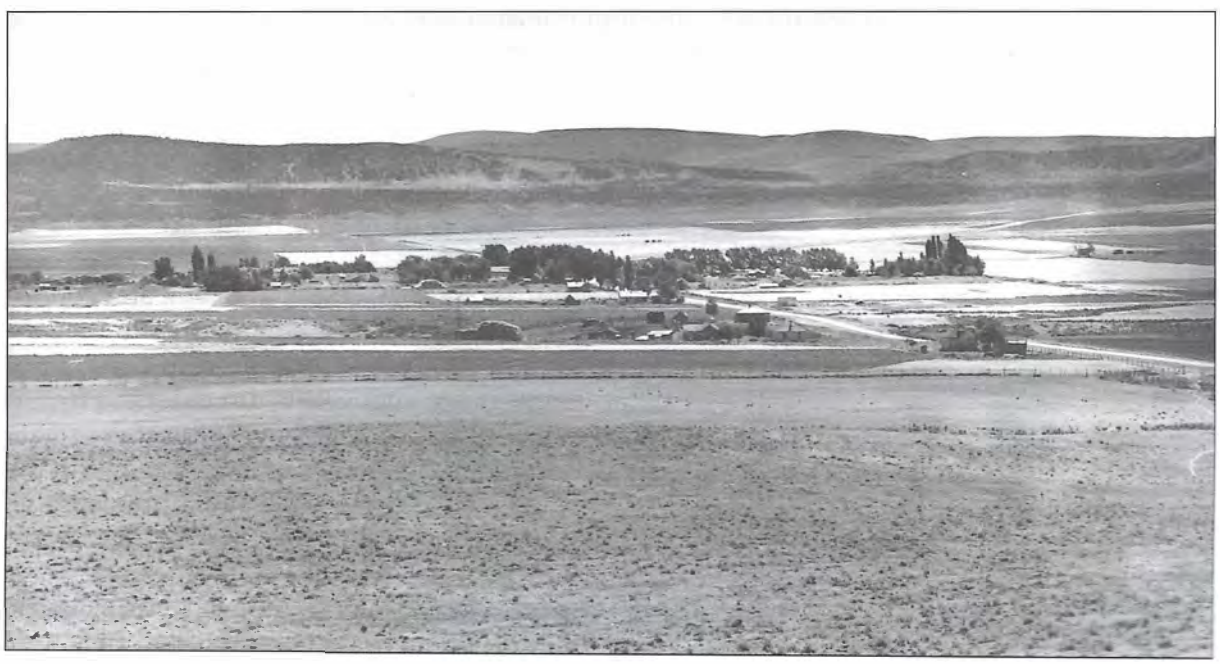


Figure 10.9 Mormon settlement of Snowville, Utah. Poplars mark the grid of individual family plots; these are surrounded by larger irrigated fields.

land was unique, and it helps explain the relatively small farm sizes in Utah.

Equity and sharing governed the allocation of resources. This carried over into irrigators' responsibilities during drought. In principle, the prior appropriation rule places the entire economic burden of a drought on junior appropriators. In Mormon practice, severe droughts called for proportional sharing of water deficits. Charging market prices for water was regarded as profiteering; and over-appropriation as water hogging.[33]

The Mormon town plan also specified wide roads and sidewalks. It was in these un-mown sidewalks that the town irrigation ditches were constructed. Ditches flanking the main residential streets were narrow with primitive wooden headgates and weirs. The ditches initially served a full range of domestic and agricultural water uses. They were charged with aesthetic as well as functional significance. Brigham Young had encouraged tree planting, garden plots, and attractive houses. Interestingly, roadside ditches and sidewalks were not always kept clear of vegetation or debris.[34]

By the start of the national irrigation movement of the 1890s Mormon irrigation was being described as technologically primitive.[35] As cities grew and water quality declined, ditches were restricted to irrigation uses, lined with concrete, buried in pipelines, or replaced with conventional curbs and gutters. Even if relatively primitive in the 1890s, Mormon irrigation retained its responsiveness to hazards and conflict. Church members were encouraged to resolve disputes voluntarily. When they could not, the church bishop decided the dispute. If disagreement persisted, the central church leadership rendered a final decision.

When the settlement of one area was well established, however, the central church would focus on other areas, leaving the operation of local water works and settlements to local leaders. Thus, an initially centralized authority was replaced by a highly diffuse pattern of locally controlled canal networks. As early as the 1850s the territorial legislature of Utah sought to shift the locus of water control to various civil arenas, e.g. the county court, the county board of selectmen, municipalities, and public irrigation districts.[36] In spite of increasing heterogeneity and water conflicts in Utah's population, early efforts at civil water control were largely unsuccessful. Water rights were regarded as the legacy of the community and only reluctantly sold or placed in the control of higher levels of government. When civil courts did enter the fray, it was usually to ratify an arrangement already arrived at through private negotiation. State legislation codified customary practice. Finally, in the late 19th century Utah adopted a state water code and administrative bureaucracy marking the transition to higher levels of regional water administration.

Federal reclamation canals followed along similar lines as those in central Arizona and the Rio Grande Valley. Established irrigators

resisted subsidies to new users and release of their senior water rights to large-scale federal ventures. This tension led to a visibly weak coordination between simple on-farm distribution systems and highly engineered diversion canals constructed by the Bureau of Reclamation.

Arrington and May have asked, "Is Mormon irrigation a model for other regions and cultures?" The question can be turned around to ask, "How did Mormon irrigation become increasingly like that of other areas?" Some distinctively Mormon settlement features have gradually disappeared; others have been adopted by non-Mormon groups. Irrigators have surpassed their original goals of a simple lifestyle, sharing, and equality—and have moved closer to the individualism and quest for prosperity that is pervasive in the West. The old social institutions for resource allocation have less force. And yet early Mormon irrigation remains a model; if not one that is directly copied, at least one that reinforces the importance of collective action for successful desert settlement. The Mormon example inspired both utopian experiments, as at Greeley, Colorado, and civic institutions, such as the beneficial use rule. Egalitarian and religious values no longer govern the Mormon ditches, but the ditches remind us of that heritage (Fig. 10.10).

Federal transformation of the Colorado River

The federal reclamation program was initiated in 1902 to stimulate homesteading on arid lands, to develop water projects beyond the financing capabilities of local groups, and to promote agrarian settlement free from speculation, monopoly, and water shortages. There has been a continuing retreat from these ideals (which had been

Figure 10.10
The South Jordan Canal, the second-oldest Mormon irrigation ditch in the Jordan Valley, completed in 1876, seen here in Taylorsville, Utah, in the southwestern suburbs of Salt Lake City, with the Wasatch Range in the background.

materially expressed in the 160-acre limitation, the appurtenancy rule, and farm residency requirements) to the point where there is now little that enables one to distinguish federal from other modern irrigation projects. Federal control over irrigation projects is also less than might be expected. Canals constructed at the national expense are generally turned over to local organizations that operate them.

The reclamation program has had dramatic impacts, however, on major rivers such as the Colorado (Fig. 10.3).[37] Countless travelers drive across the northern edge of the Mojave Desert, often from an urbanized area in California or Arizona, to see Hoover Dam. They travel from an oasis across the desert to a structure that makes the oasis what it is. What do they see? The concrete arch dam is visually overwhelming, no more so than when floodwaters ripped through its spillways in 1983. The reservoir behind the dam attracts water skiing and other forms of flatwater recreation. One can look downstream from the dam to imagine the canyon terrain drowned beneath the reservoir and its silt; but there are few who can recall from experience that lost landscape.

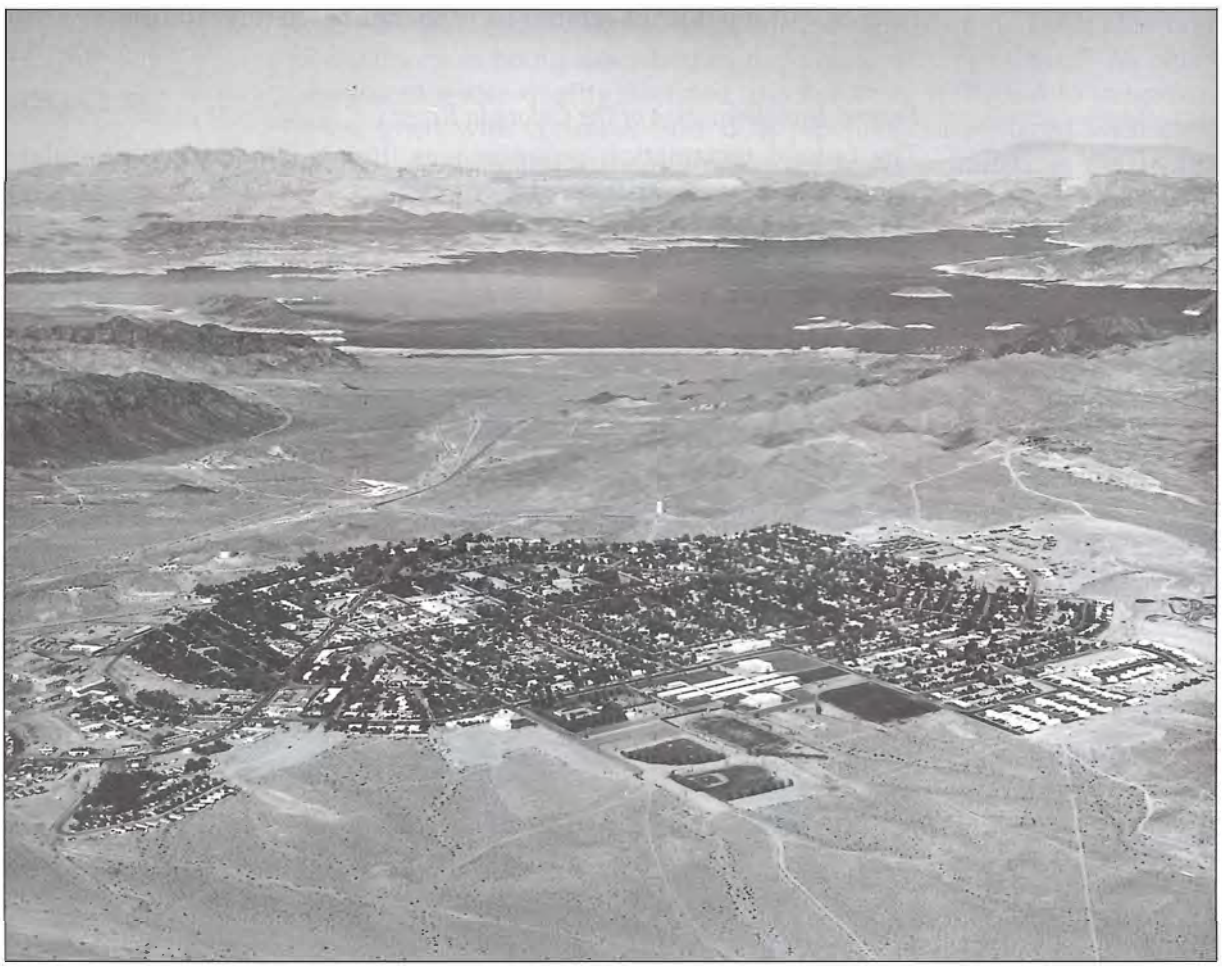


Figure 10.11
View of the planned federal construction town named Boulder City, Nevada, an unusually compact town in the modern West. Lake Mead and Hoover Dam lie in the background.

A short trip west into the hills reveals the extent of the reservoir and a view of Boulder City on the other side of the ridge (Fig. 10.11). Turbines, generators, and ganglia of power lines symbolize the regional extensions of the dam.

The Colorado River was officially viewed as a "national menace" during the first half of this century.[38] Efforts to divert the river into the Imperial Valley had triggered an accidental refilling of Salton Sea in 1905. Flooding and increasing demand for water and power in southern California had stimulated early plans for reservoir projects on the river. At the same time there had been mutual apprehensions between the upstream and downstream states. Downstream states feared that their water supplies would dwindle in the event of upstream development, while Colorado, Wyoming, and Utah feared that a prior appropriation rule would require them to pass "their" water downstream without using it. A compact was negotiated among the seven basin states in 1922 that divided the basin into two halves and ambiguously apportioned the waters between the upper and lower halves, but approval of the compact was blocked by Arizona. Eventually, Congress broke the deadlock by passing the Boulder Canyon Project Act of 1928, of which Hoover Dam was one part, ratification of the compact another, and quantification of the California and Arizona shares a third.

Thus, Hoover Dam has a complex institutional context that guides its operation.[39] The Boulder Canyon Project Act was a synthesis of several innovations in federal water resources planning, the most important of which was to design large dams for multiple purposes. Hoover Dam was authorized on the basis of flood control, power production, and water supply benefits (as well as the obligatory but absurd navigation objective on federal projects). While this may seem less than radical, earlier federal dams generally had a single official purpose with any other benefits regarded as incidental.

Control over Hoover Dam is held by the United States Secretary of the Interior. In a major deviation from western water law, the Secretary also has the power to allocate reservoir releases among the lower Colorado Basin users during droughts. Although the role of Colorado dams in delivering water to federal irrigation projects is limited, they are sometimes referred to as "cash register dams" because their power revenues subsidize new irrigation projects that would otherwise not be feasible.

The one settlement directly associated with Hoover Dam is Boulder City, Nevada. Initially built to house construction workers, Boulder City had the odd institutional status of being a federal municipality.[40] The closest comparison would be the Tennessee Valley Authority's model town at Norris, Tennessee. The aerial view of Boulder City in Figure 10.11 reveals an uncharacteristic compactness for towns in the American West. Street-level comparisons with its nearest urban neighbor, Las Vegas, could not be more striking in contrast (Fig. 10.12).[41] Liquor, gambling, and prostitution were all strictly prohibited in Boulder Cit-

Figure 10.12 Fountains at the Mirage Hotel, Las Vegas, Nevada.

despite their legality under Nevada state law. Boulder City brings together elements of suburban and company town planning. Its plan is structured around two main diagonal streets that converge heroically on the Bureau of Reclamation Administration Building. Street trees and lawns were planted throughout the town. Eventually the problems of spatial constriction, municipal financing, governance, and land ownership led to a transition toward ordinary municipal status—but not without assurances that certain forms of recreation and urban life-ways would continue to be prohibited.

Urban and agricultural settlement has proceeded most slowly in the Mojave Desert, Las Vegas and Boulder City being two of its larger towns. The Mojave supported virtually no irrigation agriculture outside Owens Valley.[42] Nevertheless, it now faces the heaviest urban pressures of the American deserts. Proximity to the Los Angeles conurbation, long-distance water diversions from the Owens and lower Colorado rivers, traversing highway and rail corridors, luxury resort complexes, and modern vehicular recreation have all drawn the public out of its oases and into the desert.

To appreciate the precedent established by Hoover Dam, one needs to proceed downstream through the succession of dams and reservoirs that culminates with Morelos Dam in Mexico and the Yuma desalination plant's last-ditch effort to remedy the water quality impacts of river development. Upstream, travel toward Glen Canyon Dam carries one through the history of social reflection on this mode of river development. It was in Marble Canyon just north of Grand Canyon National Park, for example, that a proposed dam was halted by a shift in public attitudes during the 1950s—away from water control and towards a wilderness protection. Further upstream at Glen Canyon

Dam environmentalists failed to stop the dam, but they altered the way that monument is viewed (Fig. 10.13).[43] Criticism of the reclamation ideal gained its strength from conflicts over the positioning of dams in scenic locations and then spread to deal more comprehensively with the environmental impacts of western agriculture and river development.

Conclusions

We have swept broadly through space and time, sketching out a key mode of landscape transformation in the American West. The four cases examined stayed as close to the climatic deserts as possible. Even so, it is apparent that desert oases lie on desert margins. Oasis development obscures the desert over time as agriculture and urbanism separate society from aridity. A long-term view reminds us that the separation can be dramatically reversed by various types of collapse. The roles of climatic fluctuation and environmental degradation are of course prominent in this regard, and they receive the active attention of some contemporary desert dwellers. Yet one cannot point to a major settlement that has self-consciously sought a "sustainable" mode of desert occupance. The record of groundwater development in the Southwest indicates the remoteness of this ideal.

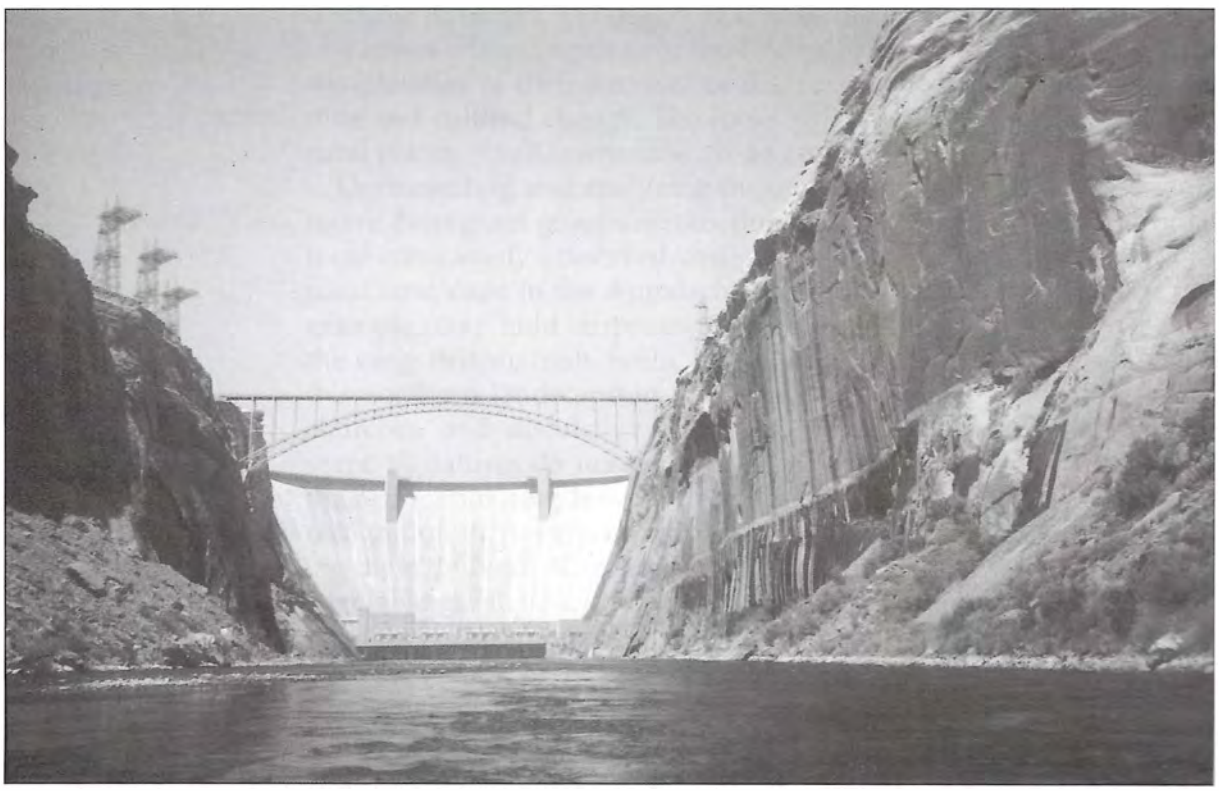


Figure 10.13 Glen Canyon Dam from the Colorado River, Arizona.

At least as significant are the social dimensions of oasis development. Cultural contact has destabilized irrigation societies from prehistory to the present. Community organization played a crucial role in the "success" of Hispanic and Mormon irrigation and the "failure" of Pima irrigation. Local collectivities have on the one hand given way to more individualistic patterns of water control, but on the other have been overlain by progressively larger water organizations and bureaucratic frameworks for water allocation and administration. The "community" of modern water control is both complex and factious. There is little question, however, that the modern vision of reclamation has faded in each of the desert provinces surveyed here. This raises important questions about the future of irrigation in the West. This future depends as much upon the cultural meaning and social structure of water use, as upon the volume, cost, and techniques of use—which have been the preoccupation of research thus far. Until the agrarian challenge is radically reconceived, the lessons for those who see will continue to shift from accomplishment to failing, and the most inspiring desert experience will lie outside the oases.

Chapter eleven
Inscribing ethnicity on the land

SUSAN W. HARDWICK

RECURRENT WAVES of migration into the United States from Europe, Africa, South America and Asia during the past four centuries have created some of the most diverse ethnic landscapes in the world. Many of the ethnic signatures that survive from the settlement of the earliest European groups, which have been discussed in previous chapters—such as New England villages, French land survey systems in southern Louisiana, and Spanish architectural styles in the Southwest—stand as visible testimony to their lasting contributions in shaping the American landscape. The imprint on the land of a wide variety of distinctive groups can still be seen clearly in some parts of the country, but remain all but invisible in others. This essay examines the creation and maintenance of various ethnic imprints in the United States in order to unravel the complexities of their survival or disappearance through the forces of time and cultural change. The focus will be on three distinct settings: rural places, small towns, and urban areas.

Documenting and analyzing the ethnic landscapes of smaller, more recent immigrant groups is sometimes more challenging than the often more consciously preserved vestiges of the earliest groups. A visit to a rural landscape in the Appalachian Mountains of North Carolina, for example, may hold surprises. One expects to find ample evidence of the early British, Irish, Scots, Welsh, and African American settlers on this southern landscape in the form of house types, steepled village churches, and distinctive fence patterns, and indeed residual landscape signatures do remain from these earlier waves of settlement in the region. But now, however, other images come into view, prompting recognition of more recent and lesser known immigrants now residing there. In North Carolina, for example, there are the small churches, vegetable gardens, and food stores of the Montagnards who now call this part of the United States home. This Southeast Asian hill tribe first came here in the early 1990s, seeking a safe haven from their politically and economically threatened homeland in the Vietnamese Highlands.[1] On Sunday afternoons, these newest Appalachian Mountains residents gather in the safety and security of North Carolina forests to play

traditional music on folk instruments brought from home (much as did earlier waves of immigrants who first settled here from the British Isles many centuries ago) (Fig. 11.1).

The continued arrival during the past two decades of immigrant groups such as these might seem to counterbalance the loss of older, more traditional ethnic expression in many parts of the United States. But there is a relentless standardization and homogenization of landscape renewal at work in this era of globalization, which poses threats to the survival of distinctive landscapes, cultures, and places.[2] Along with such demographic and economic changes are the increasingly *heterolocal* residential patterns of many of today's immigrants who fan out across the many suburbs of America's cities—in contrast to the dense concentration in older central neighborhoods of earlier immigrants. This more dispersed settlement could mean weaker and more ephemeral landscape impacts that may disappear even more rapidly than the longer-lasting imprints of earlier arrivals.[3]

Along with these recent alterations in the processes and patterns of immigrant settlement is the increasing fluidity of modern ethnic identities, expressions, and landscape tastes. As the shifting identities of

Figure 11.1
Montagnard musicians in a North Carolina forest.

immigrants become ever more nuanced in our fast-paced society, the multicultural backgrounds and multiple ethnicities of more and more Americans have made reading their landscapes more complex. This complicated terrain of ethnic identity results in frequently hybrid landscapes that reflect the widespread adoption of ethnic traits from many places. This, too, makes it more difficult to decipher the meanings of the past and the present in particular places.

Another homogenizing process has been the rapid growth rate of American towns and cities during the past century. This has resulted in the emergence of more politically and socially controlled landscapes and the sterile standardization of houses and other buildings in many places. While distinctive types remain, such as row-houses in Baltimore, bungalows in Los Angeles, and six-flats in Chicago, the standard American house type long ago became the detached single family home on a well-bounded lot, located on a tree-shaded street laid out within a grid, or, increasingly in suburbs, a mesh of curvilinear streets.

In recent years, however, a significant contrapuntal force has emerged in the central city of many metropolitan areas as downtown business districts are being transformed by gentrification. This draws urban residents who can afford it to reside in high-density downtown housing, much as their forebears once did, in cities such as St. Louis, Baltimore and Boston. It is positively typified by the rapid development of older commercial buildings "inside the Loop" in Chicago's central business district where new and renovated high-rise condominiums provide some of the trendiest (and most costly) housing in the metropolitan area.

As John Stilgoe once claimed, the word "landscape" is a "slippery" concept that contains many contested definitions and expressions.[4] With this in mind, documenting and deciphering ethnic landscapes may be the most fraught of all exercises since there are so many different definitions of the term "ethnic" in popular and scholarly usage today.[5] Here, "ethnic landscape" refers to the imprints on the land left by people who share a common identity linked to a common place of origin. Human geographers and other scholars have produced a large literature on ethnic landscapes—interpreting observable features that help identify, define, and delimit ethnic settlement areas. These include house types, barns, fences, gardens, cemeteries, field and village patterns, commercial establishments, public buildings, religious structures, and decorative treatment of homes and yards.

Each ethnic landscape is by definition almost unique, yet immigrant impacts are often defined at the regional and local scale by a set of unifying characteristics. Distinctive features such as Italian or Cuban yard shrines, house types in the American South, Finnish saunas, and Latin American-inspired open-air markets all reveal the traces of immigrant groups who have helped shape American life and record their settlement histories in the visible landscape (Fig. 11.2). Imposing some

Figure 11.2 Mexican bakery and butcher shop on North First Street in Woodburn, Oregon, one block away from the old business core along Front Street. Colorful mural art adorns the otherwise utilitarian buildings housing the businesses.

conceptual order upon the cacophony of themes explored in prior studies of ethnic landscapes is the goal of the remainder of this essay.

Why here and not there? The shaping of early ethnic landscapes

More than three decades ago, Wilbur Zelinsky proposed a concept suggesting that the earliest settlers to displace aboriginal peoples and cast their imprint on the land were the most critical in creating and maintaining long-lasting landscapes, no matter how small the initial group may have been.[6] He called this the *doctrine of first effective settlement*. Perhaps the best example is found in the northeastern United States where the impact of British colonialism remains indelibly stamped upon the land.[7] In this distinctive culture region, colonial house and barn types, street patterns, fencing styles, and religious buildings remind insiders and outsiders alike that the British were not only the first group of non-aboriginal people to settle here, but because of that also the most dominant in terms of landscape making.

The landscapes created by these early groups, however, were usually not exact reproductions of those they left behind. This resulted from the lack of familiar construction materials, within-and-between-group mixing of ideas, and preferences during the long journey to North America from Europe. The buildings they constructed may have been simpler than those they left behind. Once these adapted ethnic landscapes from Europe were established, American landscape features began to evolve *in situ* in their own way and own time.

Geographers have suggested several other theories to help explain ethnic patterns on the land. The homelands model, for example, suggests that the formation of distinctive ethnic homelands has been and continues to be one of the primary forces shaping and maintaining visible and identifiable immigrant landscapes in particular places in the country.[8] This approach to the study of ethnic landscapes listed five key ingredients necessary for a region in the United States to be called an ethnic homeland: *people, place, time, control,* and *bonding.* Conzen criticized and reworked the homeland approach by elaborating on the importance of recognizing that homeland development is linked to the creation and concept of a nation-state and suggested that there are essentially three elements needed to identify a so-called homeland—*identity, territoriality,* and *loyalty*.[9] His view is that homelands are simply a special type of *culture area,* a definition that works well in light of today's attention worldwide to homelands as a political construct. Whatever the conceptual merits of the debate over cultural areas versus homelands, it focuses attention on the processes involved in shaping and maintaining distinctive, and at times quite well-bounded, ethnic cultural regions in the United States and their landscapes (Fig. 11.3).

Nonetheless, in today's post-9/11 world, the politicization of the word "homeland" renders it less useful for landscape analysis. Whether used in association with the struggle for ethnic political power in places such as Iraq, Chechnya, and the former Yugoslavia, or the yearning for a return to Native American homelands by long-displaced aboriginal peoples, this term's connection to highly contested and politicized issues remains an obstacle to its widespread usage in landscape analysis.

Conzen's concept of "ethnic substrates" provides a more nuanced dimension to these classic views about how best to analyze the impacts of ethnicity on space and place.[10] He defines an ethno-cultural substrate as a zone within which a particular ethno-cultural group is consistently above a certain minimum proportion of the total population, thereby constituting a recurrent presence, even if a minority, from locality to locality within the zone, which may influence the broad community values, regional identity, and landscape character of the zone as a whole.[11] This substrate approach to understanding and defining ethnic landscapes also helps clarify some of the reasons for the widely varying impacts of distinctive groups in time and place. The wide reach.

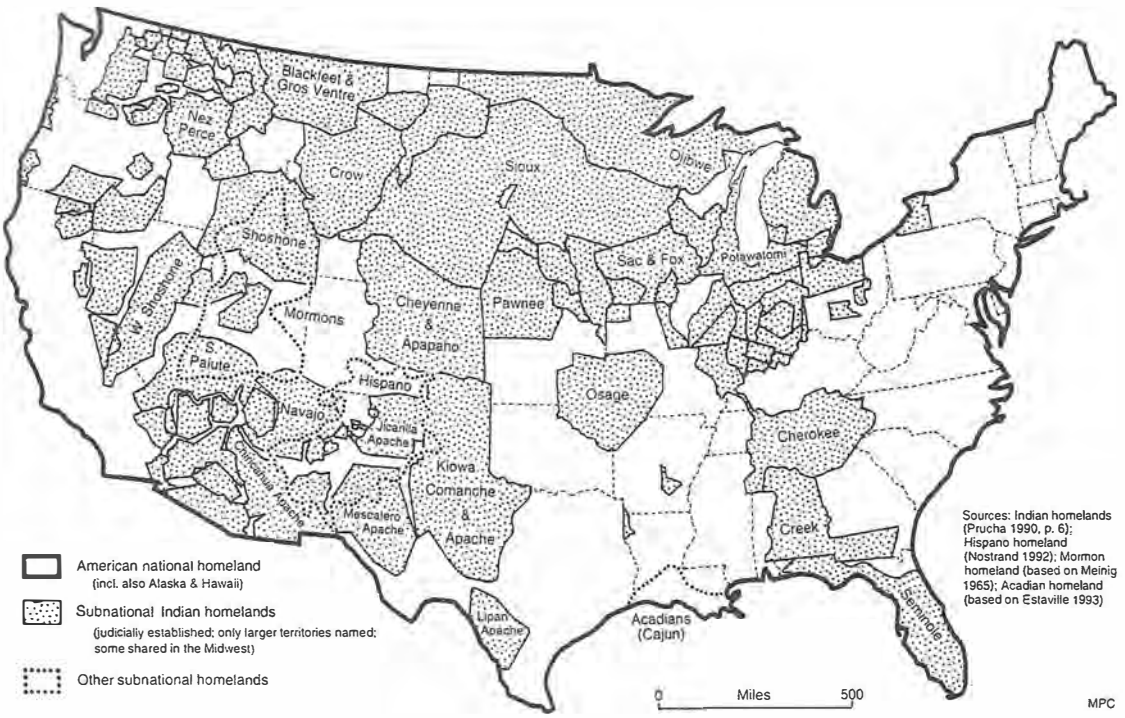


Figure 11.3 Selected ethnic homelands in the United States. Besides judicially recognized Indian homelands, other domestically formed homelands are essentially those of the Hispanos and the Cajuns, and, arguably, the religious "homeland" of the Mormons.

sometimes transcontinental, of some groups—such as the Germans and British—has extended and expanded their historical influence on particular places even though they may no longer be the majority population there.

In addition, the related concept of "ethnic islands," a spatially dispersed but internally linked ethnic zone of residence, sheds light on the scattered location patterns of early immigrant settlement sites.[12] Examples of this abound in the United States, including the insular Punjabi Sikh farming community near Yuba City in California's Sacramento Valley. More common in today's interconnected landscape are *ethnic archipelagos*[13] such as the network of Cuban neighborhoods in Miami and New York City linked by their common national and ethnic identities and longing for home. These two additional concepts help define ethnic space and place in the United States and provide a useful approach to measuring and mapping where American ethnic landscapes can be found (Figs. 11.4 and 11.5).

Regardless of how ethnic imprints and distinctive areas of ethnic settlement are defined, one thing is clear. Despite the homogenizing influence of globalization processes on local and regional landscapes, numerous ethnic groups have had an impact on the American landscape in visible and often dramatic ways. Several key factors influence how

much cultural baggage was likely to be unpacked by new immigrants in their new homes.

First, the single most important influence on the longevity and depth of ethnic imprints is the volume of immigration that occurred in relation to time and place. Large migrant flows to a common destination strongly encouraged the emergence and maintenance of ethnically distinct landscapes. Second, when settlers sharing a common cultural background congregated in significant clusters and numbers to occupy the majority of land in a given district, a strong imprint resulted. Examples include the lingering impact of the tens of thousands of mid to late 19th-century German immigrants who settled in the Texas Hill Country in distinctive spatial clusters. This large group of immigrants left their mark on communities such as Fredericksburg, Dripping Springs, and New Braunfels in the distinctive shapes of town plans and unique German-style Sunday houses, churches, bakeries, and other commercial buildings.

Likewise, the Italians also congregated in ethnic neighborhoods in settings such as San Francisco's North Beach, Boston's West End and Chicago's Nineteenth Ward—all places that emerged soon after the Italians arrived in the 1880s to be absorbed into America's classic urban melting pots. Here, and in other parts of the United States, Italian entrepreneurs and ethnic festivals helped define the smells, tastes, and distinctive appearances of neighborhoods, thanks to their relatively large numbers and well-defined spatial clusters. Likewise, in the upper Great Lakes region, large numbers of Finns, Swedes, Norwegians, and others from Western and Northern Europe helped define and delimit distinctive North European landscapes replete with building designs based on styles popular in their homelands.

Third, the economic success of groups also influenced their impact on the land. Wealth bred confidence and power in disseminating their own landscape tastes far and wide. In contrast, poverty limited the ability for groups of immigrants to place their stamp upon the land except in very localized ways. Settlers such as the Scots–Irish, many of whom scratched out a living in isolated and marginally productive parts of the Appalachian Mountains, inscribed their identities and values upon local landscapes via distinctive house types, fence patterns, and vegetable gardens. Their ability to disseminate these values and tastes beyond their immediate areas of residency, however, was limited by the constraints of their low socioeconomic status and weak political power. Despite these limitations, the physical and locational isolation of the Scots–Irish and other immigrant groups in the United States in certain parts of the country encouraged the creation and retention of unique landscape features no matter how low they may have been on the socioeconomic ladder.

One final factor that has helped shape the durability and expressive strength of particular groups has been the cohesive bond provided by shared values and common backgrounds. Groups such as the Amish,

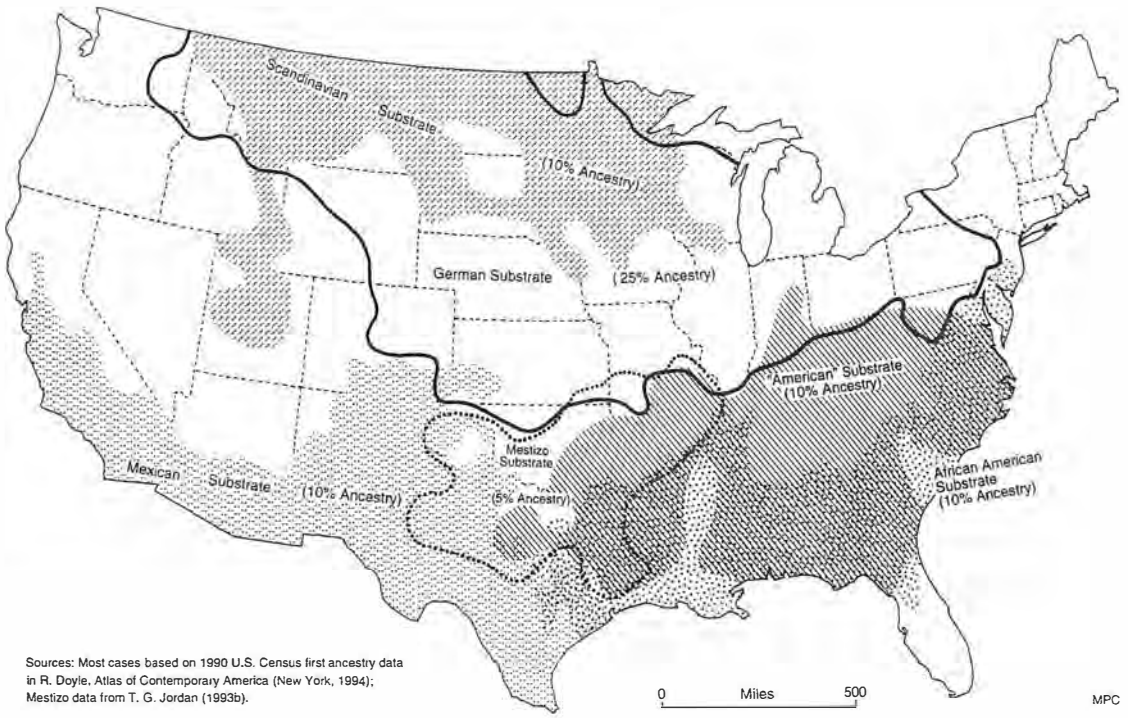


Figure 11.4 Selected U.S. ethnocultural substrates. Like rocks lying beneath the surface, many ethnic groups maintain a presence not only where they are the predominant group, but also in areas where they are a minority—but still significant in terms of cultural influence.

Mennonite, and Harmonist farmers in Pennsylvania, Ohio and elsewhere laid out farmsteads and built houses, barns, and meeting halls much like the ones they left behind in Europe. As a result of the long-term commitment of these groups to their common religious beliefs, many of their landscape features took root and remain strong to this day (Fig. 11.6).

In contrast, there are three significant factors working against clear ethnic signatures on the land. These are: (1) heterogeneous migrant streams with dispersed destinations and little tendency to cluster in distinctive places; (2) the lack of interest or success in distinctive colonization of certain groups, especially those of culturally porous disposition; and (3) sheer small numbers of new arrivals. One example of these three related processes working together was the arrival of late 19th-century Basques from the Pyrenean Mountains who migrated to remote parts of Nevada, Idaho and eastern Oregon. Their extremely low numbers and the nature of their primary means of support, sheep-herding, meant that most lived in scattered rural places and as minorities in very small towns. Such widely dispersed settlement patterns and small

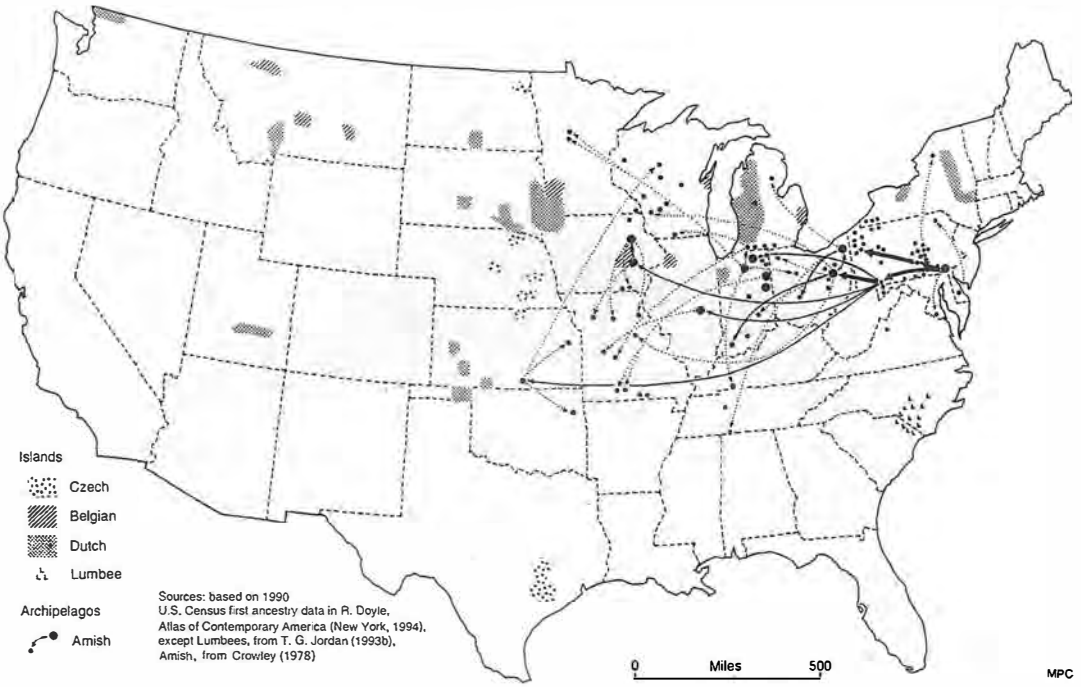


Figure 11.5 Selected U.S. ethnocultural islands and archipelagos. Shown are communities large enough to occupy significant territory on a national scale, but numerous other examples exist at the level of individual villages, small towns, and rural precincts.

numbers produced scant evidence of the more than century-long residence of Basques in the arid West—with the exception of a few Basque hotels and restaurants in remote places like Ely, Nevada; scattered, difficult-to-notice rock cairn monuments constructed on bare, windswept hillsides; and aspen tree carvings in remote mountain environments in the region. Today, most of these Basque ethnic landscape features have all but disappeared from view.

There are other structural and economic processes that have diminished the imprint of widely scattered, small, and economically less successful groups on both rural and urban landscapes. In cities, where economic and cultural change is intrinsically rapid, the distinctive cityscapes of smaller groups are often quickly obscured by time. In contrast, group identity persists in urban America when groups are large and spatially concentrated. Examples include the exuberant Mexican streetscapes of San Antonio, Albuquerque, Phoenix, and other cities in the Southwest and California and, increasingly, in many other parts of the United States.

Figure 11.6
An Amish farm in Lancaster County, Pennsylvania. Note the extensive farmyard complex and multiple residential units, including a grandfather house, and the lack of electrical service.

Enduring rural and small town landscape features

Folk building practices have created the most visible and long-lasting ethnic landscapes in the United States, particularly in rural areas. Nineteenth-century immigrants uprooted over long distances to settle new lands often translated their homesick feelings and deep longing for home into constructing homes that reminded them of their places of origin. A whole new range of structures was introduced onto the American landscape during this early period of settlement. Many of these vernacular styles such as the New England salt box colonial house, the German barn, and the Spanish adobe house linger today. Although early landscape tastes brought from home may have suffered dilution as new arrivals came into contact with other cultures and other immigrants, and while they faced the constraints of building in new environments with new construction materials, clinging to vestiges of familiar building styles helped ease the transition and trauma of starting new lives on American soil.

Almost all of the earliest immigrant groups in the United States settled first along the east coast where land was available for farmsteads. Through time, settlement streams diffused westward, as did landscape impacts and influences. An exception to this east–west flow were Russians who explored and later colonized North America along the Pacific coast from the 18th to the early 19th centuries.[14] As with other early groups of settlers, Russians built churches and other structures as close as possible in style and function to those they were familiar with from home, but using materials available in their new environment (Fig. 11.7)

Figure 11.7
St. Michael's Russian Orthodox Cathedral at the center of Sitka, Alaska. The original log cathedral was built in 1848 and burned in 1966. The present structure, of concrete, replicates the original in every design detail.

Along the eastern seaboard, because the English were the earliest and most dominant post-indigenous group to settle the area, their landscape imprints remain the most visible today. The typical New England village lingers as both a real place and a now idealized American landscape, mythologized in popular tourist destinations such as Disneyland. Although it is conventional to think of these New England villages as landscapes exactly like the ones early settlers left behind in Europe, early colonists from Great Britain did not live in compact settlements as did their forebears in the homeland (since most of the glaciated, thin-soiled land in New England was unable to support the dense populations typical of a European agricultural village).[15] Thus, most of the earliest New England colonists lived in dispersed farmsteads, with the exception of those who made their living in commercial ventures in coastal villages or in river valleys because of the rich alluvial soils and transportation opportunities the rivers sometimes afforded. Farmers and their families gathered at the meetinghouse located in the center of colonial towns, or, if it was too far away, they might form their own village closer to their farmsteads, each with its own meetinghouse. Later

on, numerous villages were formed as agricultural productivity and overall economic development expanded, making it possible for more and more people to live in commercial villages. These places became associated with the well-known English landscape scene that was made up of Protestant churches with tall steeples, meetinghouses, taverns, general stores, and distinctive New England house types reminiscent of England's urban streetscapes. By the 1830s, the meetinghouse had been replaced in many towns by a common or an open space known locally as the green. The best known of these is Boston Common.

Row-houses built primarily of brick dominated towns in New England in the early years of settlement. By the 19th century, however, wooden-frame buildings, most often painted white, had replaced the use of brick in towns and cities in the interior. As building materials changed through the years, so too did housing styles. The traditional English model favoring a row-house design was replaced by a strong preference for free-standing individual homes built on large lots with landscaped front lawns, with space for vegetable and flower gardens in the backyards. Four house types that became especially popular included (1) the oblong box-styled farmhouses with massive fireplaces in the center, (2) two-story clapboard Georgian homes with four rooms to a floor, paneled front doors, and a centrally located chimney; (3) the post-medieval English house with a steeply pitched roof, small windows, and exterior walls covered by weatherboard or wood shingles (with later room additions that gave rise to its more common name, Saltbox Colonial; and (4) the classic cottage featuring a quaint one-and-a-half-story design with two large rooms in the front, a smaller room at the back, and a central staircase leading to a low-roofed attic which usually contained two small bedrooms.[16]

These early British settlers were joined by German settlers who came to find religious freedom and farm the rolling lowlands of southeastern Pennsylvania with British colonist and Quaker visionary William Penn. Between 1682 and 1775, at least 85,000 people from German-speaking parts of Europe immigrated to the original thirteen colonies, with most settling in and around Philadelphia.[17] Because the numbers were sufficiently large, German building styles and landscape tastes thereafter played a major role in influencing landscape features in many parts of the United States. German-style homes and large German barns were dispersed westward across the continent far from original settlement sites in southeastern Pennsylvania and the Delaware Valley. Germans, and a few other immigrant groups such as Irish, Cornish, and Luxembourgers, preferred to use stone for their home construction since they came from districts in Europe where stone houses were the norm. The Middle West's traditional Luxembourg house is a stone house finished on the outside with stucco, a main entrance on the eaves side of the building, and at times a jerkin roof. These houses today provide visible reminders of the role of immigrants from Luxembourg

who settled in places like Wisconsin where the brick and frame houses of other groups such as Belgians and Anglo-American dominate the landscape. Another example of the affection of some groups for stone houses is visible in downtown New Braunfels in the Texas Hill Country where local residents have converted a streetscape of German stone houses into a tourist-oriented shopping district (Fig. 11.8). Along with stonework, Germans also carried over a construction method known as half-timbering, a traditional building form in parts of Europe where wood was scarce. This German-inspired *Fachwerk* style is still visible in places from Pennsylvania to Texas, even where there was enough wood for clapboard or log houses, although few remain on their original settlement sites today (Fig. 11.9).

Throughout the 19th century, immigrants continued to move west, taking their distinctive building styles and landscape tastes with them. As a result of their long history and experience with wood construction methods, and the availability of trees in the East and Midwest, many depended upon log-building designs as their primary construction method. Since several different log-building cultures were in evidence in Northern Europe prior to this time period, it is difficult, if not impossible, to trace the exact place of origin of this ubiquitous "American" building style. Germany, Sweden, and Finland have all been suggested as the source area of the now famous American log cabin. The most controversial theory of the exact place of origin was presented in work published by Terry Jordan and Matti Kaups, who argued that the Savo-Karelian culture area of southeastern Finland was the most likely point of origin for the American log cabin.[18] According to this thesis, the

Figure 11.8
German stone buildings in Luckenbach, in the Texas Hill Country.

Figure 11.9
German half-timber construction in the Friedrich Koepsel Farmhouse, Lebanon, Dodge County, Wisconsin, built circa 1858. The building was moved to Old World Wisconsin and restored in 1979–1980.

preadaptation of the earliest immigrants from this part of Europe who settled in the Delaware Valley colony of New Sweden in the 1640s first brought log-building styles into the United States. Whatever its exact origin, the historical significance and emotional association of log construction with the frontier spirit continues to hold romantic appeal for Americans throughout the United States today.

One example of the long-lasting legacy and interplay of the relocated landscapes of overlapping immigrant groups that is still visible today is found in the rural areas and small towns of Ohio.[19] Immigrants from three key zones of cultural influence on the east coast—the Middle Atlantic, the South, and New England, along with new immigrants from Northern and Western Europe—settled in specific parts of eastern Ohio after crossing the Appalachian barrier. Eventually, settlement nodes of migrants from each of the primary culture hearths on the east coast along with distinctive ethnic islands formed by new immigrant groups from abroad became well established here. They were encouraged by federal policies that opened up land west of the Appalachians, made available through the *township and range* survey system.[20]

Early transportation routes encouraged each of the three major groups from the East and South to settle in specific places with New Englanders, Middle Atlantic, and Southern migrants each dominating a particular part of the state. Germans from Pennsylvania were the largest group to settle in eastern Ohio. The most visible and best known of the landscape elements they brought with them was the distinctive German barn (Fig. 11.10). This large, two-story structure, originally from Switzerland, had a functional stable in the lower level and ample threshing and storage space upstairs. The other distinctive Pennsylvania German influence on Ohio's ethnic landscapes included the practice of painting brightly

Figure 11.10
Decorative German barn, Henry County, Ohio.

colored images on the sides of barns as well as on other buildings, furniture, gravestones, and elsewhere, which help define Ohio's unique multi-ethnic landscape.[21]

These residual ethnic landscape features in Ohio were typical of similar developments in other places as foreign-born migrants and native-born Americans continued to move increasingly farther west. Immigrants from Belgium, for example, settled on the Door Peninsula in Wisconsin after 1846 where their material and nonmaterial cultural imprints continue to be displayed in local landscapes.[22] Examples of this include the French language inflected by the Walloon dialect that is still spoken by some residents of the area, the abundance of Catholic churches scattered across the landscape, traditional Belgian foods served in homes and local restaurants, Belgian religious and ethnic festivals, and an array of distinctive building styles. The extensive forests in this region provided ample logs for the earliest Belgian houses in Wisconsin (although few of these structures exist today). These log structures vary considerably in appearance from other more traditional log styles in North America since their exterior is often covered with clapboard or a red-brick veneer. This outer layer helped protect houses again fires and provided insulation during the long winter months. Smaller stone houses were also popular in the area. As with other immigrant groups, these building materials may have been used to satisfy the Belgian desire to use stone and brick so that their homes resembled houses common in their homeland.[23] The lingering landscape signatures of the Belgians of Wisconsin, along with their summer kitchens with attached outdoor baking ovens, three-bay and other barn designs, and wayside chapels also provide evidence of the impact even relatively small groups can have on the land (Fig. 11.11).

Figure 11.11
A typical Belgian house with summer kitchen and attached bake-oven (foreground) in Kewaunee County, Wisconsin. Summer kitchens and bake-ovens separate from the main dwelling were a climatic adaptation to Midwestern heat in many Belgian, Luxembourg, and German communities.

North of this Belgian-inspired Door Peninsula is the Lake Superior region of upper Michigan, Minnesota, and Wisconsin. Here, too, a host of ethnic landscape features survive, created by groups such as the Finns, Swedes, and Norwegians who likewise left their mark on the landscapes of the upper Midwest.[24] The Norwegians were the first to arrive and they soon became the dominant population in some parts of the north-central region. One of the largest and most concentrated Norwegian settlements was in Vernon County, Wisconsin, where their distinctive vernacular architecture can still be found. Finnish immigrants who settled on the American shores of Lake Superior preferred log houses with close-fitting square logs that required no chinking, Nordic pair houses, and many different log-notching methods common in Finland.[25] As with other groups, many of these Northern European pioneers migrated west, taking their landscape tastes and building skills with them. In place as far-flung as Rocklin in northern California, in fact, an active community of Finns planted their distinctive landscape features on the land in the early 20th century. Although most of the saunas, notched log houses, and commercial establishments in Rocklin have been obliterated by condominiums and shopping malls in recent years, Finn Hall remains as proud evidence of the former dominance of this Sierra Nevada foothill town's Finnish heritage (Fig. 11.12).

Ethnic cityscapes

> As a cultural construct, the meaning of the city can be deciphered by closely examining its complex relationship with the culture of which it is a part.
>
> (Domosh 1992, p. 475)

Figure 11.12
Finn Hall in Rocklin, California.

Urban places in the United States also bear the imprint of the past in their ethnic landscapes. Today, American immigration is primarily an urban phenomenon with concentrations in traditional "gateway cities" such as New York, Chicago, and Los Angeles as well as new portals such as Atlanta, Minneapolis, Las Vegas, Omaha, Memphis. Ethnic imprints remain in older neighborhoods where groups first settled. Street names, businesses, and signage carry names with ethnic roots while particular concentrations of ethnic restaurants, religious structures, and social clubs also linger as reminders of the past and present impacts of immigrants. Before the 1890s, ethnic communities were located near central business districts and were dominated by Irish and German residents who were spatially segregated from each other as well as from other immigrant groups and Anglo and African American residents of the city. German cities such as Milwaukee and Irish-dominated urban places like Boston come to mind as examples of this era. New waves of immigration from Southern and Eastern Europe in the late 19th and early 20th centuries shifted ethnic communities to heavily working-class districts located near industrial plants far from the city center. A third period may be identified as beginning in the 1920s when various ethnic communities began to form a series of clustered upwardly mobile neighborhoods across the metropolitan area.[26]

This third era of immigration left its mark on the landscapes of American cities and also on the theories of social scientists writing about urban ethnicity. From the 1920s to the present, studies of immigrant landscapes and spatial patterns in the city of Chicago in particular emerged as the basis for analyzing urban ethnic impacts. Beginning with sociologists of the Chicago School, the ethnic landscapes of this multicultural city have long been used to help explain and predict the movements of immigrant residents. Their field studies of immigrant

neighborhoods in Chicago resulted in theories of assimilation and urban growth patterns in American cities still useful today.

Chicago also provides a fertile mixing ground of immigrant cultures and landscapes for students of American ethnic landscapes. Its 25-mile-long, 10-mile-wide flat well-gridded terrain is divided into sections marked off by a series of barriers including three branches of the Chicago River, railroads, expressways, and embankments that have created unintentionally imposed boundaries for distinctive ethnic neighborhoods.[27] These well-bounded parts of the city made it possible for immigrants to live apart from each other, practicing their religious customs, speaking their own languages, and creating their own ethnic landscapes (Fig. 11.13). Successful waves of Western, Southern, and Eastern European migrants shaped the character of many city neighborhoods with later arrivals of African Americans from the American South, followed most recently by new immigrants from Latin America and refugee communities from Eastern Europe, Africa, and Southeast Asia. Each have added their own layers of diversity to the city's ethnic landscape through time.

Figure 11.13
Thalia Hall on West 18th Street in the once-Bohemian neighborhood of Pilsen, Chicago. This impressive community building contains a large theater modeled on the Old Opera in Prague, Czech Republic. Today, the district has become the symbolic heart of Chicago's extensive Mexican American community.

Many of the immigrants who came to Chicago and other parts of the United States during the past three and a half decades were allowed entry through changes in federal legislation in the mid-1970s. These new laws made it possible for increased numbers of immigrants from Latin America, Asia, and Africa to gain entry into the country. The largest group by far is from Latin America, which spawned a migration flow from south to north (in contrast to the earlier east–west transfer of British, German, Scandinavian, and other groups and their ethnic landscapes across the continent). Most representative of this trend is the dramatic and ongoing migration stream of immigrants from Mexico who have created distinctive Latino landscapes throughout the Southwest and California as well as increasingly in other parts of the country. Mexican-born Latinos are now the largest group of new immigrants in the United States and thus their landscapes hold particular significance. As early as the 1940s and 1950s, despite intense attachments to their rural villages, Mexicans from the Rio Grande Valley and other places located in the United States–Mexican Borderlands began moving to urban places such as Los Angeles and Phoenix where wages were higher and employment more secure. The contributions to ethnic landscapes of this large immigrant group continue to the present day as Mex-America expands in size and importance in American culture.[28]

Today, the city of San Antonio remains the most Mexican-influenced urban place in the country, with well over half of its population from Mexico and other parts of Latin America. The city's Mexican heritage has deep roots. From its public plazas, neighborhood cantinas and colorful wall murals, to the heavily touristed La Villita shopping district, San Antonio is a quintessentially Mexican place.[29]

Puerto Ricans represent another Latin American group that has created highly distinctive ethnic landscapes, particularly in New York City. They first arrived in the early decades of the 20th century. Many built *casitas*, small wooden structures most had lived in at home before departing for the east coast, and very rural-looking buildings help identify past and present Puerto Rican residential districts in the city today.[30] Casitas are small Caribbean-styled houses identified by their bright colors, ample verandas, corrugated metal roofs, and shuttered windows. New York's casitas are primarily located in high-poverty neighborhoods that witnessed massive population displacement during period of intense urban renewal from the 1950s through the mid-1970s. Here, these small buildings are tucked among abandoned tenement buildings. In recent years, an effort to preserve historic casitas has begun within the local Puerto Rican community, as builders reoccupy abandoned or misused territory that was once home to the Puerto Rican community, to add visual and cultural texture to the city.

Similarly, Cubans in Miami and other parts of south Florida have transformed neighborhoods and districts of the city into a dramatically observable Cuban space. By 1980, more than 430,000 Cubans lived in

Miami and its environs following changes in the political situation in their homeland.[31] Their settlement in south Florida as well as in other places in New Jersey and New York has had a sudden and fundamental impact on each community's ethnic landscape. The most extreme example of this is found in southwest Miami where Cuban culture is expressed in Spanish-language newspapers, magazines, and books; cigar factories; open-air fruit and vegetable stands; restaurants featuring Spanish and Cuban cuisine; front yard shrines to Catholic saints and Afro-Cuban cult religions; and historic commercial buildings that have been converted into meeting halls for concerts, dances, and political gatherings. This community-in-exile, like other immigrant groups who came before them, have created their own sense of place that captures much of what they left behind at home in tandem with traditional American cultures, values, and landscapes learned after their arrival in the United States.

This well-developed Cuban landscape gave birth to the concept of "ethnic enclave." The term refers to a high-density clustering of residential and commercial urban space, usually dominated by one ethnic group. Ethnic landscapes in urban areas are often expressed most vividly in enclave settings such as San Francisco or New York's Chinatown, Monterey's Little Italy, or Chicago's Greektown. As newly

Figure 11.14
Flea Market at night, Chinatown, San Francisco, California.

arriving immigrants settle more often in suburban locations because of the high cost of in-town living, available housing, and accessible employment in the outer city, traditional ethnic enclaves are breaking down. Despite these changes in the past several decades, however, many of the landscapes of established ethnic enclaves remain in older downtown districts of American cities as reminders of the past.

Perhaps the most evocative urban ethnic enclaves are the nation's Chinatowns, Koreatowns, Japantowns and other areas where Asian immigrants have congregated through time (Fig. 11.14). Even though it has become common for more recent Asian groups to settle in or relocate to the suburbs, such as the Chinese-dominated *ethnoburb* in Monterey Park near Los Angeles, today's Chinatowns and other Asian districts in American central cities still serve to signify the importance of urban ethnic identity.[32] One of the most recent additions to the urban landscapes of American cities are the commercial signatures of Arab American immigrants (Fig. 11.15).

Ethnic tourism and ethnic heritage landscapes

For the past 30 years, a major force in shaping the American ethnic landscape has been a broad interest in preserving ethnic history. In contrast to a generation ago, preserving and enhancing the "ethnicness" of communities and regions with long settlement histories has replaced the belief in and acceptance of homogenizing assimilation as the only cultural process. Documenting, analyzing, and preserving distinctive places such as the German landscapes of Fredericksburg,

Figure 11.15 Arab businesses on West Warren Avenue in Dearborn, Michigan.

Texas; California's Danish landscapes in Solvang; or the importance of Swiss ethnic memory and ethnic tourism in small towns like New Glarus, Wisconsin, have emerged as a new form of historic preservation. Preservation's link to economic development and the cultural and economic processes involved in creating or recreating an ethnic sense of place in particular locales have turned memory-making into an entrepreneurial pursuit, as well as a historic process, in unexpected parts of the country (Fig. 11.16).

Encouraged by government policies supporting affirmative action, multiculturalism, and ethnic pluralism in the education and employment arenas, a resurgence of nationalism worldwide in response to the increasing invisibility of local identity in a relentlessly globalizing world, and official and unofficial celebrations of ethnic diversity in the public and private sphere, ethnic expression in the urban landscape has become a *cause célèbre* for many in recent years.

Descendants of the early settlers from Switzerland who still live in New Glarus, Wisconsin, were among the first to celebrate their ancestry for public consumption.[33] Since the 1930s, this community has continued to expand on its Swiss-inspired log cabin museum by adding Swiss-style wooden balconies to the fronts of numerous ordinary business buildings, coats-of-arms to street lights and telephone poles, half-timbered construction to the drive-up windows of its banks, and phone booths designed as Swiss chalets. On the other hand, Bavarian-themed Leavenworth, Washington, has evolved from a railroad junction town into a wholly invented ethnic tourist center courtesy of a community decision to capitalize on the district's completely incidental "alpine"

Figure 11.16
The Swissification of Berne, Indiana. Standard early 20th-century American commercial structures in the downtown have been given faux-Swiss chalet facades in recent years to tout the town's Swiss heritage and draw tourists. The "Erste Bank von Bern" ("First Bank of Bern") is not an authentic Swiss form for naming a bank.

look (Fig. 11.17). Its tidy streetscapes feature festive flowerboxes, open-air coffee shops, German-style country inns, and steak-and-schnitzel eateries. A blend of occasionally authentic and more often manufactured ethnic landscapes now dot the countryside of many parts of the United States attracting tourists and others who claim traces of the ethnic heritage on display. Clearly then, ethnic landscapes are not just a thing of the past. They also shape an increasing number of present-day small towns and urban neighborhoods, as well as the often profitable commercial districts of towns in need of economic rescue.

And what of the future?

Ethnic landscapes in the United States, then, represent a hybridization of past and present cultural values. As Americans continue to search for ways to define and express the nation's multi-ethnic and multicultural identity, the landscape remains a living record of what the nation once was and what it might become. In some places, preservation of traditional ethnic landscapes is celebrated for both cultural and economic gain. In other parts of the country, there are ongoing threats of change brought on by economic development interests that often favor the destruction of the old because of the worship of the new.

The unique geographies and histories of particular places have shaped the ethnic imprint in a myriad of ways. In recent years, one of the most socially and culturally revealing landscapes of change is visible in some of the changing functions of religious structures. Although many of the classic white frame or brick churches with tall steeples

Figure 11.17 Bavarian-ated streetscape in Leavenworth, Washington. Founded in 1893, this unremarkable railroad and timber town languished from the 1920s through 1962 when merchants decided to theme it as a mock-Bavarian tourist haven. Ordinary commercial buildings were revamped with hyper-Bavarian facades.

that have long been a trademark feature of New England villages and towns and cities all across the country remain, the design and function of some of these traditional landscape features is changing. In some of America's high-density downtowns, for example, church buildings have been adapted as apartments and condominiums, cultural centers, performance halls, museums, community meeting rooms, private schools, and even restaurants and bars. These activities are taking place in spaces formerly preserved for religious purposes.

At the same time, stores, storefronts, and other buildings that originally were constructed for commercial or industrial uses are now used for church services as increased space demands by large religious congregations need to be met in other ways than building large new (and often prohibitively expensive) churches. Conversely, smaller religious groups among recent immigrants may be financially compelled to rent space on Sundays in insurance offices or community centers that may be used on weekdays for other non-spiritual purposes.

The changing religious landscape is but one of many examples of the ever-shifting palette of ethnic landscape change in the United States. Even as historic landscapes may begin to feel obsolete in some places as redevelopment sweeps away the old in favor of the new, many of the overarching patterns, structures, and cultures that helped shape the American landscape and American values remain as reminders of the past. Some may also be making dramatic predictions of the future.

Chapter twelve
Organizing religious landscapes

WILBUR ZELINSKY

AMERICANS ARE fond of referring to their land as "God's Country" (Fig. 12.1). And, indeed, looking at the statistical evidence—current incidence of congregational affiliation, attendance at religious services, responses to faith-related questions in surveys, extent of overseas missionary activity, religious philanthropy—all such measures seem to confirm the boast. In fact, these numerical indicators suggest that the United States may well be in the lead among all Judeo-Christian nations in terms of religiosity (with only Ireland and Poland in serious contention).[1] However, one could contrive an equally convincing case that this republic is the most secularized, or materialistic, of all First World entities, but that is another tale for another day.

But when we turn to the landscape, to the visible, tangible facts on the ground, we encounter a bewildering paradox. It becomes all too obvious that the sacred plays a distinctly secondary role in the American

Figure 12.1
This Delphic announcement places God's Country quite specifically in Fair Ridge, Pennsylvania, though necessitating a left turn down the lane to find it.

scene—certainly significant (otherwise no excuse for this essay) but decidedly subsidiary to the economic and political as well as all the material tokens of the Good Life of the American Dream. To appreciate fully the disconnect between reputation and practice, we have only to cross the border to Québec or Mexico—or the most intensely Hispanic, questionably American, tracts of the Southwest—to witness authentically other-worldly landscapes, places where churches, roadside chapels and crucifixes, religious images, and religious place-names abound and tend to lord it over the secular. The United States simply lacks the cathedral towns of Great Britain and Western Europe and their countless towns and villages dominated by churches, monasteries, and ancillary facilities, countries where legions of pilgrims frequent numerous holy sites. Then there is the even starker contrast between the American landscape and the faith-drenched vistas of India, Thailand, Turkey, or Bali.[2]

There are two aspects to this paradox. First, we have the secondary status of religion within the visible scene, something for which we can provide a reasonably satisfactory historical explanation. In contrast to the experience of colonial Latin America and French America, where the Roman Catholic Church was such a powerful agent in converting and managing the lives of the native peoples and maintaining the allegiance of European settlers, the British, Dutch, German, and Scandinavian colonists in North America for the most part were driven primarily by economic motives and were poorly supplied with clergy or means of worship (with much of New England, of course, as the obvious, if perhaps transient, exception).[3] Dwellings, barns, fences, sawmills, grist mills, roads and trails, and often forts, took priority over church buildings or schools or seminaries, and, for the faithful, transatlantic relationships with the mother church were slow, difficult, and often vexed. Thus, it is not too surprising that when the American republic was born, no more than 10 percent of the population could claim church membership, while for those many citizens lacking local churches, the journey to the nearest one could be long and trying and visits by itinerant preachers a chancy thing. The situation was not uniquely American since other settler countries, including British Canada, South Africa, Australia, and New Zealand, endured similar conditions. Only with a maturing economy and society could a respectable churchscape take form.

The other difficulty, and a much more troublesome one, is to explain the contrast, especially in recent years, between a vociferous, possibly sanctimonious, protestation of a special kinship between the American experiment and a special Providence, augmented by the aforementioned statistics, on the one hand, and its relatively feeble manifestation in the material fabric of the country, on the other. This incongruity poses a major challenge to the analyst. But any effort in that direction would take us too far afield in an essay that is fundamentally concerned with

exploring the religious signatures that can be found in the cultural landscape.

Recognition of some basic facts must precede that examination. Much of North America was radically refashioned by newcomers from overseas over the past four or five centuries. The earlier occupants practiced a variety of religions and regarded as sacred certain elements of the physical environment, a fact initially totally disregarded by the Euro-Americans and recently only grudgingly acknowledged. The result has been a never-ending series of disputes and bouts of litigation over violations of sites revered as sacred by Native Americans but viewed quite otherwise by the dominant population.

A paramount fact pervading any consideration of whatever is sacred in the Euro-American landscape is the doctrine of separation of church and state as enshrined in the U.S. Constitution and upheld repeatedly by the courts. There may be endless controversy over precisely where to draw the line between the two entities, but no question over its validity and importance. Initially, some of the colonies, including Massachusetts and Virginia, had established an official church, despite many dissenters; but, by the early 19th century, given the reality of the highly varied religious proclivities of their residents and a general loosening of tradition fostered by the Reformation and the Age of Enlightenment, all such churches were disestablished. However, crucially important to the health or even survival of the multitude of congregations and their physical facilities is the fact that church-related property is tax-exempt. Thus, although the state holds itself aloof from the church, it implicitly fosters and encourages religious faith.

Another related and fundamental fact is the amazing multitude and variety of American denominations and subdivisions within them. The total number, certainly in the hundreds, is impossible to reckon, but assuredly exceeds any quantity recorded in other lands.[4] Moreover, the total is constantly swelling as an increasingly varied array of immigrants bring with them their exotic faiths and as indigenous religious entrepreneurs persist in devising novel creeds. Then beyond any tallying are the countless independent congregations not beholden to any organized denominations. The end result is an astonishing number of congregations and houses of worship in the United States, at least 400,000, to venture a conservative guess. As a consequence, many a small town and urban neighborhood is seriously overchurched.

The mainly metropolitan churchscape

So what, then, is the specific place of this prodigiously prolific sacred component within the American landscape? The most meaningful way to address the question is to scan the metropolitan sector, accounting as it does for well over three-quarters of the national population. There

Figure 12.2
As late as 1877, Boston's South End and Back Bay, seen from the north across Boston Common and the Public Gardens, boasted a skyline replete with church spires, defending the neighborhoods against encroaching Mammon.

the essential fact, past and present, is the literally marginal position of houses of worship and their accouterments.[5] In city after city, the most central, the most dominant, patch of real estate, whether measured in terms of price, volume of traffic, prestige, or symbolic significance, does not house church or temple (Salt Lake City ceased being a rare exception some years ago, as did Los Angeles and other places of French and Hispanic origin much earlier), but rather commercial or governmental structures or secular monuments. Instead, especially in times past, the more noteworthy churches would materialize toward the edge of the downtown area in what is still a relatively high-rent district, sometimes forming a cluster of mainline congregations, typically, but not exclusively, Episcopalian, Baptist, Methodist, Lutheran, United Church of Christ, Unitarian, Christian Science, and Roman Catholic, with the occasional synagogue.

In the 18th and 19th centuries, these not-quite-central buildings with their lofty spires or towers were the tallest in town and the most conspicuous items in the urban panorama when glimpsed from afar (Fig. 12.2). But no longer. Today, whatever houses of worship still occupy the city center or inhabit its fringes lie literally in the shadow of commercial and governmental skyscrapers. That is not to deny that we have cases where especially large and magnificent ecclesiastical structures are the most prominent of objects in certain neighborhoods. Thus Washington, D.C., has its remarkable National Cathedral on conspicuously high, but off-center, ground and a dazzling Mormon temple in a Maryland suburb confronting motorists along the Beltway. New York claims its majestic St. John the Divine, suburban Chicago its eminently visible Baha'i temple, and massive Roman Catholic churches monopolize the visitor's gaze in the Eastern European or Italian sections of many a large

city in the northeastern quadrant of the country (Fig. 12.3). But in every such instance, the location is well beyond the heart of the metropolis. Only the mother church of the Mormons in Salt Lake City has staked a bold claim to urban centrality, and even here the edifice shares the downtown skyline with prominent business buildings (Fig. 12.4).

The question arises as to just what is meant by the term "sacred." If it applies clearly enough to all manifestations of conventional organized religion, how to deal with what might be described as latterday civil religion, that incandescent devotion to the nation-state, to its saintly heroes, myths, symbols, holidays, monuments, hymns, and holy writ? The emotions in question and relevant practices—flag-worship, chanting of pledges, pilgrimages, and much else—overlap and are virtually indistinguishable from those associated with traditional religiosity. A fuller discussion is best left to another chapter in this volume but not without noting that nationalism and standard piety do not completely exhaust the category of the sacred. The fervor of the totally committed sports fan certainly simulates, or exceeds, the passion of the conventionally devout worshipper, so that one can make the case that major athletic stadia can be designated as temples of a sort. A somewhat similar line of reasoning applies to large-scale museums, and one scholar has argued persuasively that, in a society so consumed by consumerism, the most elaborate shopping malls have acquired the odor of sanctity.[6] And, to substantiate such a claim, the largest of the American megachurches display all the trappings of a major shopping center (Fig. 12.5). There may be other candidates for nontraditional religiosity, such as political passion. The quest for transcendence is not restricted to a single route.

Figure 12.3
Impressive St. John's Catholic Church occupies a site quite peripheral to downtown Indianapolis, where it competes in heavenward uplift with the convention center parking ramp next door.

Figure 12.4
Salt Lake Temple dominates Temple Square at the heart of Salt Lake City, Utah, with the Tabernacle to the left, LDS Office Building behind the temple, and the former Hotel Utah on the right. Such urban centrality for religious centers is extremely rare in the United States.

But, returning to the geography of urban houses of worship, if these buildings fail to muscle out their worldly competition in city centers, where do we find them? The answer is that, with the exception of hierarchically organized denominations such as the Roman Catholic Church—and that may be a singular exception—the decision as to where to construct, buy, rent, or share a facility is normally entirely in the hands of the individual congregation with rarely much oversight or counsel by a central denominational office. The general result is the placement of houses of worship in almost random fashion, but following economic dictates and usually observing the constraints imposed by zoning ordinances, and preferably at locations convenient to actual or potential congregations on sites in residential, commercial, and even light industrial areas. As a matter of fact, the precise location of churches can be so unpredictable that a good many resort to posting signs along major thoroughfares to guide the spiritually famished wayfarer (see Fig. 12.1). The only unchurchable sites are those within public lands, i.e. parks, nature reserves, public school grounds, military tracts, heavy industrial areas, dumps, harbors, country clubs, airports, and shopping centers (except for the occasional invisible indoor chapel). The fact that houses of worship are not to be found at strategic sites in outlying commercial concentrations within the city proper or the suburban shopping malls further confirms their second-class status in the landscape hierarchy.

Within an essentially chaotic system, one can still hazard a few generalizations. For ethnic communities that have not yet advanced far on the socioeconomic ladder, the choice is somewhere close to the parishioners in the appropriate neighborhood. Similarly, for religious reasons, in the

Figure 12.5
Crossroads Cathedral, an Assemblies of God megachurch (not a cathedral in the traditional sense) in south Oklahoma City, seats over 5,000 in a structure that could fit architecturally in a shopping mall, and boasts a dot.com website.

case of the Orthodox Jewish synagogues, it must be within walking distance. For the smaller, rather special groups with membership scattered over much of the metropolis—entities such as, say, Ethical Culture, Swedenborgian, or Jain—the gathering place may be almost anywhere. In the important Roman Catholic case, by far the most numerically dominant of the denominations, we find the entire country subdivided along three territorial levels: the archdiocese, vicariate, and local parish (along with a series of ethnic parishes in some cities), each with rigidly delineated boundaries.

Viewing the distribution of metropolitan houses of worship in the aggregate, one of the more striking recent developments is their relative scarcity in suburban and exurban areas. Real-estate developers and builders invariably omit provision for churches or synagogues (and most amenities) in their plans. Consequently, worshippers must drive longer distances and possibly to larger facilities. As occurred earlier downtown, the profane shoves the sacred to the sidelines.

The modal situation is one in which the house of worship is built in a recognizably ecclesiastical style but with an adjacent parsonage lacking any outward clues to its function. Quite frequently, there will be a church-related elementary school next door and a dedicated parking lot close by (Fig. 12.6). The larger, more elaborate Protestant and Jewish houses of worship may have ancillary physical facilities and quasi- or non-religious activities at a level seldom found in the Old World. In addition to space for Sunday school, we may find kitchen and dining facilities, auditoria for lectures and concerts, library, gift shop, gymnasium, and even a swimming pool. Community-oriented congregations often provide day care, food and clothing banks, counseling and other

social services, office space for local organizations, and a polling place for elections.

The largest, most impressive of physical presences among the denominations is, predictably enough, the Roman Catholic. Adjoining the bulky, architecturally ambitious church in what amounts to an updated New World version of a medieval village, one often observes elementary and secondary school, social hall, residences of clergy and instructors, one or more large parking lot, playing fields, statuary, grottoes, gardens, and, often directly across the street, a funeral parlor. Less frequently, there can be a burial ground or retirement home complementing all these facilities.

Matters architectural

However unobtrusive the sacred element may be generally within a metropolitan setting in terms of visibility or location, its architectural language more often than not causes it to stand out sharply. During the days of pioneer settlement, the impulse was to recreate as faithfully as possible whatever building style had become traditional in the home country or, when newborn prosperity rendered it feasible, to mimic the latest ecclesiastical vogue from abroad. In any event, the spires, belfries, fenestration, and general geometry of the structure would make it highly unlikely that even the most casual observer would mistake a proper church for a dwelling, shop, or barn.

Figure 12.6 Sixth Street in Texarkana, Arkansas, contains the First United Methodist Church ecclesiastical complex (center) and neighboring First Baptist Church (left, with dome), separated by the latter's city-block-sized parking lot.

Organizing religious landscapes

Architectural nostalgia is especially obvious in the taste displayed by non-British immigrants over the past 150 years. Germans and Scandinavians often duplicated, or heavily alluded to, the more elaborate churches in their natal zones when designing new abodes for their American congregations. Then there is no mistaking the inspiration for the finer efforts of worshippers from Eastern Europe, those lovely, exotic buildings housing services for hyphenated Greeks, Serbians, Poles, Ukrainians, Russians, and others. Similarly, until recently, the distinctive styles of Jewish synagogues (Fig. 12.7), never to be confused for churches, spoke of Eastern European and/or Byzantine antecedents. The same scenario applies to the various American Islamic and Sikh mosques and temples of recent vintage that painstakingly celebrate Middle Eastern and South Asian glories, or in the case of Chinese and Japanese communities their East Asian roots. Whatever their location,

Figure 12.7
Temple Gemiluth Chassed in Port Gibson, Mississippi, built in 1892, reflects the growth of Jewish merchant communities in many Southern towns before and after the Civil War. Closed in 1986, the building remains the focus of preservation efforts as a reminder of the wide historical distribution of Jewish communities beyond the great metropolitan areas.

such exotic structures are usually at odds with their predominantly Anglo-American surroundings. Thus, we confront some incongruities despite the fact that, in order to abide by building codes, they must Americanize to some degree and cannot be absolute facsimiles of foreign models (Fig. 12.8).

But there are some puzzling exceptions. Apparently, virtually none of the burgeoning Latin American congregations in cities beyond the Southwest have preserved the rich architectural heritage of their homelands in whatever new Protestant or Catholic churches they have erected. It is difficult to recognize any Filipino flavor in the churches frequented by this large, growing ethnic community. But even more perplexing is the total absence of anything even remotely Korean in the appearance of the many hundreds of churches acquired or built by this particularly enthusiastic, economically successful set of churchgoers.

The mainline Protestant denominations, along with the Roman Catholic, have tended to follow parallel or intertwining architectural tracks over the years. The more affluent congregations of the colonial period adopted or modified the Georgian and related styles of Northwest Europe (Fig. 12.9). The less well-to-do in both city and countryside learned to make do with a stripped-down primordial version, what might be called "Protestant Plain": a rather small, usually single-chamber, wooden affair painted white when paint could be afforded, that might be identified as a dwelling were it not for a steeple or bell tower, the window treatment, and its narrow front oriented toward street or road.

Figure 12.8
The River of Life Christian Center occupies one crossroads corner in western Aurora, Illinois, across from the Sri Venkateswara Swami (Balaji) Hindu Temple of Greater Chicago (1985), about a mile from an East–West Tollway exit.

Figure 12.9
The meetinghouse in Lyme Plain, New Hampshire, built on the village green in 1781, still sports stables for the carriages of congregants attending services.

During the 19th century, one witnesses a transformation of the churchscape as wealth increased and tastes evolved, usually in tandem with developments abroad, as also happened with domestic architecture. After Georgian-related styles blossomed and reached an enviable peak, especially in New England, a passion for things Gothic captured the general imagination and eventually came to dominate the ecclesiastical scene and, to a lesser extent, the residential and academic realms.[8] More than any other style, and still to this day, it is the one architectural mode that speaks of godliness to Americans. If the most ambitious of the 19th-century projects strove to duplicate the noblest examples across the Atlantic, much more numerous were the humbler, smaller structures with Gothic aspirations, generally in brick rather than the more costly and coveted stone. Eventually, during the late 19th and early 20th centuries, this simplified Gothic-flavored design, which one might label "Generic Traditional," became the most popular and widespread choice for Protestant congregations (Fig. 12.10).

After the Gothic phase had climaxed, some church architects, especially those with Catholic clients, turned to the Romanesque idiom

Figure 12.10
Dexter Avenue Baptist Church (1875), Montgomery, Alabama, an unassuming Gothic-flavored brick church just one block from the Alabama State Capitol. From 1954 to 1960 the pastor here was Rev. Martin Luther King, Jr.

in either close replication of ancient examples or an Americanized version. A good deal earlier, beginning with the early 19th-century Classic Revival in domestic and governmental construction, a certain percentage of pretentious Christian and Jewish houses of worship have emulated the Greek and Roman temples of ancient times. This predilection, along with a persistent fondness for the Georgian, persists to the present day.

During the middle and late 20th century, a strong plurality of relatively well-to-do Protestant congregations have settled for a rather unostentatious style, the "Generic Modern Ecclesiastical," predominantly in brick but often with stone trimmings and devoid of superfluous ornamentation. Such buildings are instantly recognizable by virtue of steeple or belfry, shape, window form and placement, and a signboard. But also quite abundant are the respectable "Modern Nondescript" buildings that are acquired by, or built for, every sort of congregation, edifices that

are indistinguishable from standard contemporary commercial structures. There is only the sign to announce the identity of the occupants.

The most recent and exciting development in American ecclesiastical design is the Modern.[9] Each highly individual, usually imaginative example is the work of an architect, often a quite accomplished one. With little or no reference to the past, as a group Modern houses of worship may represent the vanguard of innovation in esthetic quality, generally surpassing commercial, civic, residential, and school efforts (Fig. 12.11). The number of "megachurches," a distinctly American phenomenon, is too small to permit any clear generalizations about their style except to suggest that one may have here the Modern Nondescript on a gigantic scale.[10] One must note parenthetically a visual tactic adopted by many a large affluent house of worship, old or new, that compensates to some degree for a lack of locational primacy: night-time floodlighting.

At the polar opposite from the Modern and Megachurch on any scale of respectability are the Storefront churches, a strictly urban phenomenon. If the great majority are small, shabby affairs, often with flamboyant signage, that have taken over the premises of former shops, factories, or warehouses (Fig. 12.12), there is an interesting sumptuous minority occupying former movie theaters, banks, or auto dealerships. And not all of them house poor African American or Latino worshippers. There is the occasional Jewish synagogue, Islamic mosque, or Catholic, Christian Science, Mennonite, or other white Protestant affair.

Figure 12.11
The First Presbyterian Church in Bartlesville, Oklahoma (1970), epitomizes church design in a Modern idiom entirely distinguishable from that of commercial structures.

We might also set within this category the various missions for the downtrodden operated by the Salvation Army and other high-minded organizations in less desirable neighborhoods. Close to invisibility are the many private houses and apartments serving part-time as places of worship for a variety of denominations with only the occasional sign revealing such a function. Although overwhelmingly an urban practice, we find instances in the countryside as the stricter Amish rotate within a circuit of farmhouses and barns each Sunday.

There is an even less visible component of the churchscape, if that is not a misnomer: those Orthodox and Islamic congregations, seeking to avoid unwelcome attention from bigots and vandals, who sequester themselves in buildings that mask their presence. A word may be appropriate here concerning another form of religious life hidden from view. Devout Catholic, Protestant, Jewish, and Hindu families may perform daily or weekly religious rites at home and even have set aside a special nook for such activities and the display of hallowed objects. As noted below, such folks may be the most likely to mount sacred images or messages on lawns, porches, or in windows. Also qualifying as invisible are the footloose, homeless congregations that rent space for the sabbath in theaters, schools, or community centers on an *ad hoc* basis and perhaps the mobile ministries catering to the urban homeless or to truckers along major highways. On the other hand, both visible and mobile are the fleets of buses and vans maintained by many congregations for transporting the infirm to and from services or groups of members to picnics and other outings. Their identity is emblazoned on sides and rear, usually with a series of religious admonitions.

Then, in revival tent meetings we have still another case of

Figure 12.12 Classic Storefront church facilities on Ashland Avenue in Chicago. All three structures belong to the Church of God in Christ network.

mobility—and evidently another unique American institution. The itinerant preachers in question and their co-workers and trucks circulate from one mid-size city or smaller place to another with advance publicity, and over the span of several days and nights deliver their exhortations and entertainment in lots on the outskirts of town. Such events are rare in the larger metropolises because of the scarcity of and high rents for suitable space and possible legal or police restrictions.

As the earlier discussion suggests, we fail to find anything close to a one-to-one correspondence between denomination and building style, aside, of course, from the case of the ethnic congregation. Indeed there is a general sharing and mixing of styles among the mainline groups, although the Episcopalians display a certain penchant for the Gothic and other prestigious modes, and one can often detect a family resemblance among Christian Science edifices. But there is a notable exception when one examines the quarters occupied by the Jehovah's Witnesses, a flourishing, wholly urban denomination. Invariably, they have adopted a standardized, windowless, boxy, one-story brick building with a fence enclosing a parking lot and some landscaping, a Modern Nondescript, something readily mistakable for a suite of dental offices.

But this general panmixia of styles characterizing the American churchscape is not solely the outcome of original architectural intent. Quite frequently in recent times a younger minority or ethnic congregation has purchased or inherited the property of an older one now defunct or fled elsewhere. Thus, the former synagogue or Catholic or Lutheran church now sheltering an African American, Hispanic, or Korean group has become a common sight. Also far from rare are the instances in which the same building accommodates two or more congregations on a time-sharing basis, so to speak. Then there are the many cases where a house of worship has been abandoned or simply been desanctified and turned into dwellings, shop, theater, museum, or other secular projects.

A last, if marginal, element in the visible urban churchscape is the funeral home. Although operated for profit, the premises of these neatly maintained buildings of relatively modest size qualify as hallowed space since this is where the most solemn sacred rite of passage is performed. These enterprises are usually specialized, serving a specific religious, racial, or ethnic clientele, and thus may be located accordingly in some appropriate business district, but some undertakers will take all-comers. Like many churches, they may indulge in billboard advertising. By necessity, their architecture is sedate and unobtrusive, but tasteful, and, in every case, a large parking lot adjoins the structure.

As a final comment on the architectural aspects of the churchscape, one must note one's inability to detect more than a modest degree of regionalization in church building types. However, such an inability may reflect the paucity of studies of vernacular houses of worship rather than the actuality. There is an obvious need for more research. In

the meantime, one can point to the heritage of a distinctly New England flavor, especially in the smaller cities and towns of that region, to how the humbler older churches of the South and Appalachia share many of the traits of folk housing and to how the use of Hispanic motifs has become fashionable for non-Hispanic congregations in the Southwest and California.

The rural scenes

Within the vast stretches of America's farmlands, ranches, mining districts, and populated forests, with all their homesteads and thousands of hamlets, villages, and small towns, the relationship between the this-worldly and other-worldly is basically much the same as in larger cities. Dominating almost everyone's waking hours is the production, exchange, and consumption of goods and services, while spiritual matters are decidedly a subsidiary matter. But there are some interesting differences that have developed between the metropolitan and nonmetropolitan sectors.

Given the relatively weak competition for prime real estate in the smaller agglomerated settlements, it is not uncommon to find one or more church buildings astride the most central of locations rather than a post office, bank, or other commercial enterprise. And such structures may tower above all others unless the town houses a county courthouse or grain elevator (Fig. 12.13). The spatial disposition of the departed also distinguishes rural vistas from the urban. Burial places in the countryside are generally smaller and more numerous than those in cities. Indeed, one can frequently come across small family cemeteries or even isolated individual gravesites. Furthermore, there is a distinct tendency to set community graveyards on elevated sites, either in response to theological sentiment ("Nearer My God to Thee") or for superior drainage.

Rounding out a cursory overview of the rural and small town, it must be said that the visible role of religion is static or declining. The exceptions are rural Utah[11] and a scattering of Midwestern villages settled and dominated by pietistic Germans and other central Europeans where churches and church activity still dominate the scene.[12] Elsewhere, as populations have declined, the usually unpretentious church buildings have been abandoned or converted to other uses, in a manner similar to the fact of the one-room schoolhouse.[13] But, as noted below, when it comes to roadside signs, the story is quite different.

Utterly nonmetropolitan in character is another phenomenon unknown in other parts of the world: the camp meeting—and Christian retreats in general. Evidently originating in the late 18th century well before the famous Great Revival of the early 1800s, the practice of staging loud, enthusiastic services over several days in the summertime

Figure 12.13
In the Volga–Deutsch districts of central Kansas, the Catholic churches still loom proudly over their settlements. Holy Cross Church lends a distinctly European flavor to the village skyline of Pfeifer in the winter-wheat belt.

with temporary platform and makeshift living quarters drew hundreds or, in some cases, many thousands of individuals and families, such events gaining great popularity throughout the nation over the years.[14] Some of the physical arrangements could be quite primitive, little more than perishable brush arbors. Many of the oldest campgrounds have been abandoned and have vanished or linger on in derelict condition. But quite a few survive, most famously the elaborate cluster of remarkable cottages adjoining a sturdy stage in Martha's Vineyard.[15] "No one knows how many camp meetings, assembly grounds, Bible conferences, and Christian retreat centers actually do exist," Kenneth O. Brown has noted, "but if the count included children's, youths' and the specialty camps (denominational, associational organizational, and interdenominational), the total number might well exceed six or seven thousand encampments per year."[16]

Quite different in appearance and in their elaborate internal arrangements are the several year-round Roman Catholic pilgrimage centers in rural locations (Fig. 12.14).[17] Protestant counterparts are exceedingly rare. None rivals the notoriety of the hill near Palmyra, New York, where Joseph Smith experienced his great revelation.

The other structures

Not to be ignored are the many other large artifacts populating the American landscape, in addition to houses of worship, that owe their existence to religious organizations or have some religious connotations. If the greater number are urban in location, some are also found in small

Figure 12.14
Lourdes grotto (1892) and Stations of the Cross (1889, rebuilt 1950) at the Shrine of Our Lady of Sorrows, Starkenburg, near Hermann, Missouri. Local events led to the growth of a pilgrimage site here. Water from Lourdes, France, was placed in the well in 1934 and 1997.

towns and the countryside. The most numerous and conspicuous of these are schools. If churches, early and late, have generally included education and indoctrination as major functions, many or most of the nominally freestanding academies and colleges of young America were churchly in origin. It may be difficult to recognize the facts nowadays, but such prestigious institutions as Yale and Princeton were created by religious denominations, and the practice continues to the present with such latterday examples as Brandeis and Bob Jones universities, among many others. But one is hard put to read any outward or inward signs of the religious connection in virtually any of the schools created by church organizations. Notre Dame's Hail Mary Jesus is a glaring exception, as are the praying hands of Oral Roberts University (Fig. 12.15). Their architecture does not differ significantly from that of private or state-related colleges, and in such places as the University of Notre Dame, Northwestern University, the University of Chicago, Macalester College, Chicago's DePaul University, or St. Louis University there is only faint evidence in the composition of faculty, student body, or curriculum pointing toward sacerdotal beginnings.

On the other hand, there is an abundance of seminaries and yeshivas (again outwardly unremarkable), staunchly Catholic colleges, and seemingly innumerable bible colleges hither and yon. Then, too, in all cities we see not a few elementary and secondary schools operated by Jewish, Catholic, Lutheran, Methodist, Presbyterian, and other religious entities, but whose identities can only be deciphered by their names or by signs and ephemeral displays. As numerous and indispensable to the totality of the national educational system as all such schools may be, they still fail to register as distinctly different landscape ingredients

upon the consciousness of the observer. On the other hand, we must not neglect to note that the great majority of college campuses of whatever origin contain a chapel, often large, sometimes the most architecturally audacious item in sight and, generally, in private and state-related settings, interdenominational in character.

A similar, but even more emphatic, conclusion must be reached when we consider the many important hospitals founded by Catholic, Jewish, Methodist, Lutheran, Presbyterian, Seventh-Day Adventist, and other church groups. There is nothing particularly religious in their outward appearance and not much if anything of a denominational bent in their professional and support staffs, while the patients, if they happen to be aware at all of the religious auspices, give it scarcely any consideration. Equal to the illegibility of religious genesis in the case of church-related schools and hospitals is the situation with regard to the many retirement and care facilities for the aged and infirm, apartment complexes, and child care facilities associated with, or funded by, church organizations.

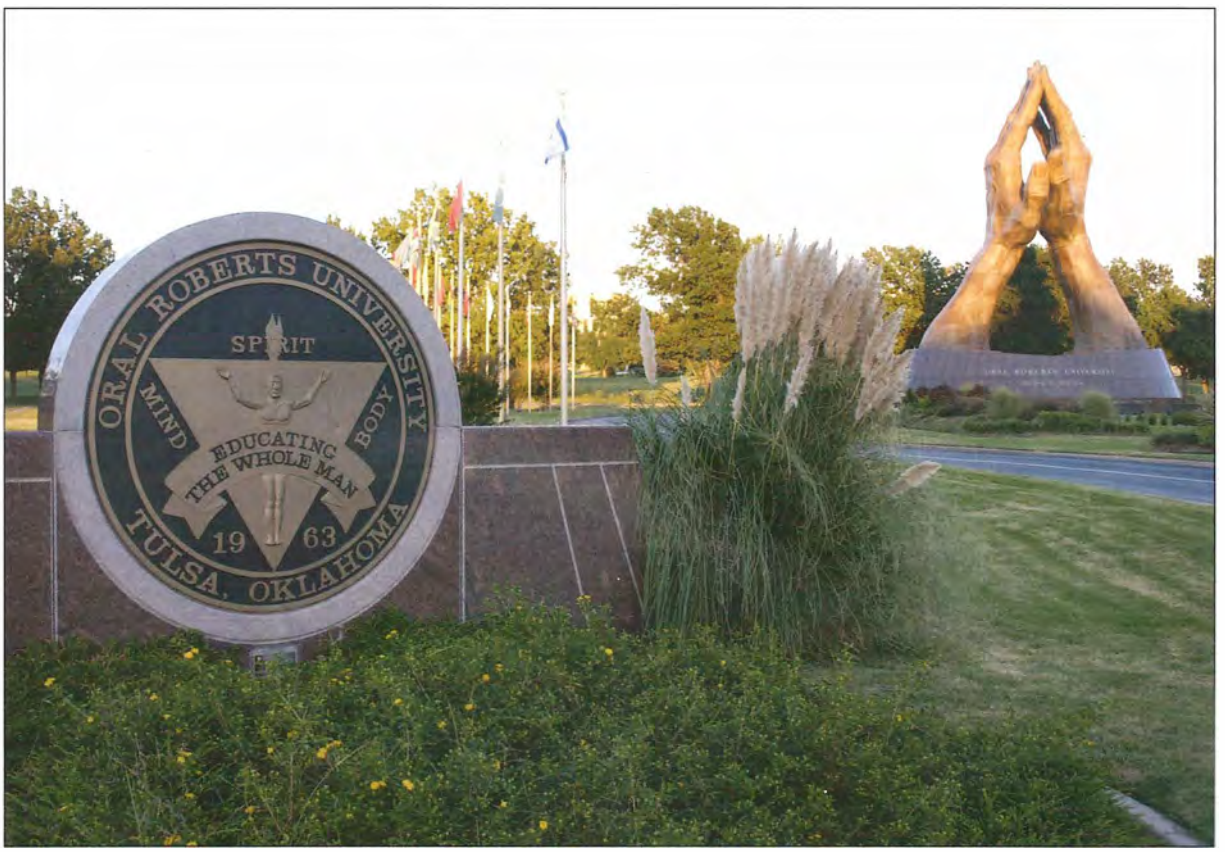


Figure 12.15
Oral Roberts University entrance in Tulsa, Oklahoma, features a 30-ton, 60-foot statue of praying hands (1955) the world's largest. Founded by a faith-healer turned televangelist, the university stresses Christian ministry, mass media, and business studies.

In fact, it takes a resolute investigator to ascertain the presence or lack of any such relationship.

If there is little doubt about the religious identity of monasteries and convents, whether in city or countryside, there is nothing extraordinary about their appearance except size, the prominent cross(es), and statues of holy beings executed at a heroic scale. Much smaller and not especially visually assertive are the many shops purveying religious goods and books, whether Catholic, Protestant, Jewish, Islamic, New Age, or general, or gospel music.[18] Their location tends toward the random.

This may be as opportune a point as any to mention the episodic religious festivals that crowd the streets of certain metropolitan neighborhoods, the occasional downtown rally with political-cum-religious agenda, and, ephemeral though they may be, the solemn automotive cortege wending toward the cemetery that halts cross traffic several times a day.

Cemeteries[19]

No other class of items within the sacred landscape of the United States accounts for more real estate in city or countryside than does the cemetery. In any urban place the acreage in question far exceeds the amount of land occupied by houses of worship and their adjuncts. Although, as is also the case with all funeral homes, many cemeteries are business enterprises, the entirety of their space must be regarded as sanctified, and indeed the for-profit operations usually, like the others, maintain chapels for the final rites. And the characterization of sacredness applies to every one of the several types of burial space: churchyard, denominational, municipal, military, fraternal, ethnic, potter's field, columbarium, family, and private.[20] Moreover, a significant minority—and in the Roman Catholic case all—of the grave markers bear religious images, symbols, or verbal messages or are accompanied by statuary of sacred figures.

In esthetic terms, the better cemeteries with their sophisticated landscaping and appealing vistas often provide the most attractive of settings within or next to cities large and small. This achievement is the outcome of an American innovation: the garden cemetery. Initiated in the 1830s with Boston's immensely popular Mount Auburn, similar faux rural projects soon materialized in other major cities and were emulated on a more modest scale in lesser urban places, replacing the churchyards and other hitherto prevalent unsightly and unsanitary burial spaces that had attracted few unnecessary visitors. No other country has developed anything like the profusion of picturesque garden cemeteries to be found in the United States. The same statement applies to a late 20th-century offshoot of the Mount Auburn model: the modernized park, or lawn, cemetery. In an arrangement with only a

modest amount of landscaping, all the small markers are flush with the surface. Thus the shrewd operators have eliminated much of the time and expense previously lavished on keeping grass and weeds in check.

In the case of still another American invention, the military or battlefield cemetery—first realized at Gettysburg in 1863 and most thoroughly developed in Washington's Arlington Cemetery—we behold the mingling and merger of the two dominant modes of religiosity: the other-worldly and civic. Whether we should regard the various 20th-century American military cemeteries so meticulously maintained in Europe and the Philippines as belonging to the national landscape could be the subject of an interesting debate.

Ordinary cemeteries, those serving neighboring localities, abound throughout America, certainly totaling well over 100,000 (Fig. 12.16). This is an extraordinary situation, one not remotely matched in other countries. Elsewhere, including Australia, the one nation perhaps most closely resembling the United States socially and culturally, the standard pattern is for smaller cities and towns to maintain a single burial ground and to have few or none in the open countryside. When we turn to the metropolitan scene, the international disparity is striking, to say the least. There is a grand total of 738 named cemeteries within the New York Consolidated Metropolitan Statistical Area according to the Geological Survey's Geographic Names Information System, as against 143 for Greater Paris, 90 for Greater London, and a mere 27 for Brussels. Only partially accounting for the proliferation of cemeteries in the United States is the venerable phenomenon of the churchyard, the burial plots adjoining some superabundant churches, or the sheer number of denominations and other groups that may or may not operate their own cemeteries. As it happens, churchyards are overwhelmingly located in the countryside since high land prices and zoning regulations discourage them in cities.

It seems that many or most of the typically small burial grounds in rural America have been created by the local community or individual families. (Individualism run amok?) With the depopulation of a considerable fraction of nonmetropolitan America, many of these sites have been neglected or abandoned, often becoming so overgrown with brush or forest as to sink into invisibility. Thus, in a rigorous survey of three valleys within Centre County, Pennsylvania, R. W. Gerbers (1979) sighted 80 cemeteries, 19 more than the sites shown on USGS quadrangles, and, in addition, using documentary sources, he identified 14 others that were not physically locatable. The growing national passion for genealogy, however, has spurred armies of volunteers to survey and often reclaim many a discarded burial ground.

The mapping of named cemeteries[21] yields some remarkable and puzzling spatial patterns. As might be expected, they are much more numerous in the older, more populous eastern half of the country. But east of the Mississippi there are sharp differences in incidence among

Figure 12.16
A traditional rural cemetery with original, weathered gravestones, situated in the rolling margins of the Hudson Valley, New York. A dry-stone wall, without mortar, guards the sacred ground from nearby cattle.

various areas (Fig. 12.17). Maximum values occur in the Upper South and western Appalachia, especially the Tennessee Valley, which contains Rutherford County, Tennessee, the national champion with 571 named cemeteries, an almost unbelievable 91 for each of its 100 square miles. There are also exceptionally high readings for southern New England and much of Mississippi, but a puzzling dearth of cemeteries in the Atlantic Coastal Plain and Piedmont. Considerations of space prevent a review of the fascinating regionalisms in cemetery types.

Signs

It is within the world of signs that we find religion especially aggressive visually in America's public spaces, but in desperate competition with the superabundance of this-worldly signage in every imaginable venue. The items in question include the signboards erected on or next to the house of worship that will name it, usually stating its denomination, and identify personnel, events, facilities, and perhaps include a mini-sermon. Flying nearby may be colorful banners announcing special celebrations or whatever. The posting at the entrance to smaller cities of a list of the community's various churches and their schedules (next, occasionally, to a roster of service organizations) seems to be a strictly North American notion (Fig. 12.18).

In much greater number and variety and in all sizes, shapes, and levels of artistry along city streets and rural highways, on bridges, overpasses, tree trunks, and walls, as well as billboards and other freestanding surfaces, the landscape voyeur encounters verbal and pictorial messages dealing with his or her salvation (Fig. 12.19). They may be mere graffiti,

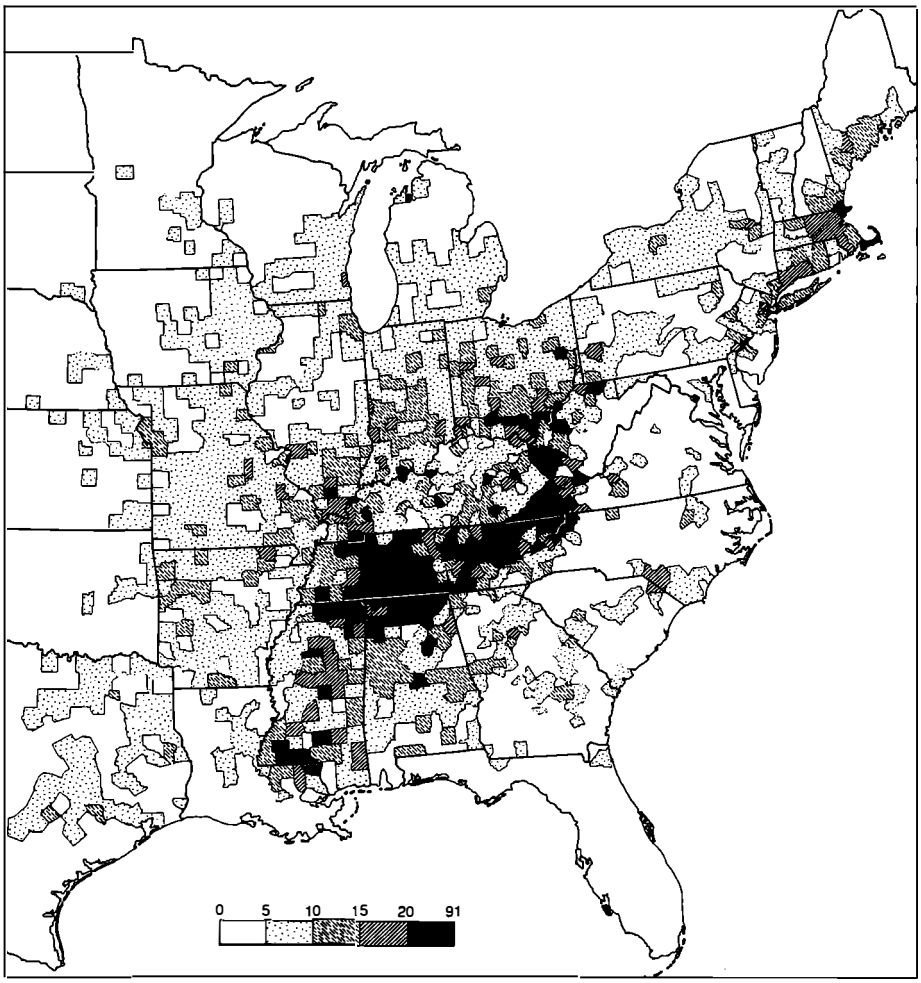


Figure 12.17
The regional density of named cemeteries in the eastern half of the United States, expressed as the number per 100 square miles, calculated separately at the county level. The areal association with the eastern portion of the Bible Belt is evident.

such as the ubiquitous "Jesus saves," or full-size billboards advertising a local church or advocating some religious program or principle. It would appear that the number and spatial penetration of such materials has increased markedly over the last century or so, which once again supports the notion of American exceptionalism. No foreign country comes remotely close to rivaling such rampant American religious exhibitionism, aside from the visiting handiwork of American missionaries. For example, such signs are rare in Latin America, virtually unknown in Great Britain, and totally absent in Germany. But Americans do emulate Old World and Latin American practice, if rather lamely, with the occasional roadside or hilltop crucifix and even rarer shrine. And, with depressing frequency, one comes across small crosses, floral displays, photos, and inscriptions memorializing the family member who perished in an accident at that point in the highway.

In still another genre, there is the mural, the cause of religion struggles for attention against the secular. In this instance, one has had enough

Figure 12.18
A welcoming board at the edge of Strasburg, Ohio (pop. 2,310 in 2000), lists three local mainline Protestant churches. There is room for another listing. In 2008 a New Apostolic Church was active in a far northern fringe subdivision of the town.

Figure 12.19
Private expression in the public view: weathered barn-roof exhortation in Grundy County, Illinois. The farmstead no longer performs agricultural functions.

studies of individual cities to realize that the mural is a phenomenon coming into its own in the United States from the mid-20th century onward, almost certainly inspired by the brilliant Mexican achievements. Thus, it is not surprising to find them most often in Latino neighborhoods, but they are nearly as popular in African American venues and in some Oklahoma towns with substantial Native American communities, while, belatedly, Euro-Americans are beginning to catch up. The motifs in these creations, often of great merit, are a mixed lot. They may be simply pictorial, real or imagined landscapes, tributes to local personages, depictions of local history, abstract designs, or *trompe l'oeil*, but an intriguing minority depict sacred figures or biblical scenes.

Possibly outnumbering all other sites for religious signs and displays is the individual residence. The zealot at the far end of the devotional spectrum who crowds every available space and surface on his property with material evidence of his religious commitment is rare and exceptional, but perhaps a peculiarly American character. Far more common, especially, but not exclusively, in Italian American and Hispanic American locales, is the display of bathtub madonnas or other religious items in windows and on porches and lawns.[22] Even more widespread, of course, and in commercial and governmental settings as well as the domestic, is the celebration of Christmas and Chanukah with increasingly elaborate arrangements of lights, figurines, and the occasional crèche. But the question of how religious this orgy of decorative art happens to be is a legitimate one. Such a reservation applies even more strongly to the recent upsurge in plastic eggs and bunnies bedecking lawns and trees in homage to Easter. In the case of Halloween and other such dates on the church calendar, any religious connotations in landscape manifestations have long since vanished.

Relatively inconspicuous though it may be within the larger scheme of things, one cannot afford to ignore personal adornment as a component of the sacred landscape. Once again, anecdotal evidence must suffice, but it seems that the wearing of religious insignia and garments with religious messages has been increasing in recent decades. And that is most decidedly the case with bumper stickers bearing religious motifs.

Envoi

The only safe conclusion one can draw from this necessarily provisional survey of an intermittently visible and audible sacred landscape in America is that much remains to be learned (Fig. 12.20). Yet certain it is that, if the religious component within the total man-made ensemble of discernible objects on the land is decidedly subordinate to the business of creating and consuming goods and services, nonetheless it is still much too lively and pervasive to be ignored. Religion has a peculiar role

in American life that makes the country an exceptional place. Finally, in learning more about such matters, we may generate fresh insights into the general nature and dynamics of society, not all of them necessarily welcome.

Figure 12.20
Beyond the simple assertion of this sign for a New Bloomfield, Missouri, residential subdivision lie many possible meanings concerning the intersections of faith, social class, and building type.

Chapter thirteen
Mechanizing the American earth

DAVID R. MEYER

AMERICAN INDUSTRIALIZATION has produced a landscape of specialized activity and mechanical integration, of growth and decline, and of abandoned and reused relics. Mineral processing plants, lumber mills, and factories are highly specialized production centers that can exist only if linked by transportation and communication systems with suppliers of raw materials and markets for finished products. The increasing specialization of production centers requires more elaborate means of both mechanical and spatial integration. In their turn cycles of specialization and integration contribute to change as new ways of organizing production occur and as old ways become obsolete. Places that acquire the new ways grow while the losers stagnate or decline. Growth leads to new landscapes as well as a reuse of past ones. Industrial decline combined with an inability to acquire new industry, however, creates an abandoned landscape.

The manufacturing process is the most prominent feature of industrial landscapes: factory buildings with machinery, chimneys, furnaces, power sources such as water wheels, dams, boilers, and warehouses.[1] Because the process requires that materials be assembled in one place and products widely distributed, transportation systems are the second most prominent feature of industrial landscapes: canals, rail lines and yards, bridges, docks, and highways. The remaining features in these landscapes, which are by-products of the process, include pollution of water and air, destruction of vegetation, and discarded products such as slag heaps, sawdust, and obsolete equipment. Immense changes in America's industrial landscapes have occurred between the colonial period and the present.

Colonial beginnings

Although there are few physical vestiges of the pre-1860 landscape, the earlier industrialization did determine, in part, where and how the later landscape emerged. The remnants of the colonial industrial

landscape are nearly invisible, except to the knowing eye. The few and small industrial enterprises in colonial cities were obliterated by 19th-century growth. Households produced simple furnishings and clothes, while other goods were purchased from craftworkers—blacksmiths, coppersmiths, shoemakers and the like. Their shops are recreated in colonial museums such as in Williamsburg, Virginia. Most manufactures were imported from England.[2] The exceptions were tied directly or indirectly to natural resource extraction: naval stores (pitch, tar, and turpentine) from North Carolina; timber products from New England; iron products (pig and bar iron, and castings such as pots) throughout the colonies; and ships built in two major centers, Boston and Philadelphia, as well as in villages the length of the colonial coast.[3] For most of the colonial period the market in the colonies was small and the population lived at a low density; indigenous producers of high-value goods simply could not compete effectively with England. Slowly, the American home market grew. The colonial population did not reach one-quarter million until 1700; by 1750, however, it had quadrupled to slightly over one million, and by 1770 the population reached two million.[4]

Near the close of the colonial period, therefore, expanding local markets, plus access to British, West Indian, and other Atlantic Basin markets, combined to provide a major stimulus to industrial development. The iron industry was a significant beneficiary. Collectively, the colonies were a major global producer; as a percentage of world output, it has been estimated that they accounted for 7 percent in 1750 and 14 percent in 1775.[5] Domestic consumption of iron quadrupled during this pre-Revolutionary period. The iron goods were made on large rural

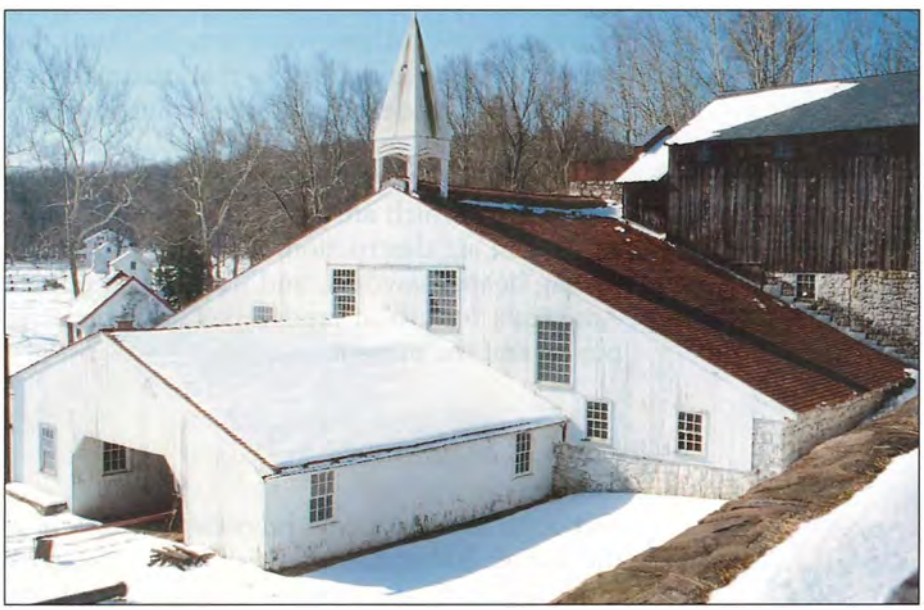


Figure 13.1
The furnace and casting house at Hopewell Iron Plantation, Pennsylvania, 52 miles northwest of Philadelphia. It operated from 1771 and until 1883. Fired by charcoal, production of stoves, kettles and small machinery peaked in the 1820s and 30s, after which more efficient enterprises rendered it obsolete. This industrial scale was little larger than that of a substantial farm of the period.

iron plantations close to iron ore, surrounded by large timber acreages (numbering up to several thousand) for making charcoal fuel, and located at water-power sites. The largest ironworks, oriented to export markets, were in Virginia and Maryland. In southeastern Pennsylvania, in contrast, ironworks produced for local urban markets in Philadelphia and to a lesser extent in York and Chester (Fig. 13.1).[6] Economic growth during the late colonial period, therefore, created a small but important base for subsequent national industrialization, even though visible remains of that era are insignificant in today's landscape.

Emergence of the manufacturing belt

While the period from 1790 to 1860 left more remnants in the modern landscape than did the colonial period, the significance of the antebellum years, instead, is that they set the framework of the industrial landscape created between 1860 and 1920 that is so prominent today. The largest industrial landscape features were iron plantations and lumber and flour mills, although their rural location hid much of their activity. Numerous small mill villages emerged in the East (Fig. 13.2). Some city factories remain today as small appendages to large buildings built after 1860. However, the most widespread features still present are probably the canals, although many are unused and resemble gentle streams.

During the antebellum years the genesis of the American manufacturing belt was established.[7] This vast industrial landscape of about half a million square miles was occupied by discrete industrial cities, mines and lumber areas, separated by the dominant landscape of farms

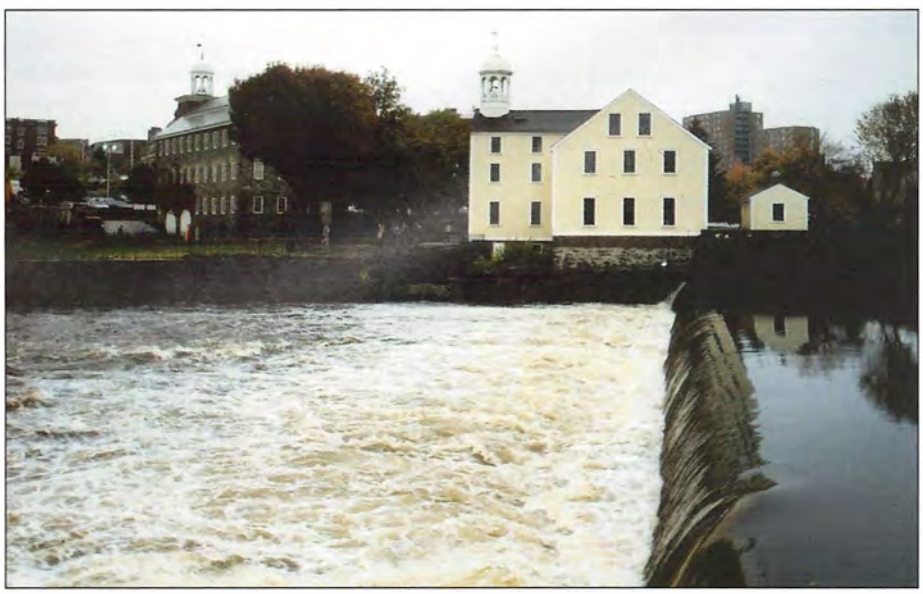


Figure 13.2
Samuel Slater's water-powered cotton-spinning mill, built in 1793 on the banks of the Blackstone River in Pawtucket, Rhode Island, is often claimed as the birthplace of the Industrial Revolution in America. Enlarged several times between 1801 and 1835, it stayed in continuous use until 1893. To the left is the Wilkinson Mill, built of granite in 1810.

and forests. The belt can be thought of as a set of regional industrial systems, rather than as a uniform undifferentiated landscape (Fig. 13.3). Each industrial system included a regional metropolis, which provided specialized financial, wholesaling, and transportation services for economic activity within its surrounding region and served as controller and coordinator of economic exchange with other regions. Smaller industrial cities surrounded each metropolis. Examples include the regional center of Boston surrounded by its industrial satellites of Lowell, Lawrence, and Worcester; Cincinnati and its industrial satellites of Hamilton, Middletown, and Dayton; and Chicago and its industrial satellites of Joliet, Elgin, Rockford, and Gary.

Regional industrial systems emerged successively with the westward shift of the frontier. In most of the regions, a growing prosperous agriculture went hand-in-hand with the development of local, subregional, and regional manufactures. The east coast regions industrialized first by 1840 while those in the Middle West emerged by 1860. The region focused on Boston industrialized by producing textiles and shoes early on for the national market, but prosperous agriculture also contributed to its economic development. Farms in Boston's environs, in small valleys and on gentle slopes throughout the region, and on larger flatland such as the Connecticut Valley provided low-cost food for the region's inhabitants, including urban dwellers in Boston. The urban and the rural population comprised a market for manufactures. This same process was replicated in New York City's region, including the Hudson and Mohawk valleys and central New York State, and in Philadelphia's region, especially the rich farming areas of southeastern Pennsylvania.[8]

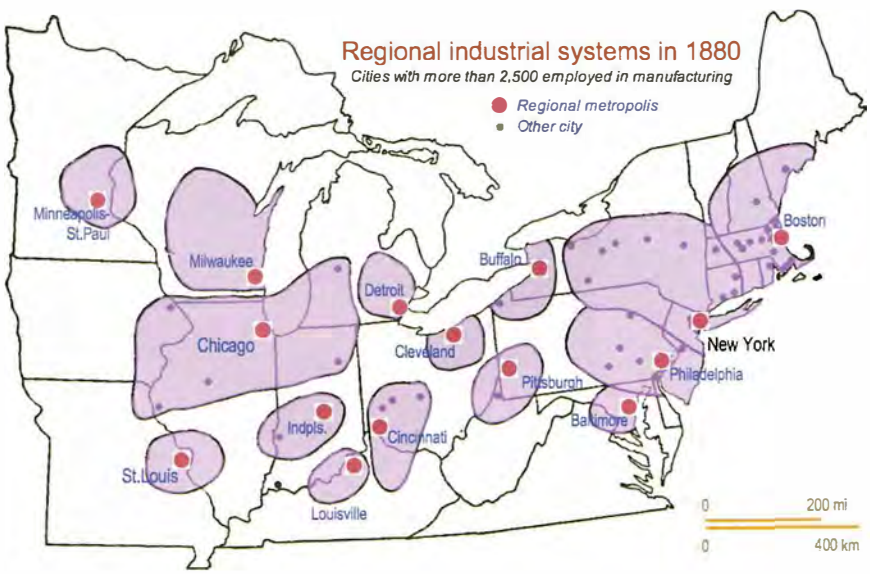


Figure 13.3
The regional industrial systems that had appeared in the United States by 1880 had many industries in common, but also varied significantly in their degree and mixture of product specialties.

Thus, demands from within each region initially stimulated the growth of manufacturing in the industrial systems in the East, and, subsequently, in the Midwest. Broad-based demand for manufactures derived from household consumers (furniture, stoves, food), urban infrastructure (bricks, glass, pipes), the natural resource sector (farm implements and machinery, flour and sawmill machinery), and intra- and interregional trade (steamboat engines, locomotives, barrels). Iron foundries, machine shops, and machinery producers emerged simultaneously with other manufactures, providing essential equipment for other factory production. Much of the foundry and industrial machinery manufacturing concentrated in the large metropolises and their industrial satellites. That so many tools and products came to be made of metal also spurred the growth of iron firms. These remained as rural for most of the antebellum years because charcoal was the chief fuel, requiring about 3,000 acres (and sometimes as much as 10,000 acres) to supply the wood.[9] In eastern Pennsylvania, however, anthracite coal began to be used in the 1840s and rural sites declined; the iron mill town was born.

Transportation improvements were critical to the growth of each region. Navigable natural waterways provided the lowest-cost movement. Coastal sailing vessels connected the east coast metropolises of Boston, New York, Philadelphia, and Baltimore. Steamboats, however, were important on the inland waterways such as the Hudson River and the Ohio and Mississippi rivers, and lake steamers on the Great Lakes. Overland transportation improvements were essential to link areas because navigable waterways limited development to narrow

Figure 13.4
An S-bridge built in the 1840s to vault the National Road over a creek in western Ohio. The zigzag permitted a simple, symmetrical stone arch to be constructed perpendicular to the axis of the stream, and thus save time and materials. The generous road width permitted oxcarts, stagecoaches, and animal herds to pass in safety. Present-day U.S. Highway 40 can be seen to the left.

corridors. Wagon transport was prohibitively expensive, averaging 10–30 cents per ton-mile (cost to ship 1 ton 1 mile) until about 1830, but that interpretation does not withstand close scrutiny. Locally built roads and turnpikes, which charged tolls and were built in large numbers from 1800 to 1830, provided effective transportation for high-value food products and manufactures. These types of goods were precisely those most in need of transport within the inner hinterlands of the large metropolises where much of the population lived.[10] The legacies of the turnpikes, however, are the highways which follow the old turnpikes such as along the Boston–New York route in New England or the National Road which started west at Cumberland, Maryland, and was completed eventually to Vandalia, Illinois; later, U.S. Highway 40 and its successor, Interstate 70, followed this route (Fig. 13.4).[11] This re-etching of old routes was common throughout the country.

Canals proved more satisfactory in augmenting accessibility in areas not served by navigable waterways. The period of major canal construction occurred from 1815 to 1844, although it extended to 1860. The immensely successful Erie Canal crossed 364 miles of New York State and linked the Hudson River with Lake Erie. It was completed in 1825 and became the model for others; by 1860 American canals boasted a total of 4,254 miles.[12] Other long canals included the Mainline, connecting Philadelphia and Pittsburgh, the Miami and Ohio, connecting Cincinnati and Toledo, and the Wabash and Erie, connecting Evansville and Toledo. Before 1850 most canal traffic moved within regions, but thereafter long-distance traffic in commodities grew significantly. Most canals, however, were not particularly profitable because they faced withering competition from wagons within the inner hinterlands of the large

Figure 13.5
The Whitewater Canal was dug in the late 1830s to promote Cincinnati's northwestern hinterland trade and paralleled the river of the same name between Cambridge City, Indiana, and the Ohio River. Seen here passing through the small town of Metamora, it was bought by a railroad company in the 1860s, which promptly ran its tracks unceremoniously down the towpath.

metropolises—the areas of greatest demand for transportation services. Canals elsewhere typically ran through low-density farm areas which generated little traffic. Besides the Erie Canal, the few highly successful ones were the short coal canals that linked the eastern Pennsylvania anthracite fields with New York City and Philadelphia. Although most canals are disused today, many still are visible as slow-moving water courses in the landscape (Fig. 13.5). Canals were superseded by railroads which provided increased speed and all-weather travel and spun networks that ultimately linked all major cities.

Railroads constructed before 1850 formed regional webs that tied a metropolis to its hinterland with radial strands. In 1835 only 1,098 miles of track existed, but during the 1840s the pace of construction accelerated. By mid-century the total reached 9,021 miles and by 1860 it had surged to 30,626 miles.[13] Prior to 1840, passenger revenues far surpassed shipments of commodities, but by 1850 they had become equal, as shipments of manufactures increasingly moved by railroad. Although continuous long-distance journeys such as from New York to Chicago did not become feasible until after 1860, during the 1850s goods and people could and did travel by rail between the East and Midwest. Major trunk-line railroads existed by 1853: the New York Central, Erie, Pennsylvania, and Baltimore and Ohio.[14]

For most of the antebellum period, the wagon served well for the shipment of much of the manufactures within the inner hinterland of each metropolis, but the railroad gradually became a better transport mode. Manufacturing favored the large city in each region as the largest single market and the site with the best access to the region as a whole. The factories built before 1860 are seldom visible today because

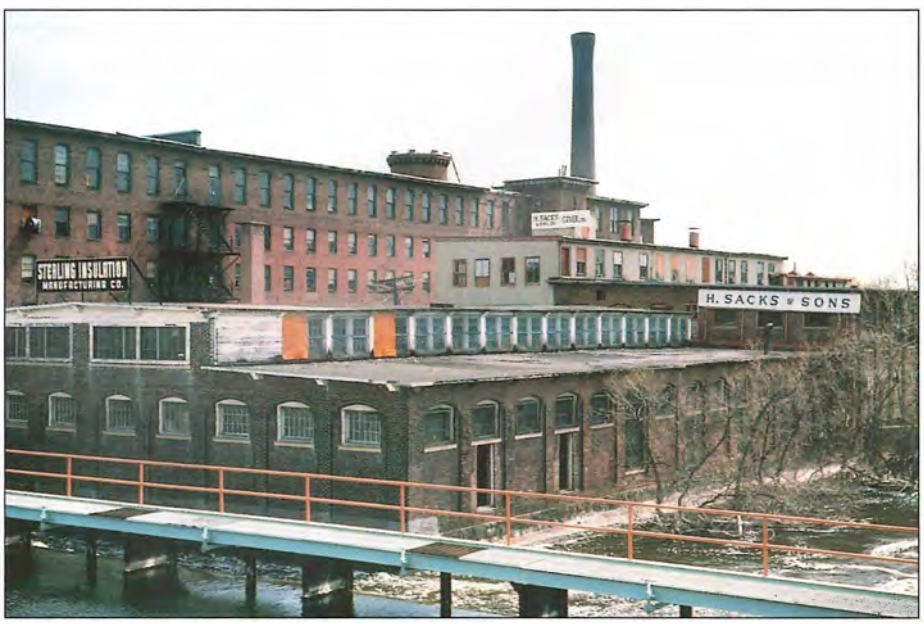


Figure 13.6
An early textile mill on the Charles River in Waltham, Massachusetts. Several generations of buildings are evident on this site, and today they are all occupied by small replacement industries, since textile production moved out of New England.

subsequent development in these cities has usually obliterated the early mills; at best they remain as small appendages to large factory buildings constructed later (Fig. 13.6). Near the waterfront were the warehouses for storing commodities and the wharves for the steamboats, steamships, and sailing vessels. After 1840, railroad terminals appeared, which attracted warehouses to locate near them, and in the two decades leading up to 1860 iron foundries became much larger in the metropolises and their satellites. In the interior of each region small towns along railroads and canals, or those easily accessible by wagon to the metropolis, also grew as industrial centers.

The improvement of long-distance transportation between 1840 and 1860 allowed a growing number and volume of manufactures to be shipped far afield.[15] Some industrial towns thus became specialized producers for multiregional and national markets. The most prominent remains of these pre-1860 manufactures exist in the small towns in the East that once produced many of the earliest national market manufactures such as textiles, shoes, gloves, and clocks. New England had innumerable such mill villages, well exemplified in Florence, Massachusetts, Harrisville, New Hampshire,[16] and Collinsville, Connecticut (Fig. 13.7). Many small mill villages, however, produced only for local or at most regional markets. Because water power was used by the early factories, the essence of these mill villages lay in the mill, the dam, the canal, and the workers' housing. The physical remains of these features have mostly disappeared, but the sites often can be identified by place-names ending in "ville."[17] Some large-scale factory complexes existed in small cities, especially cotton textile manufacturing, which offered widespread employment before 1860.

Figure 13.7
Cheshire woolen mills in Harrisville, New Hampshire, at the center of the purest surviving New England mill village from the mid-19th century. The granite Mill No. 1 (1846–1848, center) and the brick Mill No. 2 (1856, right) draw water from the millpond (behind building at left), and produced textiles until 1970.

Lowell, Massachusetts, was the earliest large textile mill city. Founded in 1823 by Boston capitalists, it boasted 36,827 residents by 1860. These financiers also founded other textile cities in New England, including Chicopee and Holyoke in Massachusetts, Nashua and Manchester in New Hampshire, and Saco-Biddeford and Lewiston in Maine. They were examples of planned industrial communities; each included large mill buildings, a great dam and upstream millpond, and canals.[18]

By 1860, regional industrial complexes stretched from the east coast to the Mississippi River Valley and north of a line from Baltimore to Louisville. Although the growth of most industrial complexes was spurred by demand within local regions, the increasing number of manufactures produced for multiregional and national markets within established industrial districts undercut the basis for industrial complexes in newer regions to form. The result was that the areal expansion of the belt ceased by the 1870s.

Specialization in core and periphery

The integration of the United States economy across regions increased significantly between 1860 and 1920, based on an enormous extension and improvement of the railroad network and on the construction of a national telegraph system. The railroad network provided low-cost locations for factories; the railroad line and factory zone became inseparable features of the industrial landscape of every city (Fig. 13.8).[19] Each metropolis had a large terminal for switching long-distance freight trains and for collecting and redistributing local shipments. Cities in the manufacturing belt became highly specialized in different manufactures. Outside the belt natural resources were processed for manufactures in the belt; by the late 19th century the nation had a core (the manufacturing belt) and a periphery (resource production).

The railroad network tripled from 30,626 miles of loosely connected lines in 1860 to 93,262 miles of highly integrated tracks in which almost 81 percent was standard gauge in 1880.[20] The eastern half of the nation was blanketed by railroads, and two transcontinental lines had been completed, the Union/Central Pacific and the Southern Pacific. By 1900 the mileage totaled 258,784, and by 1920 it increased further to 406,580 miles, a mere 23,000 miles short of the maximum mileage achieved in the 20th century. The amount of total mileage comprised of yard tracks and sidings increased significantly from 17 percent to 27 percent between 1890 and 1920. A host of technological and organizational changes in railroads resulted in a large decline in freight rates from about 2.6–0.75 cents per ton-mile between 1859 and 1910.[21] Steel rails replaced iron rails, which permitted heavier loads to be carried on the tracks, and locomotive power increased. By 1880, organizational changes allowed railroads to coordinate effectively the rapidly growing

volume of freight traffic.[22] Railroads used the telegraph to coordinate train movements, and the telegraph provided a national network for business communication. The telegraph became a nationwide network along with the railroad, the lines strung out along rights-of-way. To this day, telephone wires can be seen marching along old railroad grades that have lost their tracks, mute testimony to an abandoned symbiosis.

Transportation and communication improvements enlarged the market areas over which industrialists could sell their products. Demand grew for machinery to increase production and it, in turn, lowered production costs and allowed firms to ship to larger market areas. Machinery, therefore, was a key late 19th-century industry. The national rank of the machinery industry by value added increased from seventh to first between 1860 and 1910.[23] Although average firm size increased during the late 19th century as firms produced for larger market areas, the increase in plant size was not dramatic in most industries. Firms increased production by adding more plants. Three industries, however, that had significant increases in the scale of production involved the processing of natural resources: distilling, flour milling, and iron and steel.[24]

The iron and steel industry was a most prominent symbol of industrialization between 1860 and 1920. Plant size increased significantly, beginning in the 1860s.[25] Coke made from coal replaced charcoal in the

Figure 13.8
Factories along the rail line in Hartford, Connecticut. The industrial rail corridor became a ubiquitous feature of cities between 1860 and 1920. The factory on the right is late 19th century, while that on the extreme left was built in the first decade of the 20th century. Rail passengers were long familiar with these corridors, but the decline of rail travel has obscured their potent imagery.

regions from central Pennsylvania westward, with dramatic effects. Rural iron plantations declined because the vast adjacent timber acreages were no longer necessary to provide fuel for the blast furnaces. Iron and steel mills could agglomerate at sites where iron ore and coke could be assembled cheaply and where markets were accessible. Rolling mills had located in cities such as Pittsburgh, Cleveland, and Chicago, but with the use of coke the blast furnaces and rolling mills could be integrated in one plant. These plants were among the largest in existence during the period. The sites also had to be large to store the iron ore and coke (Fig. 13.9).

By 1900, major clusters of iron and steel mills were located in the east near Philadelphia, in Pittsburgh and nearby towns, along the river valleys of the Mahoning (eastern Ohio, around Youngstown) and Shenango (western Pennsylvania, near Sharon), and in the vicinity of Cleveland,

Figure 13.9
Iron and steel mill at Steelton, outside Harrisburg, Pennsylvania. These mills continue to be among the largest industrial facilities in existence. This plant contains a bar mill (left), rail mill (center), rail storage yard (foreground), rail lines along the Susquehanna River, electric furnace meltshop (upper right), plus various other operations including the splice-bar and tie-plate shops, maintenance shops, and power plant. A late 19th-century multistory building remains (center). Note also the workers' housing flanking the works (left background).

Chicago, and St. Louis.[26] By the late 19th century the large iron and steel mill, therefore, was the pivotal point in a complex interregional collection of inputs and distribution of outputs. Outside the East the mills used Connellsville coke made at numerous ovens on the coal fields of West Virginia and western Pennsylvania. In 1890 it is estimated that 15,000 ovens, mostly beehive, were in operation.[27] The one major outlier was the late-developing steel complex of Birmingham, Alabama, where iron ore, coal, and limestone (for flux) were uniquely found together (Fig. 13.10). The coke was transported by barge and rail car to the mills. Iron ore was mined in the Lake Superior district of upper Michigan and Wisconsin and later in the Mesabi Range of northern Minnesota. In the latter mines, large steam shovels worked open pits, rail cars transported the ore to the docks, and ore carriers moved the ore to lower Great Lakes ports to be either used by the mills in Chicago, Cleveland, and other cities or transported inland by rail and barge. The output of the mills, such as steel rails, structural plates, and girders, was used locally in the large metropolises or sold elsewhere in the Midwest.

Figure 13.10
The Sloss Furnaces in Birmingham, Alabama, produced pig-iron from 1882 until 1971, when local ore supplies gave out and air pollution controls rendered old plants such as this unworkable. It is the only blast furnace in the United States preserved for public use, and is today an open-air museum.

The emphasis on iron and steel in centers such as Pittsburgh, Chicago, and Cleveland, and in smaller cities such as Johnstown, Pennsylvania, and Youngstown, Ohio, was but one example of the growing specialization of cities in different manufactures. Cities became identified in the popular mind by their industrial specialties: iron and steel from Pittsburgh, beer from Milwaukee, furniture from Grand Rapids, silk from Paterson, cash registers from Dayton, electrical machinery from Schenectady, and watches from Elgin. Some manufactures also had distinctive sites that reflected their industrial processes. In Minneapolis the flour milling plants had multistory mill buildings juxtaposed with grain elevators. The brass firms of Waterbury, Connecticut, had large sheds for casting and rolling brass.

Many industrial cities, however, shared a common landscape of mill buildings and workers' housing. Most common was the rectangular, three- to five-story brick factory building along a railroad line or siding, many thousands of which were built throughout the manufacturing belt between 1860 and 1920. In one-industry towns the mills typically were clustered. The textile cities of New England were distinguishable chiefly by their size differences, from the large agglomerations of identical buildings of Holyoke, Lowell, and Fall River, Massachusetts, and Manchester, New Hampshire, to the single mills of Slatersville, Rhode Island, or Wauregan, Connecticut. The workers' housing clustered near the mills. In smaller mill towns the firms built one- and two-story duplexes, and in the larger cities entrepreneurs built two- and three-decker houses.

By 1880, firms in the existing industrial areas could reach markets in other regions cheaply over the railroad network. Later-growing regions in the Great Plains, Rockies, Pacific coast, and Southwest were settled too late for this. Hence, factory zones along the rail lines in these regions' cities are small. Opportunities for new firms to manufacture for regional markets had been reduced. Their chances were better in goods for multiregional and national markets, but potential industrial entrepreneurs had difficulty acquiring manufacturing knowledge to compete with those in earlier settled regions. Most firms producing basic industrial equipment for other factories located in the established belt; entrepreneurs in late-settled regions, therefore, could not easily equip factories with custom-built machinery. The South did not develop a significant manufacturing sector before 1860 because demand for manufactures in the cotton economy was too low; and after the Civil War it was too late, because northern regions dominated manufacturing for multiregional and national markets.[28]

Although the manufacturing belt ceased expanding areally by the 1870s, the late-settled regions and the South did acquire manufactures based on processing natural resources. Lumber mills, pulp and paper mills, mineral smelting, and oil refining located near the raw materials because inputs were low-value, bulky, and lost much unneeded weight

in processing. Between 1860 and 1920, therefore, American regions fell into two broad groups. There was a core centered on the manufacture of finished products together with some raw material processing. And there was a periphery—the remainder of the nation—that produced and processed raw materials both for the periphery and for the manufacturing belt.[29] The railroad was the chief link between core and periphery.

The lumber mills, mines and smelters, and oil refineries were specialized extensions of the manufacturing belt. An omen of changes in national manufacturing, which would become more apparent after 1950, appeared in California during the first several decades of the 20th century. Its rapid population growth led major national corporations such as auto and tire companies to locate large branch plants in the state to serve the regional market.[30]

Lumber mills were always features of the manufacturing belt in Maine, New York, and Pennsylvania, but the depletion of timber required exploitation of virgin or regrown forests for new supplies. The margins of the belt in the Great Lakes states of Michigan and Wisconsin contained important lumber centers from the 1870s to the mid-1890s, such as Saginaw, Bay City, and Muskegon in Michigan and Eau Claire

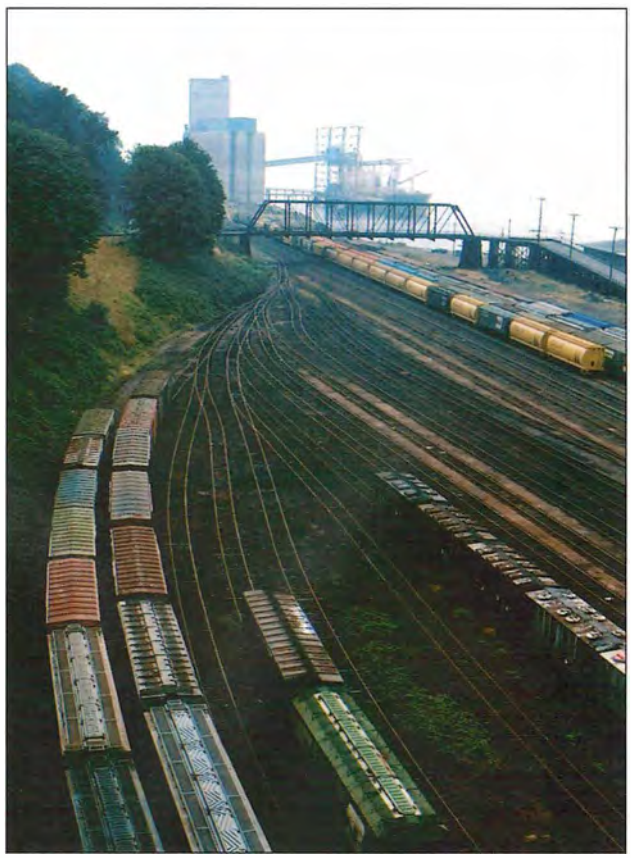


Figure 13.11
A rail yard of the Northern Pacific in Tacoma, Washington, hard against the bluffs that rim the southern edge of Puget Sound. Lumber, grain, and minerals pass through this transshipment point. In the background is an elevator with ship-loading equipment.

and La Crosse in Wisconsin. The rivers leading to the mills often were clogged with logs, ponds surrounding the mills were used for storing logs, and large buildings housed the saw equipment. Because the mills drew timber from the surrounding area, most lumber cities were not large. Each lumber center was isolated from the others and surrounded by cutover land.

The Pacific coast supplied lumber to the national market after 1890, having served the west coast and markets around the Pacific Basin since the 1850s.[31] The northern California redwood industry was a major supplier to these markets, with large lumber mills at Humboldt Bay and the city of Eureka. By the late 1890s, lumber towns along the lower Columbia River and around Puget Sound, including Seattle and Tacoma, were shipping lumber east by railroad (Fig. 13.11). The Michigan and Wisconsin lumber areas declined because the forests were cut over. By 1900, the Southern lumber industry also was supplying the national market, in addition to its own region. Pulp and paper mills also located in the West and South (Fig. 13.12). They produced mostly low-value materials such as newsprint and wrapping paper.[32]

Figure 13.12
Paper mill on the Hiwassee River near Calhoun, Tennessee. The timber resources of the South continue to supply vast paper mills, often in rural surroundings. Note the electricity apparatus (foreground), legacy of Tennessee Valley Authority dam projects.

National demands for precious metals (gold and silver) and demand in the manufacturing belt for industrial metals (copper, lead, and zinc) spurred western mining. Beginning with the California Gold Rush of 1848, successive gold and silver mining booms swept back and forth across the West. The term "mining district" was coined to describe rather dispersed areas where numerous mines were operated, several towns developed, and political incorporation of the district could occur; the districts sometimes covered as much as 30 square miles. During the 1860s, the Comstock Lode at Virginia City, south of Reno, and the Butte district in Montana started production. Colorado had several mining booms that hit the Central City district in the 1860s, the Leadville district in the late 1870s, and the Cripple Creek district in the 1890s.

The large mining operations in the districts left indelible marks on the landscape. Hydraulic mining—blasting hillsides with high-pressure water—stripped the vegetation and topsoil. Dredges worked stream beds and piled rock along the edges, and the smelters left mountains of waste rock. Surrounding forests were used both as fuel for the smelters, although coal was used by the end of the 19th century, and as lumber for construction. Once the railroads arrived a large network of feeder railroads branched into the mining districts beginning in the 1880s.[33] Each of the districts today has abandoned towns. Other towns have populations that are miniscule compared to their peak and look hopelessly overbuilt with streets and structures only partially in use now. The Cripple Creek district had over 50,000 people at its peak and electric interurban trains joined the towns, but today it has under 1,000 inhabitants (Fig. 13.13). Some towns, however, such as Central City

Figure 13.13
The buildings of Cripple Creek, Colorado, established in 1891, spread like confetti across the slopes of this erstwhile gold-mining district in the vicinity of Pike's Peak. For two decades, more than 22 million ounces of gold were extracted from the area's 500 mines.

near Denver, have revived as tourist attractions while others such as Breckenridge, Colorado, have become resorts.

Industrial minerals could not be mined in the West until the transcontinental railroads were completed and feeder lines to the deposits were built; the value of the smelted or refined ores was too low for them to be shipped by expensive wagon transport (Fig. 13.14). Upper Michigan was a major supplier of copper before 1880, but during the 1880s the Butte, Montana, and Arizona copper districts emerged. Underground shafts were used in Butte, while Arizona mines developed large, open pits. Lead and zinc were mined in the Tri-State district of southwestern Missouri and adjacent Oklahoma and Kansas beginning in the 1870s. In the 1880s the Leadville district in Colorado and in the 1890s the Coeur d'Alene district in Idaho emerged as lead producers.

Oil was both a consumer and an industrial mineral from the beginning of important oil production in the 1860s near Titusville in northwestern Pennsylvania.[34] It was sold quickly in interregional markets because oil fields often were distant from major markets. During the 19th century oil was used chiefly for lighting and machinery lubrication; not until 1910 was it processed in significant amounts into fuel oil and gasoline. Because oil was bulky, difficult to handle, and low in value relative to its weight, low-cost oil transportation in either refined or unrefined form was essential. Although railroads always have been used, the pipeline was the preferred solution for bulk shipment. Already by the 1880s long-distance pipelines linked the Appalachian oil fields with Cleveland, Buffalo, New York City, and Philadelphia. From its birth, oil refining has been located both in the oil fields and in the large

Figure 13.14
Climax molybdenum mine near Leadville, Colorado. At an altitude of approximately 11,000 feet, the mine was first developed as an underground mine around World War I, when molybdenum became recognized as a useful alloy to harden steel, and for a time accounted for a majority of global production of this mineral. Open-pit operations began in the early 1970s.

Figure 13.15
Rigs such as this dot the entrance to Mobile Bay in the Gulf of Mexico, and sit atop wells that siphon oil and gas from the Jurassic strata below. This rig is close to the ferry route between Dauphin Island and Fort Morgan.

metropolitan markets. Urban as well as rural dwellers, therefore, have observed the typical large oil refinery with its cracking towers, storage tanks, and flames atop pipes for burning excess gas. The Ohio–Indiana fields became important in the mid-1890s, while the Gulf Coast of Texas and the California fields emerged as producers after 1900; the Kansas–Oklahoma and Illinois fields were important by 1910. By the early 20th century large refinery districts were established in northern New Jersey, along the southern shores of the Great Lakes and the Texas–Louisiana Gulf Coast, and southern California. Beginning in the 1920s these same areas became the first sites for the growth of petrochemical plants based on oil and natural gas. The vast refinery and petrochemical complex with large economies of scale, therefore, became a fixture of the industrial landscape in the manufacturing belt and on the periphery. In recent decades the oil industry has moved aggressively offshore (Fig. 13.15).

With the first construction of the intercity railroads, the lines radiating from cities provided sites for factories at the city edge. This continued throughout the second half of the 19th century and afterwards, and circumferential routes gradually augmented these radial lines. Therefore, factories always existed in the suburban landscape of cities, but city growth encompassed many of them and observers frequently thought these factories were part of the inner city from the beginning. This industrial landscape on the city edge can be seen in cities as far apart

Figure 13.16
Textile mill at Cordova, Richmond County, North Carolina. Just as the three- to five-story textile mill dwarfed the workers' housing in a New England textile city in the 19th century, the modern one-story Southern mill overwhelms the adjacent housing. In contrast to the earlier textile mills that spun and wove natural fibers such as cotton and wool, this mill uses polyester fibers. Also in contrast, this mill is without windows, permitting no natural light into the workplace.

as Boston, Pittsburgh, Chicago, and San Francisco from the 1870s to the 1910s.[35] Many of these factories were multistory. Fire insurance companies began to advocate building the "slow-burning factory," which had safety features to inhibit fires; one of these was the one-story factory.[36] As manufacturing shifted to mass production in some industries, experimentation with continuous assembly lines began to demonstrate the advantages of one-story factories.[37] Finally, electric motors attached to machines increasingly became the preferred power mechanism, replacing the group-drive and the belt-and-shaft driving system inherited from the steam-power era. Production machinery and assembly lines could be arranged in any configuration.[38] These production changes were well established before the truck became efficient for industrial transport after 1910. The truck, therefore, accelerated an existing trend, and the car added to it by providing greater ease of commuting for the workers.

The switch to the one-story factory in the suburbs has had a dramatic, cumulative effect on the industrial landscape of cities. The multistory factory has become obsolete; new firms and existing firms that expand have built one-story suburban factories along major highways and expressways (Fig. 13.16). The corridors these roads create

offer the preferred sites for modern factories just as the railroad lines did in the 19th century. Although the old multistory buildings have remained in use for many decades, especially by the firms originally in them, demand for the buildings has declined. The long-term effect has been a gradual abandonment of multistory factories and warehouses that had been built in the pre-1920 metropolitan area. This abandonment reached such a critical level that it became one of the stimuli for the urban renewal programs initiated by planners during the 1950s and early 1960s.

Many factories and warehouses located near the city center and in the inner railroad industrial zone have been torn down and replaced by parking, public housing, convention centers, and expressways, or the sites have been left vacant. Numerous multistory factories and warehouses, however, remain. In cities such as Boston, New York, Baltimore, Chicago, and St. Louis, some buildings have been renovated for commercial activity, offices, and loft housing. Manufacturing-belt cities, therefore, look substantially different from cities outside the belt that grew essentially after 1900. The former cities retain large numbers of their 19th-century multistory factories scattered about the inner parts of the city and in the railroad industrial zone, and in the suburbs are the one-story factories. The latter cities have "suburban" factories in the inner city as well as in the suburbs.

The blend of old and new

The American manufacturing belt was established over a century ago, but it retains a significant role in the industrial landscape. Yet, the years since 1920 have witnessed a gradual decline in the proportion of United States manufacturing housed in the belt. From highs of about 85 percent during the late 19th and early 20th centuries, the proportion had declined to just over 50 percent by the 1970s.[39] Within the belt, new landscapes have emerged, while the old decay or revive. Outside the belt resource processing remains important, but a new feature is the growth of the aerospace and information and biotechnology industries. The belt also participates in these industries; the distinctions between belt and non-belt, therefore, have lost much of their salience.

The resource-processing landscape of smelter, lumber and paper mills, and oil refineries and petrochemical plants has not changed significantly from the early 20th century in its broad regional distribution in the West and South or in the manufacturing belt. At a local scale, however, as resources are depleted or new ones develop, the processing industries decline or emerge. The result has been the continual abandonment of resource sites and the use of new processing facilities, often larger than previously because of scale economies in handling and processing raw materials. The old industry of textiles shifted from the

Pennsylvania–Maine corridor to the Piedmont region extending from Alabama to North Carolina. This redistribution began in the late 19th century, but over half of all textile production was still in the northern area as late as 1940; by the 1970s, however, about three-fourths was in the South.[40] Because the textile industry was so large, numerous abandoned, large mill buildings exist throughout the Pennsylvania–Maine corridor in such centers as Paterson, New Jersey, Fall River, Massachusetts, and Manchester, New Hampshire. In the South, in contrast, only early textile cities such as Augusta, Georgia, have old multistory factories; most Southern mill towns have large, one-story factories (Fig. 13.16). Yet, the dramatic expansion of textiles and apparel in many less-developed nations during the late 20th and early 21st centuries has meant that Southern mill cities are seeing the same abandonment of factories as the Northeast had experienced over five decades earlier.

The productive capacity of the steel industry increased over tenfold during the 20th century, but the industry remains concentrated in the belt while some changes internal to the belt have occurred.[41] A few large mills were built outside the belt before 1900; the notable ones were at Birmingham, Alabama, and Pueblo, Colorado, during the 1880s. Two other large mills were built during World War II at Geneva, Utah, and at Fontana near Los Angeles. Other large mills, especially pipe plants to serve the oil and gas industry, have been built along the Gulf Coast such as in Houston, Texas. In spite of these changes, as well as the proliferation of minimills using scrap as raw material, the large, integrated steel mill remains a dominant fixture in the manufacturing belt cities. This concentration has been reinforced by the enormous demands for steel from the automobile industry that localized in the Midwestern part of the belt. The domestic steel industry's production stayed stable for the last two decades of the 20th century, whereas cheap foreign imports are approaching levels close to 40 percent of domestic production.[42] The result has been the abandonment of old mills. The impact of these changes is most noticeable in the Pittsburgh area. Here, the formerly smoke-filled, noisy valleys are pollution-free and quiet; what remains is an eerie river valley landscape of huge, empty mills or, increasingly, vacant sites, some of which are being redeveloped for other uses.

Explosive growth of automobile manufacturing during the first two decades of the 20th century established a sprawling belt of plants assembling cars and making parts, stretching from northern Illinois to eastern Ohio but focused on Detroit and southeastern Michigan.[43] This core contained the earliest successful large-scale car builders such as Henry Ford and Ransom Olds. The year 1903 was the first time automobile manufacturing surpassed 10,000 vehicles, but by 1910 it reached 181,000 vehicles and by 1920 almost 2 million were produced annually; by the 1950s the typical number built was five million annually.[44] Most auto parts factories did not differ noticeably from other 20th-century one-story factories. The assembly plants, however, were different. Because

enormous economies of scale are possible in automobile assembly, these one-story plants are some of the largest in the nation, often employing between 5,000 and 10,000 workers. These scale economies have limited the spread of assembly plants from the original belt of auto manufacture, although a few plants were built in cities such as St. Louis, Atlanta, and Los Angeles. The entry of Japanese assembly plants beginning in the early 1980s reinforced the original auto belt in Michigan and Ohio,

Figure 13.17
Silicon Valley, California, looking northeast from a point above San Jose. At the southern edge of San Francisco Bay (upper left), much of Silicon Valley lies between Palo Alto, home to Stanford University (off left), and the city of San Jose. Many high-technology firms have sprouted here, ranging from small, specialized producers of semiconductor chips and equipment to large diversified computer firms.

and subsequently their plants, along with those from other countries, extended this belt southward into Kentucky, Tennessee, Alabama, and Mississippi.[45]

The quintessential "modern" industries today are aerospace and high-technology corporations, but both have strong roots in the manufacturing belt while forming the basis for the expanding industrial landscape outside the belt. The cavernous buildings for airframe assembly house thousands of production workers, similar to auto assembly plants. Aircraft assembly is a specialty of "new" metropolises such as Los Angeles and Seattle, but it also occurs in an old metropolis such as St. Louis. Although southern California has numerous parts plants, others are scattered nationwide because production requirements draw on traditional manufacturing belt skills in metal fabricating and machinery. The largest component of modern planes, the jet engine, is manufactured in the Hartford and Boston areas.

High-technology manufacture, especially of computers and semiconductors, is often cited as a symbol of the demise of the manufacturing belt. The Silicon Valley south of San Francisco is considered prototypical of manufacturing derived from science and engineering (Fig. 13.17).[46] A leading engineering university such as Stanford is considered essential for founding and supporting new firms. The heavy emphasis on research and development, employing highly educated workers, dictates locations with high amenities, it is thought, with low-slung buildings set in a garden-like environment. These so-called ideal

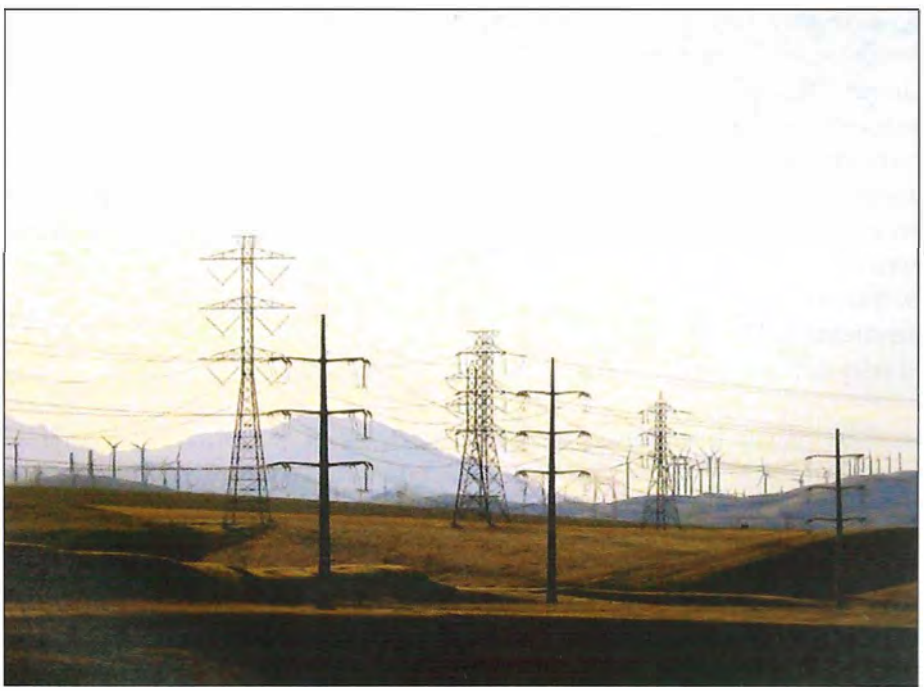


Figure 13.18
Late afternoon haze envelops the energy landscape of the Altamont Pass corridor between the Livermore Valley and San Francisco Bay. These turbines constitute one of the earliest wind farms in the United States (erected following the 1970s energy crisis), and are some of the 4,900 turbines that still comprise the largest single concentration in the world.

locations lie in the carefully designed California landscape or on the front range of the Rockies between Colorado Springs and Boulder. This standard characterization, however, is misleading. The old manufacturing belt has a large high-technology base, as is well exemplified in eastern Massachusetts, which originated in part with firms started by Massachusetts Institute of Technology faculty and graduates. During the 1960s and 1970s, numerous computer and related equipment firms were located there in "campus" settings along Route 128. In addition, new and old high-technology firms are renovating 19th-century mill buildings for research and development and production facilities. The New York metropolis extending from northern New Jersey through southern New York State into Connecticut also is home to many high-technology firms including the world's largest, International Business Machines. Likewise, biotechnology firms occupy a diverse set of metropolitan areas from those in the manufacturing belt such as Boston and St. Louis to those on the Pacific coast such as San Francisco and San Diego. Integral to the expansion of high technology in American manufacturing are innovations in electricity generation, and as the 21st century unfolds, wind power is beginning to play a significant part (Fig. 13.18).

The American industrial landscape is a dynamic blend of the old and the new. Each specialized component, factory, smelter, paper mill, and refinery, participates in complex linkages of transportation and communication. New landscapes are being created while old ones are abandoned or reused. In the past the separate components were individually owned and managed, but today many are linked by chains of ownership and information flows quite invisible in the landscape. These chains, however, are real in the lines of authority in the organizational structures of large corporations.

Chapter fourteen
Building American cityscapes

EDWARD K. MULLER

A TRAVELER TO almost any large American city in the early 21st century encounters an urban landscape that proclaims its newness alongside the vestiges of its past. American cities appear to be in motion, almost cinematically changing before one's eyes, even those struggling with the ravages of industrial decline. Because growth is gospel in America, change is commonplace and admired. "New" in the landscape presents a dynamic image, while "old" represents a hindrance to growth except where preservation enshrines cherished symbols or finds support in investment incentive policies.

Forests of new office towers in the largest downtowns crowd out smaller 19th- and early 20th-century streetscapes. Huge public housing projects and blighted inner-city slums slowly recede against the press of expanding central gentrified historic districts and condominium developments. Obsolete central wholesale districts and waterfronts with abandoned railroad tracks, terminals, piers, and warehouses court rediscovery by entrepreneurs keen to establish upscale retail, residential, and office complexes. At a distance from this central redevelopment in older water and rail corridors, the abandoned massive factories of former smokestack industries gently rust alongside their shrinking working-class communities graying with age, and acres of cleared brownfield sites await new development. But beyond these idle zones, around expressway interchanges and airports, spacious office and industrial parks, enclosed shopping malls, and satellite business centers, anchor a vast automobile-spawned sprawl, virtually independent of the mother city.

This American city is a vast, restless, multifocused urban region, a collection of employment and consumption centers scattered over numerous political jurisdictions. Yet a web of capital investments, electronic networks, and highways knits them together. Relatively new and low in density, these cities roll on expansively with a rectilinear geometry unsympathetic to the physical environment and interrupted only by misaligned subdivisions. However, the usual monotony of gridiron planning belies the differentiated social patterning of this urban milieu.

Variations in wealth, duly reflected in the age, quality, and appurtenances of housing, distinguish neighborhoods in this immense mosaic. Moreover, new generations of Asian and Spanish- and African-speaking immigrants exist uncomfortably alongside older European ethnic and racial minorities in an economy perceived as dividing the population increasingly into two extremes.[1] The continual transformation of American cities reflects the society's persistent and often contradictory values, its enduring political and economic system, and the legacy of past geographies. The original urban settlements in North America were derivative transplants of European societies, but with each passing era they diverged further from these roots and progressed along an increasingly independent course in step with the flowering of the nation-building enterprise.

American society developed a unifying consensus founded on a capitalistic economy and liberal social philosophy.[2] Economic activity and change were vested in private enterprise working through private markets with success measured in financial profits and higher material standards of living. The business community, wealthy landowners, and the socially established controllers of capital and its economic institutions garnered considerable power, especially over public priorities. The public interest was defined in terms of the private economy because successful businesses, it was believed, redounded to the benefit of the entire community.

In concert with this, the liberal social philosophy, stressing the freedom and rights of the individual, complemented the individual's (or organization's) economic latitude in the capitalistic system and has long relegated local government to protecting individual rights, nurturing economic interests, and maintaining civil order.[3] It placed value on individual performance, equality of opportunity, tolerance, and political democracy. Formal social distinctions have been few, and fair chances for material advancement, especially in the form of land—or, in cities, home ownership—undergirded an essentially democratic society.

Substantial infusions of diverse immigrant groups over the years have tested this social vision, but a general adherence to the liberal philosophy in a growing economy diminished rigid class stratification, effected a sharing of power and wealth with upwardly mobile generations, and produced a dynamic yet untidy social geography. With the increasing complexity of American society, governmental responsibilities expanded and underwent redefinition, but the *laissez-faire* conception of government endured, providing a constant check on public policies seeking to manage the economy or effect social engineering. Americans have doggedly adhered to this core set of principles in the face of technological change, foreign immigrations, recurrent communal impulses, disturbing social inequities, external threats, and alternative European political models. As centers of economic activity and power, American cities have reflected the geographical consequences of this value system

and stood increasingly in contrast to their European counterparts, at least until corporate global activities began generating similarities.

The economic landscape

Although the earliest settlers along the Atlantic seaboard concerned themselves with the demands of survival in the frontier and carried with them the directives and models of their European origins, they also worked assiduously toward the success of their economic pursuits and adapted their towns to fit with their aspirations for the New World. By the middle of the 18th century, as settlement moved inland and new town founding accelerated, an American urban tradition began to unfold, and its forms have shaped the urban landscape right down to the present.

Towns were initially places of colonial administration and religious community, but both local and long-distance trade, free of feudal-style obligations, increased their economic value. Individuals viewed land as not only a site for work and residence, but also a source of speculative profit. Thus, land was a commodity and a basis for rising material expectations. It was neither universally owned nor equally distributed among the citizens.[4] Property owners exercised freedom from governmental control over the use of their land, except for instances that created a pronounced public nuisance. Formal plans for streets, property parcels, and public spaces preceded the development of most new towns, but they had little influence over the land uses that eventually emerged. Far from the anarchy that such an individualistic economic emphasis might imply, common patterns characterized the urban landscape, because of English origins, market forces, and the diffusion of the new tradition.

Although Spanish and French settlers in North America established distinctive colonial town forms, the far more numerous English who brought various town concepts with them eventually established the characteristic American plan. Irregular organic forms oriented to the town's functional focus, usually a waterfront, developed in many of the earliest settlements, as seen today in the tangle of streets of central Boston and lower Manhattan. Rectangular gridiron plans with little open space based on European bastide towns also appeared frequently along the Atlantic coast.

However, William Penn's late 17th-century plan for his colonial capital of Philadelphia seemed best suited to the requirements of American urban growth. Its formal rectilinearity and broad spatial extent accommodated the city's growth long after its founding in 1682, allowing the orderly and speculative sale of land by absentee investors or prospective settlers. Throughout its 18th-century prosperity, Philadelphia maintained the appearance of order and egalitarianism, so appealing to evolving American sensibilities, with its straight streets and regularly

aligned and reasonably uniform houses. A few elaborate aristocratic plans with prominent, long diagonal streets for colonial Williamsburg, Annapolis, and later Washington presented alternative models. Nevertheless, the simple egalitarian, speculative, and orderly features of Philadelphia's gridiron, the nation's premier city at century's end, appealed to Pennsylvanians as they moved west and merged comfortably with the developmental orientations of New England and southern frontier migrants.[5] The gridiron was easily understood and facilitated investment, rapid development, and geographical mobility. Quite simply, it worked and fit with the American rational and egalitarian vision. While a few grandiose plans such as those of Buffalo and Detroit dotted the 19th-century urban landscape, the gridiron's rectangular geometry, embellished with market spaces or central squares, spread relentlessly and monotonously across the continent, paying little heed to relief and barely inhibiting cultural aspirations (Fig. 14.1).[6]

Despite Penn's intention to create a spacious town, Philadelphia grew into a compact settlement of narrow lots, dense housing, and little green space. In part, the high density of early cities reflected the geographical constraints of a walking city, but it also resulted from the imperatives of a commerce-oriented economy that revolved around the waterfront (Fig. 14.2). Trade powered the early American city, and access to the marketplace for merchants and shopkeepers drove up central land values. The expansion of commercial land use in the early 19th century occurred outwardly along the waterfront and incrementally away from central markets, driving out residences and often usurping public open spaces. Social and public institutions had difficulty competing for

Figure 14.1
Rectilinear residential tracts in southwest Los Angeles, reflecting a sense of order, rationality, and expedience, recall the repetitive gridiron plans of new towns in the 19th century. Here, even the modern freeway, Interstate 110, south of its intersection with Florence Avenue (at left margin), cuts southward through the area in alignment with the grid.

Figure 14.2
Tenement buildings on North Street in Boston's North End, near the waterfront along Atlantic Avenue. High land values in this central district stimulated cycles of rebuilding that ended in these very dense, turn-of-the-century living quarters.

central locations and often shared the city center uneasily with business activities.

Changes in transportation means and building technology appearing late in the 19th century maintained peak values at the center until after World War II. The resulting distribution of land values with a central peak and gradual decline away from the center, though elongated along radial transportation axes, ordered the land use patterns of American cities. The initiation of urban planning and zoning in the early 20th century rarely interfered with existing, broad patterns of land uses because planners cautiously observed the prerogatives of private property owners and protected existing values. They retained a metropolitan planning vision that privileged downtown while accommodating necessary industrial and residential decentralization. Even as planning became more aggressive after 1950, the goals were often to re-establish the traditional peak valuations, centrality, and vitality of downtown.[7]

The congested central business areas of the early 19th century evolved into prestigious downtowns that became hallmarks of the American metropolis.[8] These early business centers displayed low skylines of two- to four-story buildings broken only by ship masts and steeples, homogeneous architecture of brick rows or some other regional vernacular tradition occasionally punctuated by monumental Greek Revival buildings, and an intermingling of all manner of activities (Fig. 14.3).

Rapid growth of central business areas during the mid-19th century led to increasingly specialized functional subdistricts, pretentious buildings that conveyed business importance, and a determined elegance to attract retail consumers. Commodity brokers, investment firms, and bankers withdrew from the cacophonous mercantile quarters into ponderous stone edifices befitting their solid respectability. Retailers also

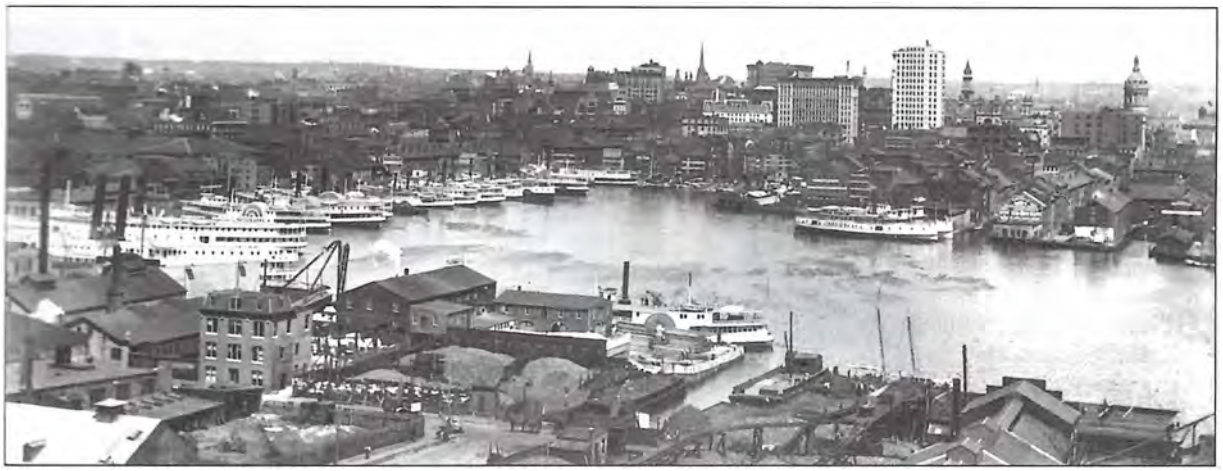


Figure 14.3
Baltimore's inner harbor and downtown in the early 20th century, looking north-northwest. The old warehouses, shipping services, and docks of the original harbor contrasted with the rising modernity of the central business district only a few blocks to the north. After World War II, this and other harbors would attract urban renewal interest.

left the congeries of warehouses for fashionable stone and iron-front buildings and innovated in mass-marketing techniques that promoted consumption habits, appealed to female shoppers, and made shopping a downtown event (Fig. 14.4). A surprisingly standardized architecture that emphasized building facades emerged to radiate the storeowners' up-to-date commercial activity. Pressed together, sometimes in a single commercial block, flat-roofed Italianate buildings with large glass windows signaled America's main street in small towns and large cities (Fig. 14.5). Perhaps as much as any other institution, the department store with its vast array of goods and broad social appeal signified the transformation of central areas into downtowns.[9]

With the retail and financial districts entrenched as the bedrocks of downtown by the 1890s, the steel skeleton building frame and hydraulic elevator intensified downtown's centrality by concentrating white-collar workers in tall office buildings. The emergence of life insurance companies and industrial corporations with national orientations multiplied administrative functions headquartered near sources of capital but distant from markets and sites of production. The subsequent expansion of corporate bureaucracies and legal, financial, and business professions ballooned office employment at the time that the new electric streetcars offered mass transportation for middle-class workers and shoppers. By stacking offices a dozen or more stories high, the skyscraper solved the constraints of earlier walk-up buildings, but it also unleashed the businessman's burgeoning sense of power and importance. Originally a profitable solution to spatial demands, the skyscraper in its awe-inspiring verticality and behemoth scale became the symbol of corporate prestige and a means of competition for status among the captains of industry. By the 1920s, shining towers soared dozens of stories above the street, many aspiring to be the tallest in the world. The traditional boosterism of America's businessmen focused

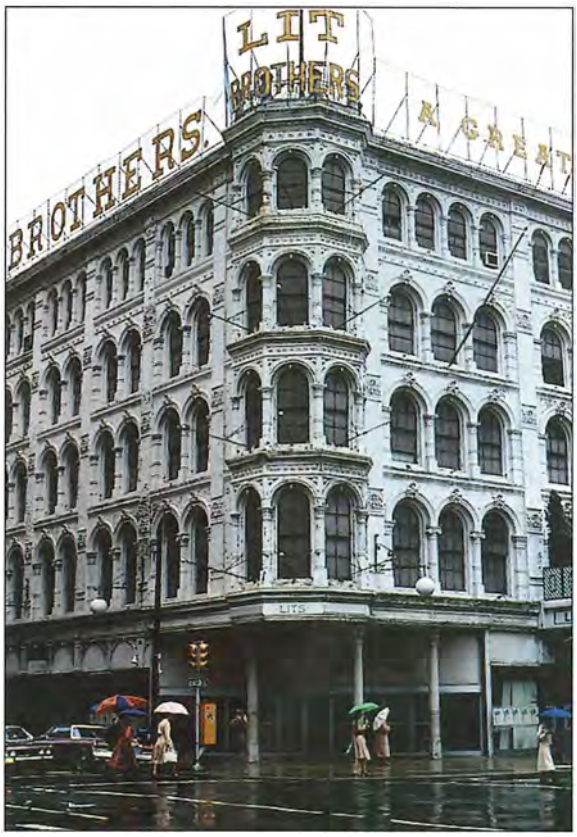


Figure 14.4
Lit Brothers' Department Store on Market Street, Philadelphia, designed to be ostentatious and appeal as a consumer's palace. At the focus of trolley lines coming from the suburbs, department stores anchored the retail district within American downtowns.

during these years on the skyscraper.[10] If the department store made going downtown an exciting event, the office tower trumpeted the city center's power in the metropolis and beyond (Fig. 14.6).

The explosive growth of downtowns spawned a series of subsidiary functions that contributed to their dominant position. Massive and grand railroad stations crowded into downtown space where they coordinated the voluminous daily circulation of commuters and intercity travelers. The tumult in the terminals' cavernous waiting halls epitomized downtown's breathless pace and vitality.[11] Outside, traffic congestion and pedestrian pandemonium heightened the sense of being at society's center. Expensive hotels, elegant theaters, movie palaces, fancy restaurants, and less pretentious mass amusements made downtown the city's entertainment focus, as well. The era's fashion and modernity were captured by the towers, terminals, and shops, which signified downtown to urbanites, and for many symbolized the American city at large.

Even as downtown flourished in the 1920s, forces were at work to destroy its centrality and vigor within a few decades. Motor vehicles captured the American imagination, exacerbating central congestion and cluttering curb space, while states scrambled to improve highways,

Figure 14.5
Well-preserved commercial buildings along Oklahoma Street in Guthrie, Oklahoma, typify the look of "Main Street" in countless towns and small cities across America at the beginning of the 20th century.

extending urban development miles into the countryside. Downtown retailers nervously watched new competitors locate in secondary business districts. After World War II, governmental policies further stimulated highway building and suburbanization, which accelerated the challenge to mass transit and inner-city neighborhoods. Radial and circumferential expressways and electronic communication reoriented the longstanding center-focus of the American metropolis. By 1960, retailers were following the flight of homeowners and industries to distant suburbs. Deteriorating transit facilities, declining railroad service, blighted central industrial districts, adjacent minority slums, and closed department stores tarnished the once glittering image of downtown.[12]

In the 1950s, coalitions of public and private civic leaders with economic interests in maintaining central land values and business activity formulated renewal programs that leveraged private investment with federal subsidies for highways, slum clearance, parking garages, and office developments.[13] Expressway construction plowed through older neighborhoods and split them into separate communities, leveled buildings in great bands around downtown, and usurped blighted waterfronts, cutting the water bodies off from pedestrians. Sprawling expressway interchanges, looming cement retaining walls, and immense swaths of parking lots accompanied downtown redevelopment. Sterile Bauhaus architecture, carefully segregated land uses, and super-scaled projects were meant to signal renewal and a vigorous future, but these modernist features and the new highways also froze out pedestrians and squashed an active street life (Fig. 14.7).[14]

Figure 14.6
The Woolworth Building in New York City (center right) completed in 1913 and an important early skyscraper, captured the American imagination and symbolized urbanity. For 30 years (1971–2001) it shared the Lower Manhattan skyline with the twin towers of the World Trade Center, as seen here looking southwesterly from City Hall.

While urban renewal slowed the decline of downtown, in the 1970s a new generation of planners and developers stressed upgrading rapid transit, new stadiums for spectator sports, cultural entertainment, vibrant street life, and waterfront redevelopment to enhance the city's core. Small parklets with leisure programming, outdoor cafés, pedestrian malls, and linear parks along waterfronts injected open space into downtowns almost for the first time. Retailers now eschewed older practices in favor of combining small vendors in festive markets that strove to convey excitement. While more people-oriented downtowns unfolded, the rejuvenation depended on a new generation of even taller office towers. Today, downtowns strive to be the city's premier locus of skyscrapers, regional entertainment, and civic institutions.[15]

In the largest metropolitan areas, however, downtowns no longer were the only major business district. By the 1970s, suburban centers of offices and stores also flourished, rivaling the size and complexity of downtown.[16] The junction of radial expressways with circumferential beltways created ideal locations for assembling large numbers of workers and shoppers who resided in postwar suburbs. Some corporations tired of downtown's excessive costs and congestion and retreated to suburban sites. Others carved out routine office functions and relocated them within convenient access to a low-paid, suburban female workforce. Developers built landscaped office campuses in purposeful contrast to the unruly atmosphere of downtowns, while

Figure 14.7 The Lower Hill Redevelopment Area, Pittsburgh, in a 1956 planners' demonstration photograph. Containing over 1,500 households and 400 businesses, the buildings within the area marked out by the proposed new roads, Civic Arena and Crosstown Boulevard were eventually demolished. When completed, the renewal project effectively created a barrier between downtown and the adjacent black ghetto.

retailers operated from stand-alone, big box stores or clustered in all-weather malls that became suburban entertainment centers (Fig. 14.8). Enormous asphalt parking lots consuming acres of land surrounded all suburban developments. By the 1970s, a new generation of consumers was maturing, who had never experienced downtown in its heyday and looked upon it as only one of several centers around which to organize their activities. Suburbia's expansive scale required individuals to rely on automobiles and consequently diminished employment prospects for central-city residents dependent on mass transportation.[17]

While downtown was historically the beacon of the city, manufacturers and wholesalers comprised its energy source. Originally dominating the central waterfront, these industries followed the water and railroad corridors that grew outwardly in ribbons from the center in the 19th century. Early in the century, water-power sites beyond the city's limits attracted large mill operations, complete with company housing and stores for workers and their families. As the expanding city overwhelmed these early satellites, some industries again sought large, self-contained sites beyond the urbanized area, this time served by railroads. By 1900, the U.S. Census recognized that traditional city boundaries failed to capture the complexity of the urban industrial region and called it a manufacturing district (later renamed metropolitan).[18]

Figure 14.8
Stratford Square Mall, Bloomingdale, Illinois, a 1.3 million-square-foot enclosed shopping center in Chicago's western suburbs, was completed in 1981. Featuring six anchor stores, it caters to a determinedly middle-income clientele. Peripheral sites on the mall ring road continue to be developed to complement a recent mall makeover.

Location in the city, architecture, building size, and type of industry demarcated the eras of economic development.[19] Artisans, ship-oriented tradesmen, and piece-work manufacturers packed the lofts of narrow, brick walk-up buildings throughout the central waterfront of the early 19th century. Nearby, wholesalers and processors of trade goods such as textiles, leathers, or foodstuffs built three-story structures that consumed an entire city block. The manufacturers of the mid-19th century required more space for storage, assembly, and production. These iron, machinery, or railroad car manufacturers, for example, built on the open lands of expanding industrial corridors, amassing several buildings into complexes employing several hundred workers. By the early 20th century, factories became massive, emphasizing horizontality in one-story structures where automobiles, electrical machinery, or consumer appliances were fabricated. Thousands of workers streamed into these giant complexes through secured plant gates. Beyond the surrounding fences, trolleys, vast parking lots, taverns, and grimy industrial towns served the workers. One mill town followed after another, the names often synonymous with corporations—Sparrows Point with Bethlehem Steel, Dearborn with Ford, or East Pittsburgh with Westinghouse Electric. These corporate giants paid little heed to the environments of the industrial corridors, dumping wastes into adjacent waters and lands, belching soot and toxic chemicals into the air, and sometimes ignoring the needs of dependent communities.[20]

After World War II, technically advanced businesses, research divisions, and wholesale distributors chose the flexibility of truck

transportation and suburban amenities on the urban periphery. Industrial parks offered cheaper land, access to interstate highways, and landscaped grounds, all near suburban communities. Clustered at interstate interchanges that sometimes coalesced into new industrial corridors around the city, such as Route 128 near Boston, these new industries complicated the simpler spatial pattern of center, corridor, and satellite that characterized the earlier city. Blight, technological obsolescence, and economic restructuring shut down first the central waterfront, then the downtown loft manufacturers, and finally, after 1960, the heavy industries of the railroad corridor. As demolition cleared these areas, their centrality and often waterfront sites encouraged imitative or adaptive reuse into industrial parks or entertainment and residential developments (Fig. 14.9; contrast with Fig. 14.3).

Figure 14.9
Harbor Place in Baltimore, viewed from the city's World Trade Center. Extensive land clearance made way for new hotels (upper center and right), a festival market at the water's edge, and a sanitized brick plaza—tourist accoutrements for the *U.S.S. Constitution*.

Social landscapes

The vision of America transcended purely economic aspirations, complicating the forces shaping the urban landscape. Pervasive beliefs in individual liberty, equal opportunity, social justice, and political democracy combined with the nation's role as a haven for oppressed peoples to create a culturally plural and socially dynamic society. Behavior, however, did not always conform to belief, generating charged, contentious, and often contradictory social relations in the city. The ever-changing social landscape of the city reflected both the vision and the reality of American society—the jarring extremes of economic inequality that disrupted the endless middle-class residential blocks, private suburban dwellings that contrasted with explicitly demarcated "turfs" of ethnic and racial groups, ceaseless social and geographical mobility that mocked the persistent despair of slums, and the signs and institutions of the contest for economic and political power.

Beginning with the earliest settlers to this New World, immigrants sought an improved standard of living as well as freedom from Old World encumbrances and injustices. As ports of entry and hubs of unskilled jobs, cities retained large numbers of the newcomers. The colonial seaports of Philadelphia and New York attracted peoples of diverse religions and languages. Subsequent waves of Northwest European immigrants in the mid-19th century and Southern and Eastern Europeans at the turn of the century complicated the social composition of most cities, except in the South where black Americans contrasted with the white Anglo-Saxon majority. During the initial half of the 20th century, blacks moved to northern cities in large numbers, while small Hispanic and Asian populations in southwestern and Pacific coastal cities foreshadowed their migration across urban America in the second half of the century.

The cultural plurality resulting from these migrations charged American cities with an incredible social dynamism and tension. Immigrants struggled at menial jobs scattered throughout the city, living in nearby rooming houses, barracks, or other arrangements not always intended for residential purposes. Attracted by the assortment of unskilled jobs in downtowns, recent arrivals, transients, and other poor residents also collected in polyglot central quarters composed of old building stock much subdivided and run down. There were few neighborhoods dominated by a single nationality before the Civil War. In this walking city, workers lived near their job sites or the main loci of employment opportunities. Moreover, the scarcity of housing forced diverse immigrant workers to reside side by side or in clannish pockets that together formed a residential mosaic.[21] Social tensions between foreign and native-born workers, Protestants and Catholics, and racial groups occasionally erupted in violence in the dense quarters (Fig. 14.10). When conditions permitted, immigrants preferred to reside in

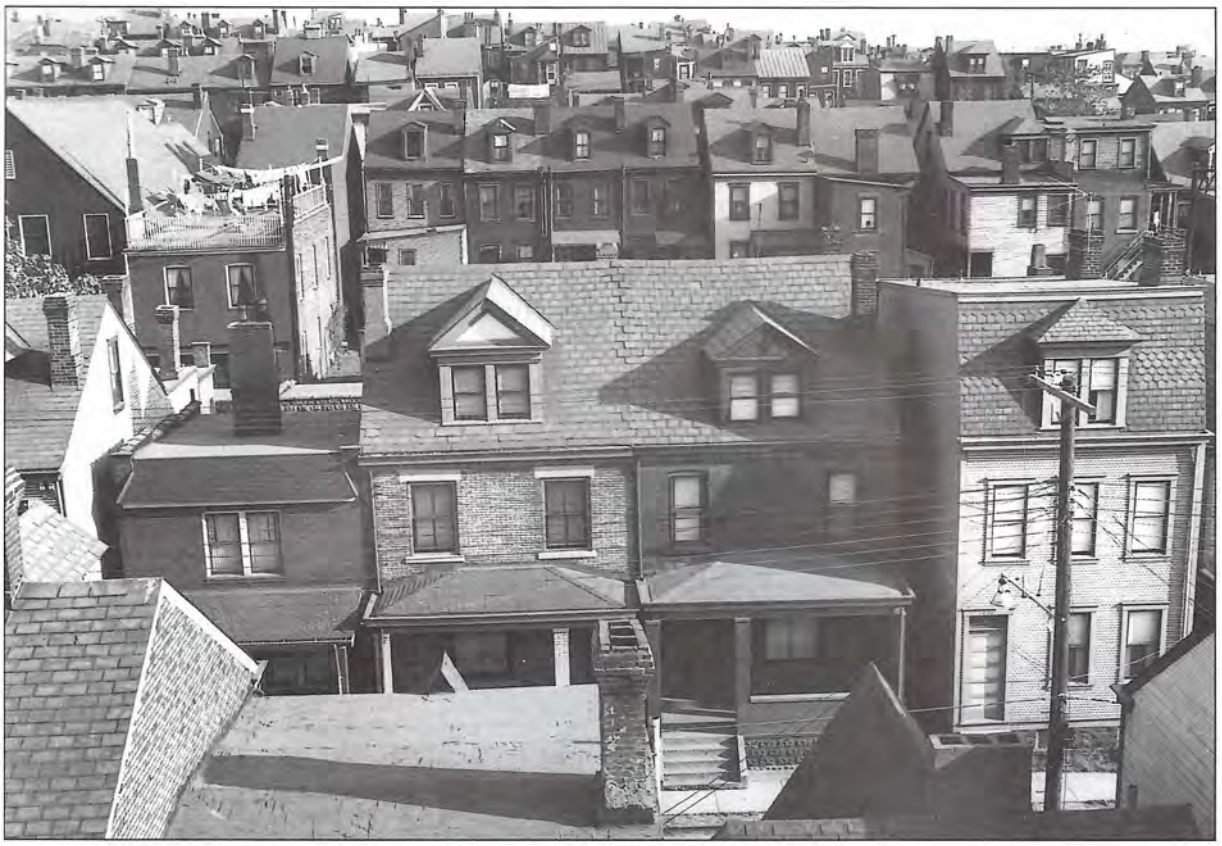


Figure 14.10
Pittsburgh, 1950. By the middle of the 20th century, the built environments of the older neighborhoods displayed generations of incremental adaptations and modifications.

their own neighborhoods, where kinship, social networks, and community organization mitigated the tribulations of foreign identity and retail demands created entrepreneurial opportunities. In the second half of the 19th century, the large labor forces of factories and increasing ethnic division of labor fostered the concentration of specific nationality groups in industrial neighborhoods about the city. Simultaneously, the accelerated suburbanization of middle-income residents freed up a substantial housing stock in older central neighborhoods, where immigrants fashioned self-conscious communities.[22]

Overcrowded, poor, and transient, these immigrant neighborhoods exhibited the exotic sights, sounds, and smells of an older world, alien quarters in the midst of the New World. Immigrant churches, parochial schools, fraternal societies, food stores, and personal services catered to their countrymen (Fig. 14.11). Housing styles were not ethnic. Rather, families crowded into tenement houses built in a regional vernacular architecture—three-decker, wood-frame structures in New England; multistory brownstone buildings in New York; endless brick

Figure 14.11
Philadelphia, around 1910. This street scene in Little Italy undoubtedly appeared exotic to middle-class American residents of the city.

row-houses of the mid-Atlantic cities; wooden cottages and bungalows of the Middle West; or narrow, one-story shotgun houses of the Gulf South. Signage and ethnic decorations on commercial and community buildings, as well as the street life itself, distinguished the national origins of residents. Employment linkages to nearby industries, economic hardship, and self-conscious ethnic identity more than outright discrimination generated these separate neighborhoods. Nevertheless, even at their peak, such districts usually harbored members and institutions of other nationalities. Often, a majority of an immigrant group's members did not reside in the neighborhood of their compatriots, since many worked and lived throughout the urban region.[23]

By World War I, most cities housed several immigrant groups distinguished by their varying longevity in the region, size, economic achievement, and self-conscious ethnicity. With the 1920s restriction on additional immigration, assimilation and new generations progressively diminished traditional nationality loyalties. The divergent paths of economic mobility and assimilation to American life taken by immigrant children further differentiated the social landscape.[24] Long-term employment stability underlay the persistence of some traditional neighborhoods well past World War II, when successful union contracts finally propelled many workers into middle-class consumption, leisure behavior, and ultimately blue-collar suburbs. In contrast, the precocious economic successes of other groups rapidly dismantled the original immigrant community through either assimilation with the American mainstream or movement into more prosperous neighborhoods, where

residents retained some ethnic and religious affiliations but no longer identified closely with immigrant origins. This rise, decline, disappearance, and reformulation of immigrant and ethnic neighborhoods produced a dynamic, patterned social geography in which neighborhood composition could change within two generations or persist for several.[25]

Even as rising incomes and changing social identities reshaped the residential landscape in the 20th century, the influx of black migrants markedly increased social tensions and separation. Southern blacks fled rural poverty and racial discrimination for perceived economic and civil freedoms of northern and Pacific coastal cities.[26] While the benefits of migration were often tangible, most blacks were relegated to the lowest paying and least secure jobs and still faced discrimination in the city's workplaces, union halls, housing markets, and other institutions. The early migrants before World War I established small communities alongside central immigrant neighborhoods, but the thousands who arrived in the 1920s encountered stiffening resistance from white neighbors. Segregation became institutionalized in governmental policies, real-estate practices, and financial lending programs. Hemmed in by discriminatory barriers, blacks piled up in racial ghettoes and slowly extended residential beachheads into older, declining immigrant quarters. These racial neighborhoods exhibited a lively community life. Storefront churches, beauty parlors, barber shops, nightclubs, and small restaurants animated the business streets, while churches of mainstream denominations, substantial service businesses, newspapers, schools, and social institutions revealed a community separate from the external white city. Built on weak economic foundations and overwhelmed by new migrants, however, ghettoes developed the pathologies of impoverished slums. Extreme deprivation during the Depression and unrealized expectations for World War II's economic opportunities erupted in sporadic racial violence, but widespread combustion awaited postwar developments.[27]

Migration from the South resumed after the war and could not be contained in the original ghettoes. Suburbanization, especially white flight, opened more inner-city housing to blacks, and soon additional neighborhoods were attached to the ghetto. The advancing black population inflamed white working-class residents, who were unwilling or economically unable to flee to the suburbs. White resistance, urban renewal, and entrenched discrimination confined expansion of black residences to inner-city areas.[28] This growing minority population changed the demography and power structure of the older city, polarizing it from the white middle-class suburbs that recoiled from the city's problems. Grinding poverty in the ghettoes, where dilapidated housing and declining job prospects beleaguered the poor and frustrated the aspirations of the black middle class who could not escape racial stigmatism, exploded under the leadership of civil rights activists in the

1960s. The violence and property destruction starkly demonstrated that black migrants had not been following economic, social, and spatial trajectories similar to those of European immigrants.[29] This landscape of racial polarization contrasted sharply with the dynamic mosaic that had attended European adaptation and assimilation. Boarded storefronts, vacant lots, abandoned buildings, run-down tenements, littered roadways, and street corners of idle men marked the most desperate districts (Fig. 14.12). It would take decades for a rising black middle class to reclaim some of these areas (Fig. 14.13).

While descendants of European immigrants inhabited a patchwork of working- and middle-class communities and blacks struggled for survival and justice, in the 1970s Hispanic peoples from Mexico, the Caribbean, and Central America poured into inner-city neighborhoods as the latest urban migrants. Working at low-paying service and manufacturing jobs, establishing their own institutions, creating barrios alive with Latin sounds, smells, and outdoor artwork, and participating in local politics, these Hispanic newcomers scrambled the economic and racial polarity that had emerged after World War II. Asian immigrants also carved out niches in several cities, adding an exotic, often economically successful, and sometimes contentious element to the unfolding social geography. While vestiges of European ethnic institutions remained in many older neighborhoods, especially in the northern manufacturing cities, Hispanic, Asian, and black groups with their distinctive economic roles, politics, and community institutions reorganized the traditional variegated landscape of the inner city and colonized many older suburban communities once the bastion of native-born white residents.

Along with long-term economic growth, the enduring faith in individual liberty and a tenuous tolerance of diversity enabled American cities to withstand and absorb the periodic influx of immigrants. While advantages of elite lineage and nagging cultural discrimination persisted, this creed, however grudgingly, recognized meritorious performance and rising wealth as worthy attributes. The corresponding emphasis on materialism became one means of displaying success and extended middle-class status to a broad spectrum of society (Fig. 14.14).

Blessed with immense land resources, Americans believed that property ownership both imbued owners with status and security and formed democracy's foundation. Although renting shelter was a longstanding practice, home ownership became not only an obtainable goal, but also increasingly widespread among the populace. In the earliest cities, small lots, modest and little-differentiated domestic architecture, and socially mixed neighborhoods presented an egalitarian appearance that masked social inequalities, except for those of the wealthy or severely destitute.[30] By the mid-19th century, the deteriorating environment, worsening congestion, and increasing foreign immigration rekindled an anti-urban bias and shaped an emerging

Figure 14.12
Surviving buildings on East 46th Street in Chicago, 1988. This gaptooth cityscape hints at the process of past neighborhood disinvestment, as torchings, and demolitions for health and safety reasons, depleted the housing stock of the worst affected districts.

Figure 14.13
New construction on East 46th Street, Chicago, 2008. Black gentrification has hit this block with a vengeance, transforming the streetscape. New middle-class townhouses and condos occupy the former vacant lots and jostle with the few remaining original structures.

Figure 14.14 Single-family homes on Eastern Canal in Venice, California. An early attraction for artists and Bohemian aspirants, the district has acquired many well-to-do residents in recent decades, while retaining a diverse social atmosphere.

domestic ideology among middle-class Americans, which stressed the family's moral role in nurturing order amidst urban chaos. A separate dwelling on a landscaped lot set apart from the city's clamor solved the agrarian ideal and the family's moral imperative. Families with the time and income to afford commuting to work undertook the suburban trek that emphasized a private familial existence.[31] While architectural individuality, usually expressed in fashionable national styles, and bucolic community planning appropriately accompanied this process in the late 19th century, mass transportation and new construction techniques after 1900 increasingly made suburban developments accessible to middle-class families, paradoxically homogenizing the appearance of these new residential areas.[32]

When the city's well-heeled residents relocated in newer suburbs, their old elegant houses, indeed their former neighborhoods, often filtered down to less prosperous buyers and eventually faded into the general landscape. But some wealthy neighborhoods like Philadelphia's Society Hill or Baltimore's Bolton Hill either maintained their social identity, aging with a genteel patina amidst inner-city decay, or avoided

complete decomposition long enough for the architectural rescue of historic preservation and gentrification (Fig. 14.15).

The autonomy and privacy of the automobile embodied the suburban expression of individual freedom and economic mobility. Suburbanites incorporated the automobile into their lifestyle before World War II.[33] Increases in blue-collar incomes and leisure time, inexpensive automobiles, and governmentally subsidized highways and home financing after the war brought suburban living in reach of working-class families. Residential developments with minimal visual variety sprawled monotonously across gigantic swaths of land, broken only by highways, ribbon shopping centers, and factories until the major suburban commercial developments of the 1960s. Although the low density and institutional sterility which distinguished these neighborhoods from the city invited social criticism, the middle-class inhabitants evolved lifestyles that paradoxically combined voluntary participation in leisure and special interest organizations with an obsession for familial privacy (Fig. 14.16). Freedom from close community supervision blended with conservative concerns for neighborhood norms to yield only superficial demarcations of individuality in house color, ornamentation, fencing,

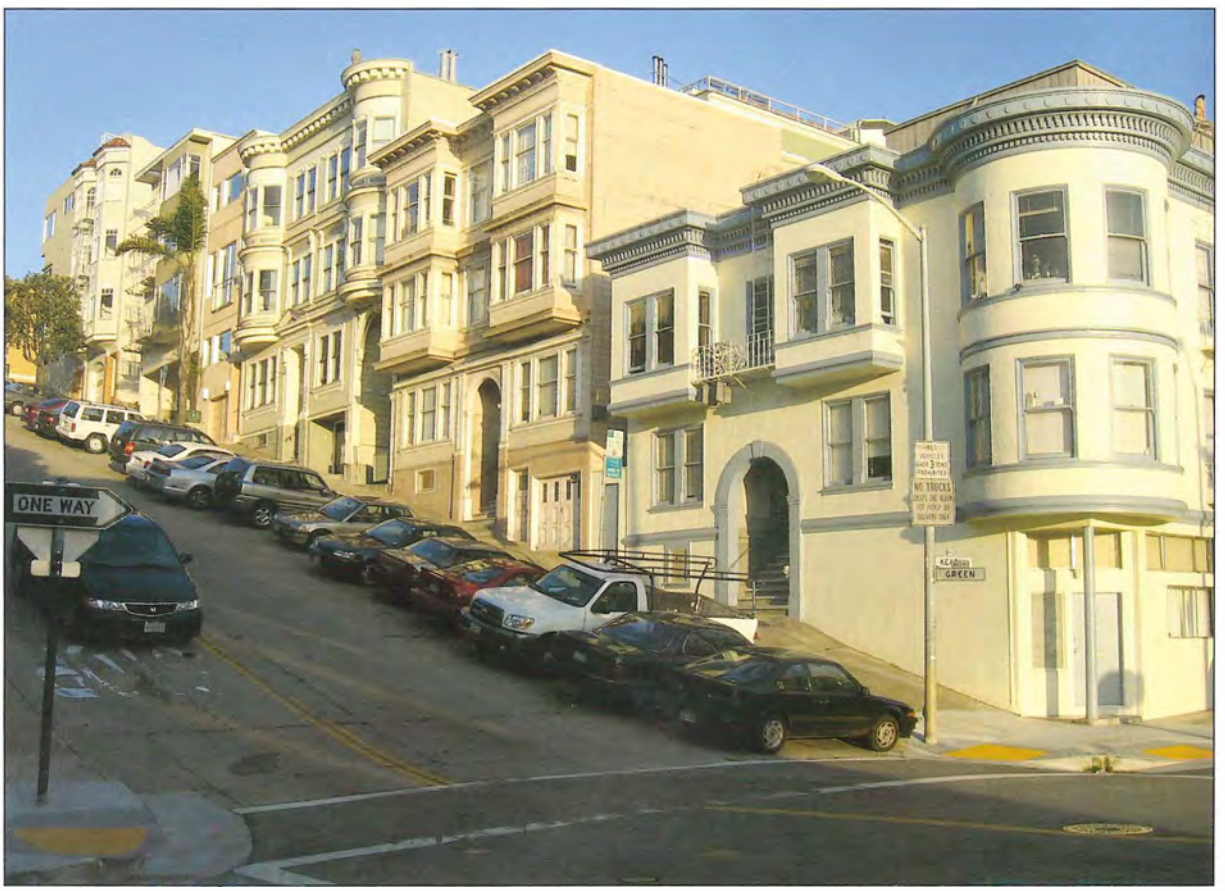


Figure 14.15
Old apartment houses on Telegraph Hill, San Francisco. Most structures have survived outwardly intact from the neighborhood's rebirth following the city's 1906 fire. Preservation has served this block well, except for three buildings at the top (at left), displaying modern architectural interventions.

Figure 14.16
A mass-produced suburb in Pennsylvania, around 1960. In this inexpensive residential development note the uniformity of bungalow design, lack of garages, and undisguised utility provision. The spare quality of new suburban subdivisions may soften after a generation of plant and tree growth.

or landscaping on the otherwise mass-produced landscape.[34]

The suburban landscape reflected the prevalence of automobiles in its organization, architecture, and land use. Expansive and horizontal suburbs shunned a pedestrian scale for complete dependence on automobile movement. Residential blocks no longer had sidewalks and service alleys, so that garages and paved driveways obscured house facades. Isolated stores and shopping centers were surrounded by massive parking lots or strung out for miles along highways. There were dozens of automobile-oriented businesses and drive-in services from restaurants to banking. Adolescents designated streets for "cruising" in their cars as a form of entertainment. Regional shopping malls offered entertainment programs but provided limited community-wide integration. Only public schools, churches, sports organizations, and local crises, such as the prospect of an unwanted development or resident, created community involvement beyond home and personal networks. Sprawling one after another, the suburbs came to form a bewildering array of communities, maintaining identification with the metropolitan region through employment linkages, the media, and professional sports teams.[35] In the larger metropolises, the original cities' hold over suburban attachments diminished with each generation.

Governance and the landscape

This America, in which the emphasis on individualism often became excessive materialism and tolerance crumbled under the weight of nativism and racism, included nevertheless an abiding belief in basic rights for all its citizens. The plight of the disadvantaged in the competitive, capitalist economy and often intolerant social milieu periodically stimulated reform movements for social justice. Aggrieved groups and organizations acting on behalf of the underprivileged

used the legal system and political power available in a representative democracy, and organized protest to redress social inequities. In the years before massive industrialization and immigration transformed the cities, municipal governments tended to support business concerns for economic growth, civil order, and infrastructure, leaving social issues to the individuals involved or to private organizations.[36] The city's increased social and physical complexity after the mid-19th century forced local governments to become more involved in social welfare and allowed established immigrant groups to compete for political power. But the more inclusive political spectrum did not benefit the city's newcomers and poor.

In a spurt of reform at the turn of the 20th century, private organizations worked to improve housing, environmental quality, and health and social services through both the prodding of local government and private sector initiatives. Extensive parks, playgrounds, sanitation and water systems, housing codes, settlement houses in immigrant neighborhoods, and other philanthropically bestowed cultural institutions ameliorated the harsh inner-city world of the industrial metropolis.[37] Inspired by the resounding success of New York's Central Park, opened in 1859, civic leaders of many cities embraced the Olmstedian philosophy that parks promoted public health, democratic values, and social harmony; and accordingly they sought to inject green space into the urban landscape. Landscape architects, most notably Frederick Law Olmsted himself, designed romantic and pastoral parks for cities across America, which despite periodic alterations have remained welcome interruptions in the densely built urban fabric. A few cities like Boston, Buffalo, Chicago, or San Francisco ambitiously constructed a network of parks linked, often loosely, by parkways and boulevards.[38]

Unfortunately, the reluctance to tamper with the private enterprise system or preempt private property prerogatives limited reform results. Despite the creation of imaginative master plans, new professional city planners minimally influenced private development in the early 20th century and performed meek advisory roles for municipal government, which focused on technical issues like traffic flow, zoning, and regulating subdivision plans. Instead, civic leaders and architects orchestrated the display of the industrial city's rising status around City Beautiful ideas of landscaped boulevards and planned civic centers composed of new public buildings, nonprofit institutions, and official monuments.[39]

The devastating Depression of the 1930s finally forced governments at all levels to become more active in urban issues. In a partnership with city authorities, the federal government financed new highways, bridges, airports, and other municipal services, underwrote slum clearance, and subsidized private redevelopment projects.[40] Low-income public housing especially signaled the departure from strictly private sector proclivities. Massive housing projects, promising decent housing for all Americans, replaced decrepit tenements with spare but modern

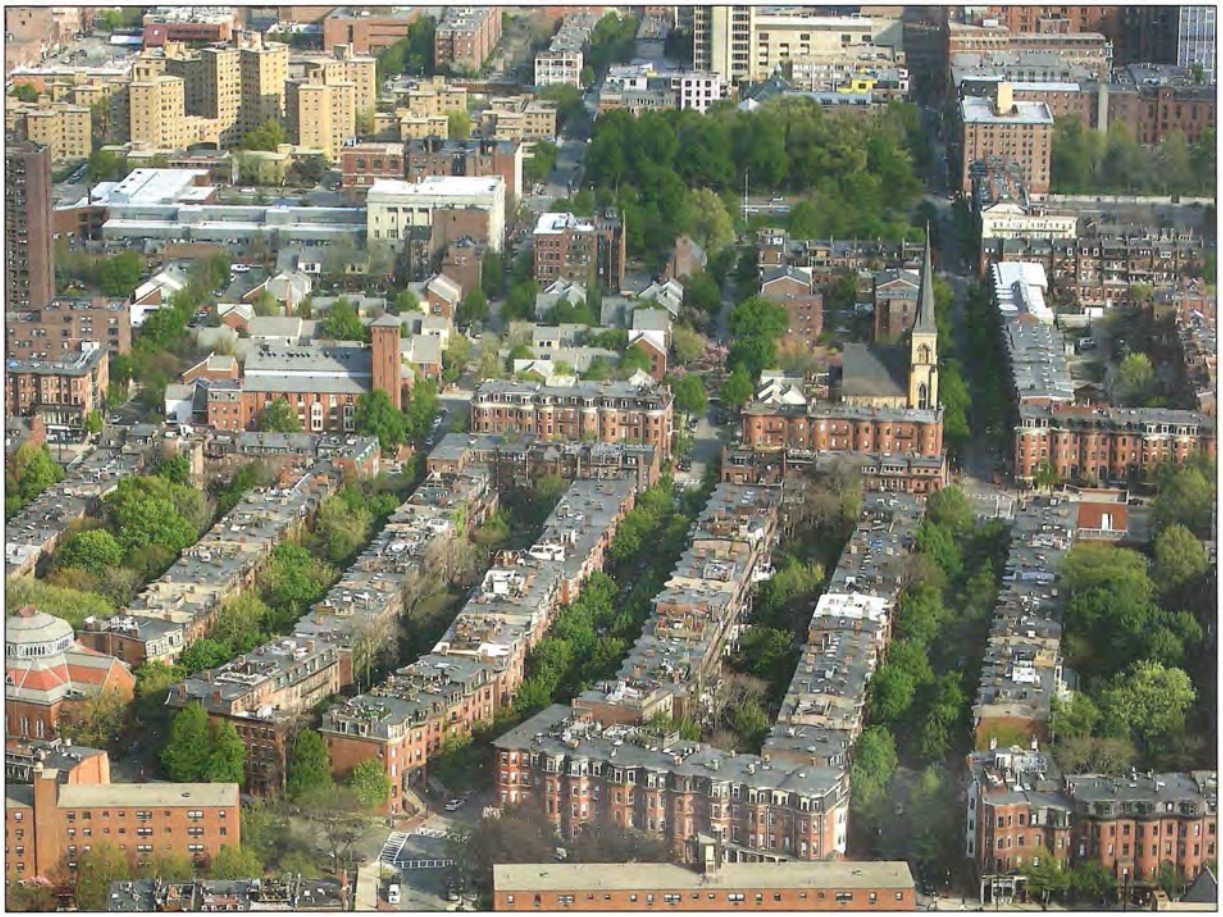


Figure 14.17
Boston's South End, seen from the Prudential Tower to the northwest. The 19th-century bow-front row-houses contrast with the boxy 20th-century high-rise structures of public housing nearby. The Cathedral Development, bordering Washington Street (upper left), was built in 1950.

low- and high-rise buildings arranged in compounds of several blocks. By the 1960s, the large number of these modernist housing projects dramatically altered the inner-city landscape, contrasting in scale, texture, and spatial arrangement with the previous century's extant neighborhoods (Fig. 14.17).[41] These housing policies joined with other social programs to redistribute some income to the urban poor, but did little to release them from the separate world of the inner city.

The new directions in social policy initially aggravated the racial polarization between city and suburb. They provided meager handouts, instead of meaningful economic opportunities, that confined poor blacks to segregated public housing in already segregated areas, while whites either benefited from governmental policies that promoted suburbanization or resented governmental largesse targeted for inner-city blacks. Civil rights pressure for open housing and fair employment

practices, along with the rioting of the 1960s, finally riveted white society's attention and obtained legislation for a more integrated society. While race continued to separate neighborhoods and schools within the urban region after the 1960s, economic abilities came to provide a more important distinction in the social landscape. With legal support, more members of America's distinctive racial groups enjoyed economic success and moved beyond their former neighborhoods into integrated areas, leaving behind a tragically isolated and deprived racial underclass in central ghettoes.[42]

National concerns for air and water quality after World War II also included cities where automobile pollution, industrial dumping, waste production, and sewage disposal presented awful problems. Protest, regulatory legislation, and finally recognition of negative economic implications slowly led to the improvement of urban air, water, and land usage.[43] By the 1970s, improving environmental conditions and governmental subsidies stimulated development of amenities and residences on older blighted, waterfront properties, which espoused outdoor lifestyles for middle-class consumers who would replace former businesses and poor residents. For middle-class residents, the city as a place to live emerged alongside the traditional perspective of the city as a place to work.[44]

The American way

Ever since Coca-Cola signs began appearing in the farthest corners of the world, commentators have bemoaned the Americanization of the world's landscape. American cities originated from European roots and measured their progress for a century or two against European standards. Nevertheless, they eventually developed a self-conscious identity and associated form, which reflected America's particular ideology, economy, and social composition (Fig. 14.18).[45] By the mid-20th century the almost single-minded devotion to economic pursuits had produced the dramatic profile of downtown skyscrapers that overshadowed weakly defined cultural and administrative spaces, the spontaneous patchwork of monotonous grid plans, a paucity of public space in central areas, and the fascination with newness and large size. Boosters trumpeted growth, progress, modernism, and size as hallmarks of greatness. Growth occurred largely within the limitations of investment prudence and without much in the way of governmental oversight. The freedom vested in private enterprise and property ownership created landscapes that both displayed a surprising homogeneity and were filled with contradictory, sometimes conflicting, land uses, frequent change, and uneven sprawl into the countryside. Embracing individual privacy and eschewing high urban densities, middle-income residents chose home ownership, maximum personal space, and landscaped lots

Figure 14.18
The sprawling pattern of modern American development, seen here in the Rio Rancho district of metropolitan Albuquerque, New Mexico. From the Chamisa Hills Country Club (bottom left), housing subdivisions, built up or merely demarcated with putative streets, stretch beyond visibility toward the western horizon.

in the suburbs. Immigrants and lower-income residents crowded into tenement quarters, separate from the middle-class mainstream, even though they, too, were free in theory to make their own choices.

The repercussions of privatized growth and excessive materialism, as seen in deleterious environments, suffocating traffic congestion, unevenly distributed infrastructural services, visual chaos, and unattended social needs, became the responsibilities of governmental officials, planners, reformers, and business leaders, who feared a declining environment for investment, a negative city image, or at worst social upheaval. In early America, civic leaders had attacked issues that affected the city's economic growth, presented an immediate crisis, or were beyond the narrow purview of private charity. However, the problems resulting from rapid immigration and industrialization generated a debate that progressively redefined the public interest and responsibilities of local government. The ability in a political democracy of new economic, ethnic, and special interest groups to enter this debate broadened the scope of municipal concerns and actions. The more active role of government since the early 20th century softened the harsh edges of America's economic and social privatism.

Increased governmental regulation, coordination, and initiative and the private sector's public service programs carefully work within a political and ideological framework of partnership that preserves private enterprise's independence and protects the rights of individuals,

property owners, and exotic social groups, albeit within circumscribed limits of freedom prescribed by the expanded conception of public interest. The contradictions in American society generate vacillation over the merits of public and private initiatives, responsibilities for fostering economic growth, and means for providing municipal and social services. Nevertheless, the abiding faith in individualism, private enterprise, and equal opportunity maintains an American distinctiveness amidst the internationalization of many urban technologies, policies, and landscapes.

Chapter fifteen
Asserting central authority

WILBUR ZELINSKY

IT WOULD be shortsighted indeed to try explaining the humanized landscapes of our 21st-century world without reckoning with the large, ever-expanding role of central authority: the workings of our more-or-less sovereign nation-states and their varied agents and deputies. Nowhere is this more apt than in the United States. Perhaps nowhere else is there stronger visible evidence of the power and universality of the governmental presence. Yet, surprisingly, to date only two scholars[1] have seriously considered this focus on the visible scene anywhere on this earth.

Such a peculiarly vivid inscription of the federal factor—and, to a lesser but still notable degree, of local authority—upon the form and content of domesticated America is the outcome of special historical circumstances. Indeed, the visible encoding within our public environment of the political powers that be is highly time-specific and reflects the evolving character of the nation, or rather state, and, even more broadly, the imperatives of a modernized mass society.

To begin at the beginning, the transplantation of European (cum African) individuals and communities into eastern North America in the 17th and 18th centuries was a relatively leisurely process by latter-day standards, and essentially a replication of Old World models. As such, despite some abortive experiments in such places as earliest Pennsylvania or Georgia, there was little real control, no effective organizing center staffed by monarchs, proprietors, or local administrators to shape the geometry or appearance of the new settlements outside a very few urban places. Consequently, local peculiarity was the rule in the landscapes of pre-Revolutionary European America, and remains so to a noticeable degree within such tracts to this day.

But the large-scale shifting of persons and cultures across the ocean did meet up with a new situation quite at variance with European experience, namely the almost total obliteration of antecedent societies and their landscapes. Thus, colonial Americans were able to refashion essentially wild, depopulated spaces into places of their own devising with no reference to any local past. Such a license for environmental

manipulation, for drawing new panoramas on a blank canvas, was unthinkable in Europe with its deeply layered, historically fused, diachronic landscapes. But the implications of such liberation from the detritus of previous generations did not become truly clear until the 19th and, especially, the 20th centuries. The exceptional circumstances of the American story—that is, the creation of a set of novel landscapes by a society, initially localistic and libertarian, that has expanded at an explosive rate into every measurable dimension but eventually came under the domination of a centrally managed corporate structure of government and business—provide the wherewithal for a nearly ideal case study of how such authority inserts itself into the tangible substance of our collective existence.

The early federal presence

For most of the first century of national independence, the federal establishment was remarkably small in size, severely limited in scope of activity, and generally a passive agent performing only those minimal functions needed to preserve economic and political sovereignty plus a few essential services—to handle only those affairs beyond the competence of the locality. Thus in 1816 the aggregate civilian workforce employed by the United States government totaled only 4,857 persons,[2] while paid state and local government workers cannot have been much more numerous. Federal employment did increase to 36,672 by 1891; but, subsequently, governmental personnel have soared to stratospheric levels. As of 2004, some 20,789,000 persons were on various governmental payrolls (more than five times the total national population in 1790), 2,740,000 of them at the federal level, thus making the U.S. government by far the country's—and probably the entire capitalist world's—largest employer.

During the antebellum era, ordinary citizens would have detected few if any signals in their workaday surroundings that any sort of national government was active. And, although there would have been greater awareness of state and local government policies and activities, their impact on the visible scene must have been too slight to be obtrusive. True enough, a certain number of forts and other military installations did exist, manned by a tiny standing army, and the young U.S. Navy was a tangible presence in a handful of places. Customhouses were mandatory and relatively conspicuous in the major seaports (Fig. 15.1), while the central regime was obliged to build and maintain lighthouses at crucial points along the Atlantic coast, an obligation local jurisdictions were unwilling or unable to undertake.[3]

The most obvious ways in which early Congresses and the executive branch molded the physical structure of the young Republic are more readily appreciated by scanning maps and aerial photography than by

Figure 15.1
The U.S. Customs House in Portland, Maine. Built in 1866, it is a lineal descendant of earlier waterfront structures serving this purpose. Every major Atlantic port had a customs house, and by the mid-19th century most were built of granite quarried at Quincy, Massachusetts, shipped by sea, producing a uniformity of look throughout the eastern United States for this ancient federal institution.

reconnaissance on the ground. First, there are the international boundaries for the coterminous United States created by treaty and negotiation from 1783 to 1853. For many years, however, their reality was more cartographic than terrestrial. Only belatedly did Washington's minions survey precise locations, build boundary markers, create border stations for managing customs and immigration, and erect barriers along sections of the border with Mexico. Incidentally, these international boundaries may very well be the first anywhere to observe geodetic formulae. Such straight Euclidean slashes across the map were later widely adopted in Africa, certain portions of Central America, and, in a manner of speaking, Antarctica.

In the process of creating 34 new states and annexing Texas during the period from 1791 to 1912, Congress delineated the interstate boundaries that, in contrast to most intercolonial delimitations, invariably included extended straight lines. In fact, in the extreme cases of Colorado and Wyoming we encounter pure rectangular lumps of territory, while Utah's shape is only slightly less simplistic. This fundamental framework, that is, the familiar profiles of the states, is thus mostly the enduring handiwork of central authority, and the direct and indirect landscape and other geographical implications of such a bald application of geometry are far from trivial (Fig. 15.2). Such a mechanistic carving up of the land would seem to have been prefigured by the provision in the Constitution for an (originally) diamond-shaped District of Columbia contained within four straight 10-mile sides.

Much more consequential for the life-patterns of that half or so of the American population inhabiting those places formerly part of the public domain is the strategy pursued by federal agencies in disposing of huge

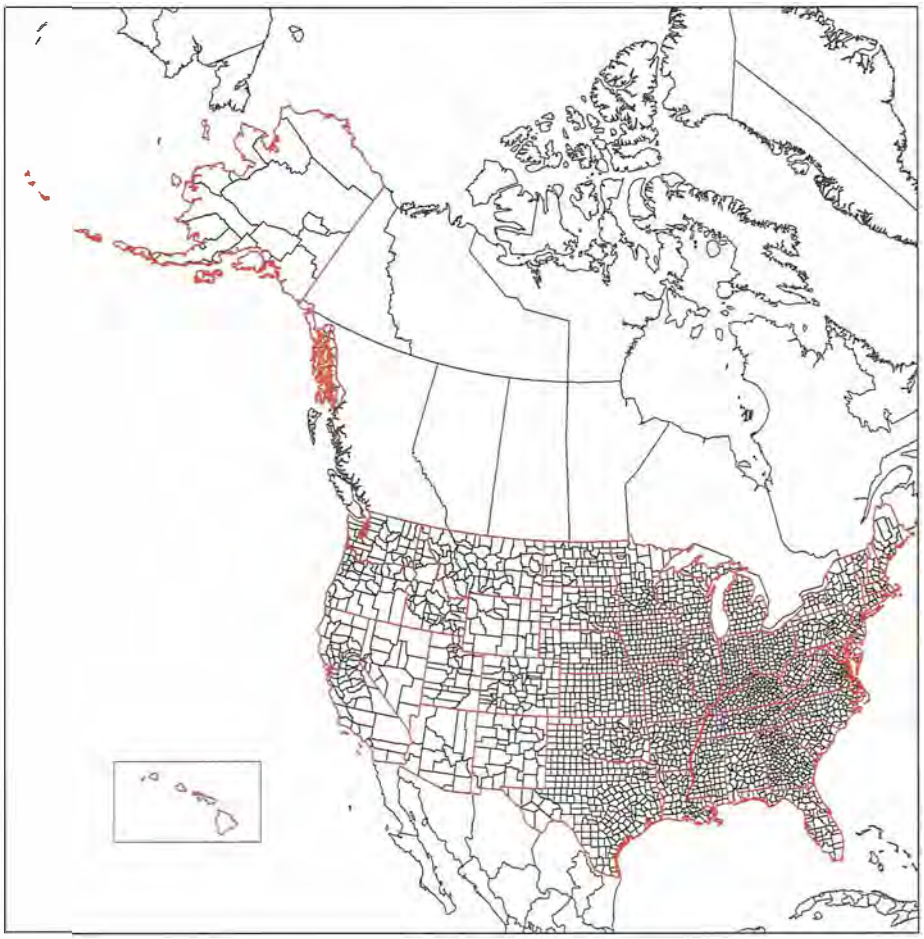


Figure 15.2
State and county boundaries of the United States.

tracts of real estate. Acquired by purchase or cession from foreign countries and the original colonies, the lands once held by the central regime amounted to something close to three-quarters of the expanse of the coterminous United States. The American government proved to be a reluctant landlord, at least initially, and began almost immediately, in the late 1780s, to sell or donate (chiefly to military veterans and canal and railroad companies) as many of its holdings as it could as quickly and painlessly as possible (Fig. 15.3). And that is precisely what happened beyond the original 13 states and Texas, except for those tracts granted under antecedent French and Spanish titles and the various Indian and military reservations, national parks and forests, and various other areas not deemed suitable for traditional types of settlement. Such a program dovetailed neatly with the prevailing economic ethos, one in which individual and corporate enterprise flourished freely with minimal intervention by governmental bureaucracies.

The mode of land survey enacted by Congress—the carving up of the public domain into 6-by-6-mile square townships aligned as strictly as

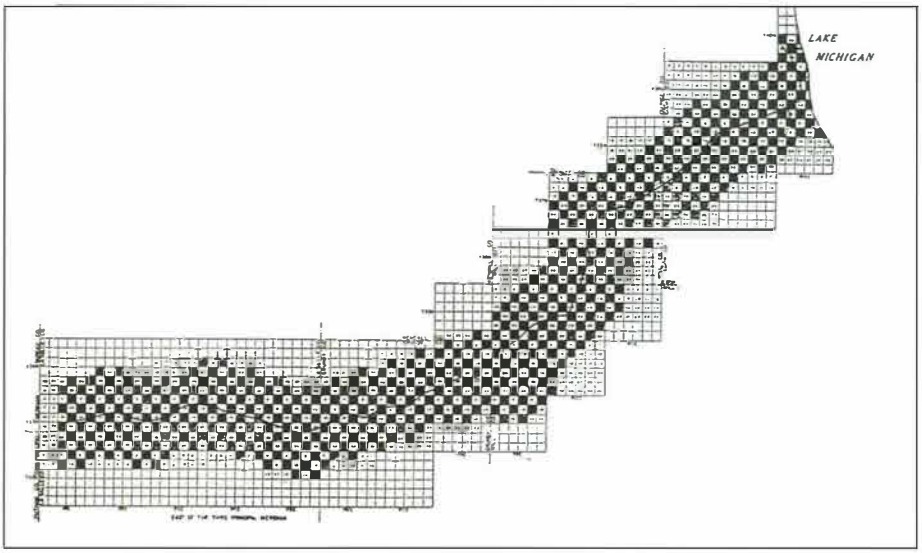


Figure 15.3
The 1827 federal canal land grant to help construct the Illinois & Michigan Canal. The first U.S. commitment of federal land for this purpose, it set the precedent for the numerous railroad land grants that occurred after 1850. The Illinois state canal commissioners selected the black (odd-numbered) sections as defining the 50 percent formula for the grant corridor; the white sections remained for federal sale.

possible with compass directions and subdivided into 36 square-mile sections—was the ultimate in geometric simplicity. Initiated in northeastern Ohio in 1785, the system pushed onward quickly, barely keeping pace with eager settlers and speculators. It immensely facilitated legal and commercial transactions involving the sale or transfer of land. And, more to our immediate purpose, the resulting grid has been stitched indelibly into the fabric of the greater part of the American land surface. As Hildegard Binder Johnson has so admirably demonstrated, the social, economic, and other implications, both positive and negative, of this pervasive cadastre have been varied, complex, and substantial.[4] In landscape terms it has produced a repetitive checkerboard lattice of roads following section and half-section lines, one that is paralleled by the boundaries of fields, pastures, and woodlots in the lands within. In countless instances, it has predetermined the placement of county boundaries and the configuration of political townships (Fig. 15.2). Many a village and city, large or small, has adopted the layout of its streets from what began as a design for rural settlement.

Visually insistent though it may be, the rectangular survey system is a residual legacy that does not genuinely validate the ideological or managerial brawn of the state. Instead it reminds us that during the first half of its history the federal establishment played a basically passive part in contriving the material framework of American life, that it relegated to the private sector most decisions as to what the country was to become and how it would look. If much of the public domain still remains in federal hands today, it has only been in recent decades, or within the past 100 years at most, that that fact has become noticeable to the casual observer.

Despite being weakly manned and under-funded, and enervated by political dispute, the federal establishment did gradually gather

symbolic and material weight in the years leading up to the Lincoln administration. Perhaps the most persuasive signs of growing strength were the funding and construction of the National Road (Fig. 15.4), and the building of federal courthouses in various cities, sometimes as much status symbols as to meet genuine administrative needs.[5]

> Towns everywhere clamored for federally funded buildings as an indication of stature. And Congressmen obligingly served them up. For example, Memphis received a courthouse even though no federal courts were held there . . . Indeed to people in towns such as Dubuque, Iowa and Astoria, Oregon, federal buildings represented the latest in architectural style and technology and, symbolically, membership in the Union.[6]

The crucial juncture, the watershed event, in the maturation of the American nation-state, ultimately in landscape terms as in virtually every other department of our collective existence, was without question the Civil War. In the most decisive and bloodiest of terms, it settled once and for all the dispute as to whether the central state and its allied system of mercantile and budding industrial capitalism, as opposed to sectional, local, or agrarian interests and values, were to dominate the polity. The landscape implications began to be discernible shortly thereafter.

Figure 15.4 Pennsylvania had six tollhouses on its portion of the National Road, intended to stretch from Baltimore to Jefferson City, Missouri, of which the Searight Toll House (built 1835) is one of two remaining today. Northwest of Uniontown, this structure took in tolls until 1905.

Asserting central authority

Federal landscape influence after the Civil War

The account that follows fits into a much broader schema developed in detail elsewhere.[7] In brief, we can trace the gradual evolution of the American community from its pristine Revolutionary and immediate post-Revolutionary character as a nation, or ethnie, of a strikingly novel ideological bent—a situation in which the superstructure of a state was barely tolerated as a necessary nuisance—into a full-fledged, veritable textbook example of the nation-state, a condition in which the state is supreme in material and emotional fact and has co-opted and absorbed into itself whatever lingers on of the former people-based nationalism. The case is most lucidly documented by chronicling the shifts in symbols that mediate relationships between individuals and the larger social–psychological entities which they inhabit. But one can also read a parallel progression in many corners of the visible landscape.

The decisive landscape innovation was that the federal establishment assumed an increasingly active role from the 1870s onward. Even when purposive behavior has not implanted immediate stigmata upon our surroundings, the indirect by-products of governmental programs and decisions have subtly, often profoundly, modified the look of the land. If a single date is needed to mark the transition, then 1872 may qualify,

Figure 15.5
The pseudo-rustic style of Yellowstone Park's Old Faithful Inn, shown in this postcard view, has become almost mandatory for buildings in other national parks and many state parks as well.

for that is when Congress created Yellowstone Park (Fig. 15.5).[8] It was not only the first of that impressive constellation of national parks and, later, national monuments and historic sites to be administered by the National Park Service (and to enjoy immense patronage), it was the first in the world, setting a precedent imitated by other countries. These precious asylums, officially wild and geologically, biologically, or historically memorable places, do vary greatly in size, shape, and appearance, but there are certain family resemblances, visual clues that set them apart from ordinary terrain. The reception or visitor centers, the mode of fencing, signage at strategic points, the occasional museum, the general style of landscaping, minor physical appointments, and other small details speak to us of a wise and caring government.

Since their relatively low-key origins during the colonial and early republican periods, the number and acreage of military sites has expanded enormously, and especially so during the past several decades, even though statistics on such land use are not readily available. A variety of facilities falls under this heading: camps for the armed services (often associated with extensive tracts for training maneuvers);[9] munition dumps; the aviation and port facilities of the various services; the concrete silos in which ICBMs are nested; firing ranges and other testing facilities; Navy docks, repair yards, and related structures; military hospitals; and various fortifications (many now obsolete or turned into museums), among other items (Fig. 15.6). To such a roster one might legitimately add the places for manufacturing and testing nuclear weapons in the states of Washington and Nevada, along with the complex at Oak Ridge, Tennessee, even though they happen to be managed by the Department of Energy. Similarly, we can include

Figure 15.6
The core manufacturing buildings of the Rock Island Arsenal, Illinois. Built during the 1870s and 1880s of Joliet limestone shipped via the I&M Canal, these structures are in use to this day, although the production is restricted to replacement parts for light armaments.

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the often imposing arsenals of the National Guard (nominally under the control of the 50 individual states) or the recruiting offices for the various armed services to be found in so many cities large and small. However diverse their immediate functions, the observer seldom has trouble recognizing the military personality of such places, or distinguishing them from civilian landscapes. In particular, the traditional military barracks resemble no other form of human habitation unless it be the "temporary" dormitories that mushroomed on college campuses immediately after World War II. Equally distinctive in appearance are those large, bland yellow-brick Veterans Administration hospitals that punctuate the skylines of many of our cities and suburbs.

There are other settings, however, in which civilian and military elements meet and merge after a fashion. First there are American Legion and Veterans of Foreign Wars halls in virtually every town of any size. Their architecture is completely unpredictable, but seldom striking; we recognize them by virtue of signs and flags and the military hardware parked on the lawn. In social terms, few elements are more meaningful in the landscapes of our smaller communities. Second, there are community cemeteries where flags and other insignia decorate the graves of veterans and those fallen in battle. But these are much less distinctive places than the national military cemeteries, which, among other things, are peculiarly effective devices for promoting the statist mystique.[10] Prior to the American Civil War, no national government had given much thought to the advantages of organized burial of

Figure 15.7
Shiloh National Cemetery at Shiloh, Tennessee, established in 1866, is one of the early burying grounds for U.S. soldiers. Located in a National Military Park that contains the Shiloh and Corinth battlefields, the cemetery holds 3,584 Union dead, of whom 2,357 are unknown, and two Confederate dead. The entrance gates project patriotic design motifs popular after the Civil War.

battle casualties and veterans; but in 1863 the United States initiated the practice—subsequently adopted by many other countries—with the dedication of the Gettysburg Battlefield.[11] Since then, the number of American examples has multiplied greatly (Fig. 15.7). Many, but far from all, lie at or near the scene of battle; most are located within the homeland, but some are in northern France, the Philippines, and other distant locales. Their landscaping and design, which includes uniform headstones regimented in the neatest of geometric arrays, have been standardized.[12] They have not been ignored by the public; in fact, some, most notably Gettysburg and Arlington, have become major tourist attractions—with some visually questionable consequences.[13]

Much less obvious than militarized sites are the telltale indications of federal stewardship over those huge stretches of countryside, predominantly in the West, controlled by the Forest Service (Department of Agriculture) and the Bureau of Land Management (Department of the Interior), in part through lease arrangement. Nonetheless, the forests and rangelands in question, developed over the past 100 years, can be distinguished from privately held properties by the sensitive viewer.

The emergence of Washington, D.C., as epitome and model

Although it is hard to avoid some visible manifestation of the power or majesty of central authority wherever one may chance to wander within the United States, it is in the nation's capital that we encounter by far the most intense, spectacular, indeed overwhelming expression of statist principles. In fact, the city of Washington was designed with just that purpose in mind.

> In the realm of broad (and somewhat trite) generalities, the most fundamental fact about Washington is that it was created for a definite purpose and has been developed according to a definite plan. Therein lies its unique distinction among American cities and among all existing capitals in the Western world.[14]

Here is still another instance in which Americans can claim priority, for Washington was the first totally synthetic capital city, creating a precedent for Ottawa, Canberra, Brasilia, Islamabad, New Delhi, Ankara, Belmopan (Belize), and other such latter-day efforts.[15] The only possible earlier claimant is St. Petersburg, which was founded in 1701; but that was a multipurpose development, one that did not become the seat of the Russian Empire until 1714.

As is well known, the original physical plan for the District of Columbia embodies the thoughts of Washington, Jefferson, and other luminaries as well as those of L'Enfant (Fig. 15.8).[16] The remarkable street layout and placement of official buildings resulting from their

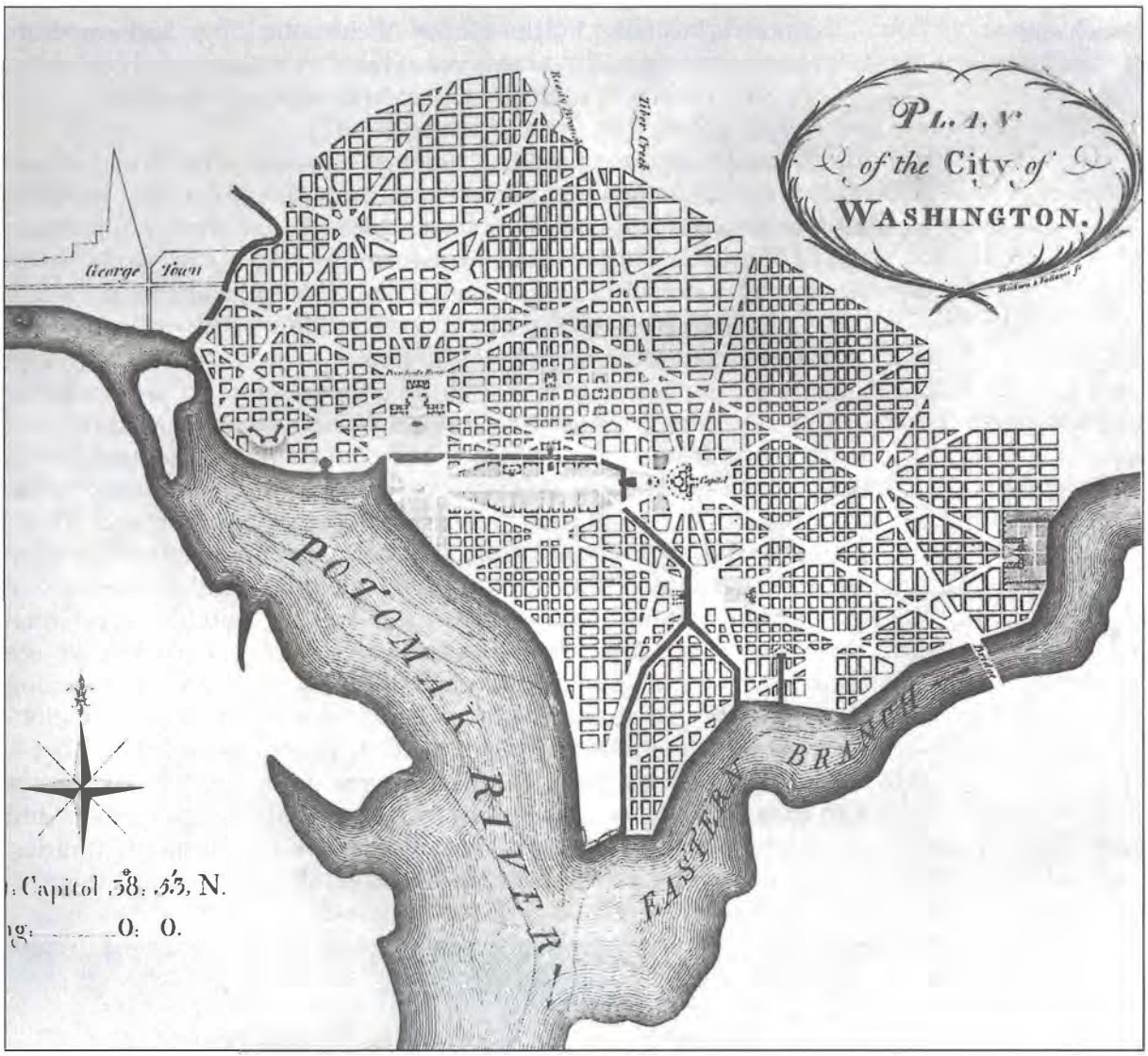

Figure 15.8
The plan of the city of Washington, published in 1792. Basically the conception and handiwork of Major Pierre Charles L'Enfant, this remarkable network of wide diagonal avenues, named after individual states, and traffic circles superimposed on a rectangular lattice of streets remains very much intact in the 21st century. Indeed, the initial scheme has been extended outward to the District's boundary with Maryland.

deliberations were, at least for the early decades of national existence, curiously at odds with the temper of the times and an egalitarian populace.

All the baroque design motifs of European planning developed over the years in the old world suddenly and splendidly found application in this virgin setting for the capital of the newest of the world's nations. It was a supreme irony that the plan forms originally

conceived to magnify the glories of despotic kings and emperors came to be applied as a national symbol of a country whose philosophical basis was so firmly rooted in democratic equality.[17]

And indeed for at least the first half-century this capital city of magnificent intentions was more of an international embarrassment than anything else, quite simply a physical ordeal to domestic and foreign sojourners alike. Sitting as it did on an unpleasantly mucky site, cursed with intolerable weather for more than half the year, and containing too few buildings, and those separated by wide gaps, the unsightly young capital was desperately short of charm or symbolic prowess. Indeed, for many years the unfinished Capitol was the only structure to invite serious attention by reason of bulk or architectural aspiration. But gradually the situation improved. The Civil War began to energize what had been a sleepy quasi-Southern town (a process pretty well consummated by the boom of World War II) with its surge of population, traffic, and official business. The implementation of the recommendations of the Macmillan Commission after the turn of the century, the cumulative efforts of one administration and Congress after another, and the substantial accretion of population and wealth eventually yielded what we see today: the world's capital city *par excellence*, a metropolis of dazzling symbolic expressiveness, a nearly ideal pronouncement of the nation-state creed in material terms. L'Enfant's plan has been fleshed out—triumphantly. We behold a theatrical ensemble of majestic vistas, plazas, and fountains, overpowering phalanxes of embassies, government and national association offices, all those grand shrines, museums, libraries, tombs, the most prestigious of burial places, all portentously designed,

Figure 15.9
Looking northeast toward central Washington, D.C., from an airplane window during the summer of 1980, a view crowded with nationalistic objects. Clearly visible is the Mall, the principal axis of the L'Enfant plan and now a broad esplanade flanked by impressive government office buildings and museums. The National Capitol is situated at the Mall's eastern terminus and faces the Washington Monument, near center.

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sophisticated landscaping that inspires more than a modicum of awe, and brilliant night-time illumination of crucial structures and regiments of statuary (Fig. 15.9).

The impact of this uniquely potent assemblage of physical testimonials to the glory of the American nation-state extends far beyond the bounds of the Washington Metropolitan Area and its local aggregation of workers and residents. The capital is host each year to an enormous horde of tourists (who might realistically be labeled as pilgrims), along with many businessmen, officials, lobbyists, conventioneers, scholars, and others. The statistics on Washington's visitors are unsatisfactory, but it is safe to assume they add up to an annual value of many millions. The fact that just one attraction, the downtown Air and Space Museum, drew 6,012,229 persons in 2007 gives us a clue as to the total volume of the phenomenon.[18]

What draws most of these visitors to the shores of the Potomac is not the standard diversions of other tourist magnets but rather something out of the ordinary: the opportunity to gaze upon the sacred places and objects of Americanism, to join in a kind of nationalistic communion. To be sure, certain icons that emblematize America to the world and quicken the pulse of the patriot are to be found far beyond the District of Colombia—Niagara Falls, Brooklyn Bridge, Valley Forge, the Statue of Liberty, Grand Canyon, Independence Hall, and the Panama Canal among them. Nevertheless, sightseers reveling in such tourist meccas as New York City, San Francisco, or New Orleans can, with a little luck, entirely escape any direct reminders of American nationhood or statehood. Such cultural amnesia is literally impossible in Washington. There is little question about the effectiveness of the Washington, D.C., strategy, even as early as the time of the Civil War. "The Union soldiers themselves were moved by their wartime experience in the city—visited previously only by their political representatives. Their actually seeing it was a fact of immeasurable psychological importance."[19]

Over and above the waves of standard tourists, there are all those who arrive for special occasions, for inaugurations, demonstrations, protests, and parades, by the tens, or even hundreds, of thousands. If we regard a living landscape as embracing more than static objects, it is proper to include these milling crowds, along with the endless busloads and carloads of tourists, as integral elements of the Washington scene.

The outreach of this remarkable collection of nationalistic objects we call Washington, D.C., is not confined to those who experience it firsthand. For many years, reproductions of the major icons, for example the Capitol, White House, Washington Monument, Lincoln Memorial, Iwo Jima Memorial, and nearby Mount Vernon, have proliferated throughout the land in the form of newspaper and magazine illustrations, advertisements, posters, souvenirs, framed pictures and other household decorations, and by the millions and hundreds of millions. Then, in recent years, these images show up daily and nightly on

televised newscasts and other programs with the utmost regularity. It has become literally impossible to avoid some secondhand glimpse of the nation's capital in the course of an ordinary day.

There is still another channel through which the particular landscape ensemble of Washington, D.C., permeates the length and breadth of America: via the thousands of other cities and towns that act as administrative centers. The persuasiveness of the Washington example is apparent in many of the 50 state capitals, but even more widespread is a rather standardized formula for spelling out physically the sense of central authority in our more than 3,000 county seats, innumerable cities, and even some townships. The moral is most obvious in the realm of architecture. Clearly the single most influential model has been the National Capitol.[20] Although other federal buildings quite independently adopted a neoclassical form during the early 19th century, it was the Capitol (the name itself is significant) that most other official structures sought to emulate, especially after it finally assumed its present form during the Lincoln presidency. Indeed, the building has become far more than an architectural prototype, having risen to the level of transcendent national symbol.

The style of the National Capitol has been copied most slavishly in many of our state capitol buildings, but the process was gradual. "At the close of the 18th century there was no universally acceptable image of what an American state capitol should be."[21] It was during the 1820s and 1830s that "statehouse design passed through a transition that led suddenly to the adoption of a new architectural style, Greek Revival."[22] Then, after the National Capitol had become the symbolic anchor of the American Union in the 1850s, we find widespread mimicry of it in state capitols and other structures,[23] sometimes, as in the case of the buildings in Providence and Austin, virtual replicas.[24] During the late 19th and early 20th centuries, the architecture of official buildings, including state capitols, evolved through a series of interesting variations, but all still well within the general bounds of neoclassicism. Occasionally, as with Pennsylvania's capitol in Harrisburg, we encounter true magnificence.

The progression of styles for the much more numerous county courthouses has closely paralleled the history of state capitols.[25] After the initial generations of unprepossessing structures (but with lovely exceptions in central Virginia and a few other places), Greek Revival buildings dominated county seats during the second quarter of the 19th century, then persisted intermittently thereafter.[26] The designs of the post-Civil War era tended to move in tandem with the fashions in commercial and residential building. Scholars have just begun to survey the city halls of the United States,[27] but they are likely, when that task is completed, to document a similar procession of styles: the ascendancy of Greek Revival styles by the mid-19th century, then a series of classically derivative designs up until the very recent past, all ultimately inspired by the examples in the District of Columbia.

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Whatever the specific architectural styles and their hierarchical diffusion through space and time, the complex of governmental and symbolic items within state capitals represents a kind of delegated, relatively subdued grandeur radiated from Washington, although the sheer pomp of the Albany, New York achievement outshines the symbolic displays of more than half the national capitals of the world. Alongside the pretentious capitol building itself we are accustomed to seeing one or more large office structures to house a burgeoning bureaucracy, one or several monuments and pools, quite possibly a federal courthouse, and perhaps a museum or auditorium (or civic center). On a smaller scale, this is also what we usually find in county seats, but with the frequent addition of the county jail, Department of Agriculture, Social Security, and other federal branch offices (Fig. 15.10). It is interesting and significant to note that all these physical trappings of civil authority—these visually and locationally dominating landscape complexes—generally exclude the ecclesiastical, quite unlike the standard patterns of urban design in Latin America, Québec, or pre-modern Europe. The cathedrals of Washington, New York City, and other major metropolises, impressive though they may be in their own right, cannot claim pride of place—except, possibly, for Salt Lake City's remarkable temple. There

Figure 15.10
The Harrison County Courthouse in Marshall, Texas, a characteristic late-19th-century structure sited within a central courthouse square, in this instance also the center of the town's traditional business district. The domed design, as in many state capitals and countless county courthouses, is calculated to echo in miniature the governmental majesty of the U.S. Capitol in Washington, D.C.

is no question who occupies the driver's seat. Equally intriguing is the fact that the governmental-cum-ceremonial cluster is invariably offset from the commercial (also usually churchless) core of the city in all the state capitals as well as in Washington, even though they may be only a comfortable stroll apart. This description also holds for many, but far from all, county seats.[28]

There is more to be said about the direct and indirect impact of the federal government upon the look of the American land, but it is helpful to stand back a moment to try to grasp the sheer enormity of the present-day physical apparatus of the central government.

> By 1974 the federal government was a property holder with worldwide possessions worth $83 billion plus utility systems, roads, dams, bridges, and harbor and port facilities valued at $39.3 billion. It had gone from the construction of less than a dozen buildings annually in the early years of the Republic to a domestic inventory of over 400,000 buildings containing floor space equivalent to 1,250 Empire State Buildings. It leased properties in another 50,000 locations . . . on its 200th birthday in 1976 the Corps of Engineers could look back on a record of constructing 4,000 civil works, 25,000 miles of navigable waterways, and 400 man-made lakes.[29]

Undoubtedly the most ubiquitous manifestation of a federal presence has been that of the postal system. Although the system has existed for well over 200 years, our post office buildings have attained some degree of visual consistency only within the past several decades (Fig. 15.11). Operating out of special buildings, corners of shops, or even their own residences, postmasters served clustered settlements of all sizes and even some completely rural neighborhoods. Quite apart from their service functions, these post offices are also often important sites for social interaction on a daily basis, especially in smaller towns. There were over 33,000 of these establishments around the turn of the century, when they were at their geographical apogee; since then, for various reasons, their number has dwindled by almost 50 percent. But even as attrition decimated their ranks, the buildings constructed by the General Services Administration, especially from the 1920s onward, began to be standardized. Their design has frequently been latter-day classical, like many a contemporary bank, or some other nostalgic style, distinctive enough in appearance that strangers have little difficulty finding the post office somewhere near the town center. On a more intimate scale, we also find within all our cities countless mailboxes, formerly painted olive drab, but more recently a jaunty red, white, and blue. And if we include the mobile dimensions of our landscape, it is hard to ignore the fleet of thousands of postal trucks in the same colors dashing along our streets and highways.

Figure 15.11
El Centro, California, received this elegant main post office in 1941. Similar facilities, found the length and breadth of the country in small and medium-sized cities, represent the furthest reach of the federal government into the daily lives of Americans. Here, the common neoclassical style has been given a decidedly Hispanic look.

The New Deal and its legacy

Without any doubt the greatest leap forward in the history of the federal government's involvement with the American landscape occurred with the advent of the New Deal.[30] The qualitative change in the relationships between political center and hinterland that became so visually blatant then has continued and intensified in the course of World War II, the Cold War, and a period of relative prosperity that has persisted more than six decades. Despite much campaign rhetoric about the wisdom of restoring power to the states and local communities, the absolute and relative strength of the nation-state continues to grow. The great transformations of the 1930s and afterwards were actually the flowering of processes that had been evident for some time. We have commented on the role of the postal system, and, as already suggested, the venerable Corps of Engineers has literally reshaped much of the surface of America. The most dramatic instances are of this century and include the taming (at least temporarily) of the Ohio River and the lower Mississippi (Fig. 15.12). The ecological and socioeconomic as well as cosmetic effects of building an elaborate system of dams, levees, sluiceways, and other engineering works are complex and extend well beyond the banks of the streams throughout the regions drained by them. A definitive account of the geographical impact of all the Corps'

Figure 15.12
Marseilles Lock on the Illinois River seen from the south, built in 1933 by the U.S. Army Corps of Engineers as part of the Illinois Waterway that replaced the outmoded I&M Canal (visible as a straight line of trees beyond the plastics factory across the river). Virtually all the freight barged today in the United States uses waterways built or maintained by the federal government.

many projects—something no scholar has yet essayed—would fill a large monograph to overflowing.

As in certain other advanced nation-states, an even more momentous way by which the central regime has imprinted itself upon the land has been via a national highway system. Toward the beginning of the 19th century, when Albert Gallatin was a force to be reckoned with, an era of internal improvements almost came to pass. Although ambitious plans for a system of highways and canals were drafted, the only federally sponsored project to come close to completion was the National Road (later U.S. 40) running from Baltimore to central Illinois. But, then, for almost 100 years, Washington was only an indirect agent at best, while hundreds of miles of canals and tens of thousands of miles of railroad track were generated by private enterprise, municipalities, and individual state governments (often on land donated by the national regime). It was only in the wake of the automotive revolution of the early 20th century that the federal government finally bestirred itself and began to take charge. Still, it was not until 1925 that a federal agency mandated a national highway numbering system, began the installation of standardized road signs,[31] and made some gestures toward uniform engineering criteria and guidelines for roadside landscaping.[32] The watershed event, however, was the passage of the Federal-Aid Highway Act of 1956 and the initiation of an Interstate Highway System, which, when completed at the turn of the millennium, included some 44,000 miles of limited-access roads.

When we consider either the immediate landscape implications or the socioeconomic by-products of what is certainly the world's greatest public works project, we must reach for superlatives. The existence of

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such long stretches of uniformly engineered pavement, the thousands of standardized bridges, overpasses, and lighting installations, broad swaths of rather monotonous roadside landscaping, the totally unsurprising service plazas, and all those signs of unvarying size, shape, color, and typography has become one of the central facts of American life, and a more than trivial portion of our collective sensory input. We are not prepared as yet to assess the impact of this grandiose web of concrete on our economy, society, ecology, and life-patterns—no geographer or other social scientist has been brave enough to try—but unquestionably it is staggering. The two sets of effects, the visual and socioeconomic, intersect and are most obvious in metropolitan areas, especially in the vicinity of beltways looping around such cities as Atlanta, Baltimore, Chicago, St. Louis, or Washington. Veritable minicities of innovative form and function have materialized at or near many of the interchanges, but the less obtrusive consequences of such high-speed roadways have filtered far out into suburbia and exurbia and, conversely, back into the inner cities.

The landscape legacy of the New Deal is rich and varied in kind and effect, ranging from total transformation of an area down to the most subtle of nuances. Unquestionably, the Tennessee Valley Authority (TVA) is a prime example of what a rich, determined central regime can achieve in terms of remaking the landscape of a region as well as its economy.[33] Other hydroelectric and reclamation projects of the same period, such as the Hoover and Grand Coulee dams (Fig. 15.13) and their associated new lakes, among many another in the West, have altered the visual scene greatly, and have also affected patterns of recreational facilities and land occupance near and far, but not to the same degree as in TVA country.

Figure 15.13
The Grand Coulee Dam on the Columbia River, Washington State, completed in 1941, is the largest concrete structure in the United States. A hydroelectric facility, its initial power generation fed the northwest wartime aluminum industry. In the longer view it has served as the centerpiece of the Columbia Basin Project, and irrigates over 500,000 acres of farmland.

Some of the more idealistic New Deal ventures involved resettling distressed rural folk in such places as the Matanuska colony in Alaska[34] or the Cumberland Homesteads in West Virginia,[35] or the creation of such model communities as Greenbelt, Maryland, with their distinctive patterns of street layout and landscaping. Much more widespread were the visible effects of the many programs initiated or executed by the U.S. Department of Agriculture under Henry A. Wallace, notably the Agricultural Adjustment Administration, the Soil Conservation Service, and the Farm Security Administration. Among the results were changes in absolute and relative acreages of crops, wholesale implementation of contour plowing and building of checkdams to retard soil erosion, the creation of thousands of farm ponds, and the reforestation of marginal tracts. Although the Shelter Belt, one of Franklin Roosevelt's pet programs—the planting of extensive strips of trees and shrubs the length of the Great Plains to protect fields and homesteads and, possibly, mitigate the impact of periodic droughts—was never fully realized, enough was done to give a boskier look to much of the region (Fig. 15.14).

A thick volume would be needed just to catalog all the projects with landscape implications financed or directed by various emergency relief agencies of the New Deal, notably the Public Works Administration, Civil Works Administration, Civilian Conservation Corps, Works

Figure 15.14
Only scattered patches of the New Deal's Shelter Belt project were ever actually planted, and even fewer have survived, as seen in this 1983 view of Red River Valley farmland near Grand Forks, North Dakota. But a majority of farmsteads are sensibly equipped with their own private tree and brush shelters along their northern and western edges.

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Progress Administration, and National Youth Administration.[36] Suffice it to say that they are numerous, diverse in size and character, and located in all manner of settings, urban and rural. Some have been durable, others ephemeral. Many of the projects bear the unmistakable look of governmental benevolence or supervision, but in many instances only an expert could detect Uncle Sam's fine hand. Despite many *faux pas*, the aggregate social and environmental results of all these efforts were definitely positive. Less celebrated than some of the foregoing but ultimately more spatially pervasive and certainly much vaster in social consequence has been the work initiated by the Rural Electrification Administration in the 1930s. It is difficult for us at this late date to visualize life and work when electrical power was available to only a minute fraction of farms and not too many of the small towns of the nation.[37] The addition of poles and wires to the scene is really minor compared to the truly revolutionary changes in economic and social behavior, which, in turn, have spawned notable landscape results.

Within many major metropolises, the New Deal manufactured new cityscapes by funding inexpensive public housing for impoverished slum dwellers. The institutional look of such mass architecture is undeniable. The program survived the demise of the New Deal; in fact it intensified with the urgent demands for housing war industry workers from 1941 to 1945. Since then, public housing programs have persisted, but rather sporadically. They have usually involved some combination of federal and local planning, funding, and administration, and have also generated much acrimony when large areas of older housing have been razed (often for unconscionably long periods) and their residents shunted elsewhere.

Among the more colorful outcomes of New Deal relief programs were the thousands of works of art produced by financially strapped painters and sculptors under federal patronage.[38] Although most of the murals, easel paintings, and statues, many of considerable merit, are to be found inside post offices and other government buildings, we encounter a fair number outdoors.

There are still other ways in which the federal government has manifested itself in the American landscape, especially in recent times. Such communities as Oak Ridge, Tennessee, and Los Alamos, New Mexico, are purely and simply total federal artifacts, and certainly cannot be confused with ordinary cities. There is a strong case to be made for the claim that Huntsville, Alabama, Hanford, Washington, and the urban developments bordering Cape Canaveral are the offspring of federal largess or that much of the same situation prevails in California's Silicon Valley, North Carolina's Research Triangle, and any number of other research and development districts on the outskirts of various metropolises and university towns. All such areas do share a distinctive appearance. Within the industrial realm, the Nuclear Regulatory Commission has veto power over both the design and siting of nuclear

power plants, while the Environmental Protection Agency's regulations almost certainly have had a perceptible effect on where certain plants have located and what they look like, but the topic awaits investigation.

No one who has driven past such federal penitentiaries as those at Marion, Illinois, Lewisburg, Pennsylvania, or Leavenworth, Kansas, or who has seen Alcatraz from afar is likely to forget them soon. More secluded and more ephemeral have been the euphemistically labeled relocation camps for Japanese Americans during World War II or the detention facilities for Vietnamese and other refugees during the past few decades.

We have the federal and affected state governments to thank for the enactment and enforcement of strip-mining regulations that have gone so far to alleviate the scandal of thoroughly hideous, lifeless landscapes previously left behind by mining operations. Less aesthetically pleasing perhaps than reclaimed surface mines but even more widely evident along the nation's highways is the role of Uncle Sam as advertiser. Billboards beyond counting tout bond sales, enlistment in the armed forces, and sundry government drives and programs. Although its basic function was that of advisor, coordinator, and general cheerleader, the American Revolution Bicentennial Administration did catalyze thousands of projects in and around the year 1976, a fair percentage of which yielded new or remodeled artifacts in public places.[39] There are some interesting regional differentials in the incidence of such projects, with the north-central states scoring especially well.[40]

The impress of the American nation-state does not stop at our borders. As already noted, American military cemeteries are maintained in a number of overseas localities. American embassies and other buildings associated with them stand on conspicuous sites in more than 100 foreign capitals, many of them designed to be visually assertive. No other country operates as many military installations on foreign soil as does the United States (or religious missions too, for that matter), and the more important of them not only occupy great tracts of land but also have stimulated many private enterprises along their peripheries, as has happened around major bases within the United States. Frequent adjuncts to the American diplomatic and military presence are the "Little Americas," hermetic enclaves of residences, shops, schools, and recreational and other facilities that inhibit serious dealings with the surrounding land and population.

It is an asymmetric situation, since, outside Washington and its embassies and some international headquarters, such as those for the World Bank and the United Nations complex in New York City, there is virtually no hint of the existence of foreign governments or international agencies to be sensed within the United States. But one might offer the same observation about the near-invisibility of supranational government in any of the advanced nation-states of the world, except

Switzerland.

Visual symptoms of an international order are not the only potential authority-related items missing from the American scene. Because of the peculiarities of the political system and, ultimately perhaps, the basic nature of the collective cultural psyche, the country lacks anything approaching land-use planning, zoning, or control at the national level, of the sort practiced in Scandinavia, the Netherlands, Great Britain, and socialist countries. Also lacking is any centralized educational system (except for that run by the Bureau of Indian Affairs) and thus centrally determined school architecture such as prevails in some foreign lands. The United States does not own or operate a network of railroads, a national airline, or shipping company, unlike Canada, Mexico or so many Old World countries. Consequently, their equipment and logos are missing from the scene.

Indirect governmental influence on the landscape

We are far from finished with the federal factor, even after considering the lengthy inventory of landscape features that demonstrate its direct operation. In their totality the ways in which federal legislation, policies, and regulations have acted obliquely to mold our environs may outweigh direct cause-and-effect phenomena. In fact, it is likely that no corner of this land has escaped being affected to some visible degree by the indirect workings of central authority. Perhaps the most obvious case is that of federal tax laws and Veterans Administration (VA) and Federal Housing Authority (FHA) loan programs. There is a general consensus as to their crucial role in the explosive growth of suburbia since World War II and the character of its housing. Similarly, urban renewal, the boom in office buildings and condominiums, gentleman farming, and the historic preservation craze would have fared quite differently without certain tax advantages under federal law. Undoubtedly it would be hard to identify a more potent force in the dynamics of the current landscape than the Internal Revenue Service, however indirect or devious the chain of causality. It is also easy to demonstrate the multifaceted effects of U.S. Department of Agriculture policy in the countryside via many channels, including its county agents and the work of the allied schools of agriculture at the land grant colleges: upon crop choices and acreages, modes of cultivation and storage, and much else. In related fashion, tariffs and import/export regulations have interesting landscape repercussions in both the manufacturing and agricultural sectors. Vivid confirmation of this assertion is apparent to anyone who scans the contrasting land-use patterns along the Minnesota–Manitoba boundary.

There are many other ways, as yet unexplored by the scholar, in which a huge, many-sided federal establishment has brought about

important secondhand changes in our human geography during recent times. The availability of Social Security benefits and other federal welfare programs over the past 50 years has given many individuals, especially the elderly and unemployed, a latitude in choosing place of residence that was previously nonexistent, and the results have been quite substantial.[41]

Plainly enough, the number and attributes of inhabitants are prime factors in the making of landscapes. Insofar as ethnicity is a visible phenomenon in this country—and few would argue to the contrary—the immigration laws and regulations that have been on the books for the past 100 years have contributed striking details to the landscapes of many sections of the United States. Taking a final example from among many other candidates, efforts at the national level to prohibit the production or consumption of alcohol and certain narcotics have certainly affected patterns of crop production, and also led to the existence of clandestine landscapes, notably those where marijuana fields or illicit stills are hidden.

Much of the foregoing discussion could be transferred to other advanced urban-industrial or post-industrial countries with only modest amounts of revision. But there is one respect in which the landscape expression of central authority in the United States approaches uniqueness: the voluntary display by the citizenry and business community of

Figure 15.15
The incidence of flag display is especially noticeable among commercial establishments in the United States. Was this Subaru dealer aware of the irony in his lavish exploitation of the national emblem?

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the emblems of statehood (Fig. 15.15).[42] The leading items in question are the national flag and the American bald eagle, the latter being the national totem since its incorporation into the Great Seal in 1782. Less overt, but still quite meaningful, is the extensive use of the national colors, the red-white-and-blue combination, in virtually every possible context and the private and commercial display of the tricolor shield also derived from the Great Seal. All sovereign states have their flags, of course, and other obligatory national symbols, but nowhere else is the incidence of flag and totem display so prevalent in absolute or relative terms, and principally on residential, commercial, industrial, and other private properties in addition to their abundance in official buildings and grounds.

The explanation for such exceptionalism is not simple, but it has to do with a spontaneous "statefulness" on the part of an American population lacking a monarchy or the attachments to traditions rooted in ancient history and geography characteristic of other successful nation-states. And, like most of the other phenomena treated in this chapter, such veneration of flag and eagle is a time-dependent phenomenon and one in keeping with the evolutionary model for the American polity sketched earlier. Until the Civil War period, the flag was seldom seen outside official sites and military installations. Since then, the fragmentary evidence suggests steady proliferation in all manner of public and private space. Fieldwork also indicates that the incidence of both flags and eagles is greatest in the northeastern quadrant of the country and lowest in the former Confederacy. The historical geography of the eagle is rather more complex than that of the flag. The latter has always been an essentially content-free emblem signifying no more than allegiance to a state. But the eagle has undergone a metamorphosis from its initial incarnation as a symbol of the early libertarian principles of American nationhood into a flag-like emblem expressing only identification with the nation-state.

State and local government landscape elements

As we descend from the federal level to the state and other more localized jurisdictions, the landscape expression of the governmental factor is more limited, in territorial extent obviously, but also in terms of intensity and multiplicity of forms (Fig. 15.16). Nevertheless, the visible impact of local government is much too important to be overlooked, and its salience for the landscape has been increasing over time. Two striking state-level examples ratify this point. Any traveler crossing into Nevada from an adjacent state by road or dropping from the sky into its airports would have to be blind (and also deaf) not to realize how great a difference gambling legislation can make to the ambience and economy of places. The visitor is assaulted by the blazing lights

Figure 15.16
Hawaii's graceful state capitol in Honolulu is one of the few exceptions among this class of government structures in not aping the dome of the U.S. Capitol. Designed in what has been termed American Bauhaus—Hawaiian style, it opened in 1969.

and blaring racket of the border-point casinos and satellite hotels and restaurants (Fig. 15.17). Much more soothing visually is one's entrance into Vermont with its sensitively maintained highways and roadsides, but especially its strict control of signs, which makes it a virtual paragon among the states in a landscape sense. Stateline liquor stores, fireworks stands, cut-rate cigarette emporia, and, once upon a time, shops selling colored margarine have been common sights, obviously battening on legal constraints just across the border.

At a more restricted scale, we can find examples by the scores or hundreds of sharp visual breaks between a city and the communities that adjoin it. Thus, there is the city of Washington, with its limitations on building heights (and other land use controls), nestled craterlike within the relatively unfettered Maryland and Virginia suburbs that loom above it. Equally jarring and abrupt is the passage from Chicago's West Side to the sylvan suburb of Oak Park, from Detroit to such outliers as Ferndale or elegant Grosse Pointe, or outward from the truly unique Carmel, California. In the author's hometown, one can traverse the line separating the Borough of State College (so intensely jealous of its appearance) and its satellite suburbs many thousands of times without ceasing to be startled by the sudden alteration of vistas. Even starker are the contrasts between city and environs when the former is the barony of a benevolent corporation, as has happened with Hershey, Pennsylvania, or Dow Chemical's Midland, Michigan. The imprint of central authority is not limited to standard political jurisdictions. There are some notable instances where special districts, formed by interstate or intercity compact, have left their mark upon the land, but perhaps no example is more definitive than that of the New York Port Authority,

Figure 15.17
State Line Showgirls, State Line, Idaho. Just 500 yards from the border with Washington State and ten minutes from Spokane via Interstate 90, this establishment reflects community values at variance with those of its state's neighbor to the west.

which, under the Napoleonic command of Robert Moses, imposed its dominating complex of bridges, tunnels, and other crucial constructions upon the New York and New Jersey scene.[43]

Thus we find that states, counties, incorporated municipalities, townships, and other local governmental entities do exercise certain powers that the federal government is generally unwilling or constitutionally unable to assert. Among these are the planning and zoning of land use, regulation of liquor sales and consumption, building codes, sign and tree ordinances, particular types of taxation, maintenance of educational, hospital, and welfare systems, licensing of utilities, refuse disposal, and the management of airports and harbors. In addition, of course, these lesser units parallel federal functions by operating highway systems, parks, forests, historical sites, and prisons.[44] There may be a certain visual uniformity within their boundaries and discontinuities at borders. Thus, for example, each state highway system tends to have a visual personality of its own. The design of roadways and roadside, signage, rest areas, and picnic grounds all share a certain commonality. Quite unforgettable, for example, are the sculpture gardens that gladden the motorist's heart alongside rest stops for Nebraska's interstate highways. The same observation applies to statewide systems of parks, forests, colleges, and historical sites. Is there a single state-supported college in Illinois that does not have its Altgeld Hall reeking of late Victorian fussiness? Even within our larger cities we can detect familial resemblances among primary and secondary school structures and in park buildings and playgrounds.

Almost endless is the roster of impacts subnational political jurisdictions have had upon the design of our lived-in American world, and by no means have all the ramifications, direct and indirect, of the hegemony of an overarching federal establishment been explored. But to bring this essay to an end, perhaps two general observations can be made.

Even a casual survey of the history of the American landscape reveals a remarkable turnabout. There was a time less than two centuries ago

when the handiwork of a puny, remote federal regime was almost never to be seen, and when the palpable imprint of local government was relatively feeble. Today, in total, stunning contrast, the impact of political authority, whether national or nearby, is inescapably intrusive. It is a revolutionary state of affairs reflecting the profound changes in the structure of our society and collective mentality, and is detectable in every department of socioeconomic interaction. We have only to look about us to collect the evidence.

Unfortunately, there has been extremely little in the way of systematic looking about. Many of the assertions presented above are undocumented, being based on personal observation and recollections of non-scholarly printed matter, for the simple reason that there are so few scholarly documents to cite. Thus this essay is an introductory sketch, and, in a sense, a programmatic appeal; it should become hopelessly out of date before many more years have passed.

Chapter sixteen
Creating landscapes of civil society

JOSEPH S. WOOD

A FEW MILES north of Portland, Maine, along what in the colonial period was called King's Highway, is a large stone with the letter "B" and number "136" carved in it. A memorial plaque nearby tells the reader that in 1761 Benjamin Franklin, then postmaster general for the British colonies in North America, directed that mile markers—this one 136 miles north of Boston—be set along postal routes (Fig. 16.1). Because postal routes carried heavy loads of newspapers, they ensured wide and, for the period, rapid sharing of news and opinion, much as the Internet does today. This diffusion of information and sharing of ideas was fundamental in organizing the social movement that became the American Revolution, and it continues to sustain American civil society to this day.

Civil society is a construct that characterizes and contextualizes social relationships independent of the state and commercial life. It is a late 17th-century concept derived from Enlightenment thinking and endowed with a distinctly moral and ethical force.[1] American civil society is a particularly utopian project that builds on the democratic principles of association and expression embedded in the First Amendment to the Constitution, which reads:

> Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

Exercising these rights, Americans form social movements to develop and, when necessary, reform civil society. Social movements start with ideologies, acquire organizational capacity, mobilize resources, engender public opinion, and create moral force. By appealing to the sense of a wider community and claiming to represent it or speak to it about a specific interest, social movements push upward from society through the political process to become institutionalized. They also provoke a narrative, a story about collective exploits and achievements,

Figure 16.1
Mile Marker 136, on the Boston to Machias Post Road in Cumberland, Maine, north of Portland.

which creates civil solidarity and holds civil society together. This ideological narrative justifies and legitimizes actions. At its base, then, civil society is about forming identity and writing heritage.

Civil society is also about place-making, about creating a social memory embedded materially and meaningfully in the landscape. Across the American landscape are material manifestations and reflections of the associational and expressive character of American civil society—spaces, sites, and structures to gather together for common purposes and to share interests, attitudes, beliefs, and opinions. They

Figure 16.2
A People's Greek Revival house in the Connecticut Western Reserve district of northeastern Ohio demonstrates the democratic impulse.

form a voluntary landscape of democratic impulse and design, one that reifies the democratic utopianism based in systematic land division practices and widespread land and home ownership, which in turn worked to legitimize civil society. Architectural style during the early republic also drew on democratic traditions from Greece and Rome to emphasize the connection (Fig. 16.2).[2]

De Tocqueville and civil society

Alexis de Tocqueville, who visited the United States in 1831–1832 at a time when civil society was emerging most energetically, recorded some of the most original and perceptive observations on America.[3] De Tocqueville understood that the American experiment was not singularly economic or religious or political but social—to construct a new society. He recognized that the central element was voluntary association, the best means for exercising those rights to speech, press, assembly, petition, and freedom of religion. Therefore, schools, churches, courthouses, colleges, libraries, museums, theaters, recreational spaces, fraternal orders, and charitable organizations—anything that fostered and supported voluntary association, exercised organizational skills, and created rules of civil engagement—all served to foster the development of American civil society.

De Tocqueville observed a "general equality of condition among the people" that led to vigorous public expression of opinion on virtually any topic.[4] He traced such equality to the Enlightenment notion

of liberalism, in particular to land holding other than feudal tenure in conjunction with the exercise of intellect as a source of wealth, albeit applying only to white Anglo-American males. Indeed, he suggested that with respect to civil society the "democratic principle" derived from the Enlightenment is the most important piece of cultural baggage original European settlers brought with them.[5]

New England settlers, de Tocqueville appreciated, were the first to instill these principles in their civil affairs.[6] During the colonial period, New England towns were both ecclesiastical and political units—mini-theocracies in which all town members were parish members by dint of location. Town centers contained meetinghouses, and town meetings had both religious and secular functions, the latter including governance of political, social, and economic activities. Separation of religious from secular affairs occurred when churches were disestablished upon ratification of new state constitutions—in 1818 in Connecticut and 1833 in Massachusetts. Meetinghouses retained their religious function, but the bulk of the original meetinghouse lot became secular property, the public space that eventually evolved into the town common—the community's gathering place that supported academies, political rallies, militia training, public lectures, sports and recreation, and public entertainment (Fig. 16.3). In time, voluntary improvement associations raised funds to beautify these commons, building monuments and recreational facilities, and directing traffic around them instead of across them.[7] These open public spaces epitomize to this day the New England impulse to create and advance civil society (Fig. 16.4).

Democratic principles and rights of expression and association, let alone public space, do not by their mere existence create civil society. People must exercise their rights, they must organize themselves,

Figure 16.3
The Town Hall, Pelham, Massachusetts, where Shay's Rebellion was hatched, was the meetinghouse before disestablishment.

Figure 16.4
The Town Common, Petersham, Massachusetts. Central community space such as this, with flagpole, monuments, and a gazebo, exemplifies the ideal landscape of civil society.

mobilize resources and public opinion to form social movements, and act. De Tocqueville recognized in this the importance of political parties, because they reflect different and competing ideologies, opinions, and principles, in championing social movements in order to bring change.[8] Party agitation was rampant when de Tocqueville was visiting the United States, especially over issues of states' rights, which produced battles over internal improvements, such as the National Road, a national bank, and the expansion of slavery. Resolving these issues deeply affected the evolution of civil society and shaped the American landscape accordingly.

Finally, de Tocqueville appreciated that suffrage—the right to vote—is the regulatory key in constituting civil society; it allows a majority to mobilize opinion and acquire moral force, as well as to quell anxiety and apprehension in social relationships.[9] The "egalitarian ethos" of the antebellum period prompted increased suffrage by eliminating freehold qualification. By 1824, every state provided suffrage to white male adults regardless of property qualification.[10] Progressively, suffrage was extended to non-Protestants, to non-white males, to women, and to those 18 years of age or older, along with the elimination of any poll tax in federal elections, through successive amendments—the 15th, 19th, 24th, and 26th Amendments—to the Constitution. The 19th Amendment, which extended the right to vote to women, was the culmination of efforts started generations earlier to mobilize opinion and acquire moral force and is memorialized in a national shrine at Seneca Falls, New York.

Landscape features

What expression does the rise of civil society find in the American landscape? Some elements of the voluntary landscape are quite grand; they form large assemblages and have a significant local or regional economic impact. One example is the Logan Circle–Fairmount Park civic ensemble in Philadelphia, a product of the City Beautiful Movement. But there can be other elements, such as a memorial to a long-forgotten event or a boarded-up socialist hall that may be barely visible unless one is looking for it. Some groups exclude others from their membership, and their spaces reflect this, or at least are perceived to do so—a few remaining men-only clubs, private colleges, or veterans' organizations, for example. Still other features, such as public parks, are open to all, even the outcasts in society, such as the homeless. Some features serve specific functions—for example the local Women's Club headquarters and meeting space. Other groups, like the Boy Scouts, borrow space not otherwise identified with the group (Fig. 16.5). Still other groups prefer invisibility, such as the Michigan Militia, whose headquarters may be found in the basement of a private residence and whose activities take place on remote and inaccessible private land. Some features may have a material visibility far in excess of their groups' relative membership, as with Masonic Lodges or the 42-story Shriners' Medinah Club Building in Chicago. Certain distinctive national geographic patterns of membership exist, more rural in the case of the National Rifle Association and more urban in the case of fine arts museums. For other groups, membership patterns favor or express one region over another, as with labor unions reflecting local economic geographies, or with

Figure 16.5
Southeast Community Service Center, Detroit, serves multiple community functions.

the Chesapeake Bay Foundation, even when part of a national social movement concerned with the environment.

The unique mixture of public, private, and religious institutions supporting assembly confuses the matter of where to draw a line between what is voluntary and non-voluntary. The voluntary landscape is not the private landscape of residences, although residential ensembles, such as public housing, or architectural styles, such as the Colonial Revival, demonstrate commitment to a social movement. Many people work for profit in the voluntary landscape. Commodification of the traditional town square, as at Reston Town Center in Virginia, privatizes spaces perceived as public, asserting restricted owners' rights over space once owned by all. And coffee shops are replacing corner taverns in many neighborhoods as community gathering and organizing sites. Much of the press and other forms of media are privately held but essential to civil society. Much public life has always taken place on private property or through private interests.

The voluntary landscape is not the landscape of central government either, though commonly its effectiveness is aided by government intervention, franchise, funding, or tax laws. Government-owned civic space mediates multiple interests, allowing pluralism to flourish in an otherwise standardized and often commodified landscape. Culture and arts complexes, and recreation venues, for instance, are necessary to the public good, and certainly this was the hope for pedestrian malls. Internal Revenue Service 501(c)3 tax exemption allows non-profit corporations affordable space for their activities, but much other space is privately owned—train stations, amusement parks, and stadiums, for example—or publicly (i.e. government) owned, such as public sports and recreational facilities, municipal convention centers, and state universities. Zoning and overlay districts have stimulated voluntary neighborhoods, as for artists or gays.

Recreational spaces perform an important associational function because play is a social activity that emphasizes cooperation and competition, thereby supporting and sustaining civil society. Like the arts, play fosters certain neurological organization, it helps shape how we act in relation to others, even spontaneously, and it fosters formation of social groupings and associations, including sports leagues. Back in the 19th century, streets and yards and public open space largely provided informal voluntary landscape elements for play. More generally today, playgrounds, gymnasiums, and parks with spaces devoted to organized play provide more social control, especially allowing "children to develop skills, learn cooperation, and be valuable citizens."[11]

Civil society has its sacred spaces, too.[12] Cathedrals, churches, synagogues, mosques, and temples are most obvious sacred elements of the built environment in America. Linked together, they form a considerable network of sacred ground that comprises a religious landscape. But beyond this is a vast set of features composing a patriotic landscape that

includes courthouse squares, battlefields, sites such as Kitty Hawk, and structures such as Mount Vernon, each with a memorial plaque. Ritual civic space is for formalized, repeatable symbolic performances and is usually set apart from ordinary space, as in the case of the Washington Mall with its many monuments, museums, and open spaces for assembly and recreation. An 1846 bequest of $500,000 led to the establishment of the Smithsonian Institution and presaged the rise of philanthropy in pushing central authority to act in certain ways, with great effect on local landscapes. The sacred character of the Mall in Washington, D.C., today owes much to this gift from over a century and a half ago. Sacred "natural" environments deriving from 19th-century romantic naturalism are best exemplified by the pastoral milieu of Concord that influenced Henry David Thoreau, who spent the years 1845–1847 at Walden Pond, from whence his writings inaugurated the American environmental movement (Fig. 16.6).

Spectacles are ephemeral forms of expressive and associational activity—political conventions, marches, orations, lectures, sermons, festivals, demonstrations, commercial promotions, charitable events, farmers' market days, building dedications, and concerts—that shape landscape for only a moment but nevertheless create a sense of place. Carnivals replicate medieval religious processions—Mardi Gras in New Orleans and West Indian Labor Day celebrations in Brooklyn (Fig. 16.7). Ritual parades of Mummers and St. Patrick's Day celebrants have also transcended religious origins. The Rose Bowl Parade and Macy's Thanksgiving Day Parade celebrate other ideologies and shared interests. The shopping mall is a site for spectacles of all sorts, as well as a

Figure 16.6 Replica of Henry David Thoreau's hut in the woods surrounding Walden Pond, Concord, Massachusetts. A mere two years' sojourn there on his part made it sacred ground for many environmentalists.

Figure 16.7
Floats passing through the crowd at Mardi Gras in New Orleans.

gathering place for exercise. Shopping malls also manifest increasing attention to identity formation.

Civic or political street celebrations and parades reflect ritualized identity, as in the case of the 1995 Million Man March in Washington, a consciousness-raising spectacle for African American men. Advocacy marches for civil rights, gay pride, or women's choice, not to mention group runs to raise funds for battling breast cancer or AIDS, illustrate how complicated competing ideologies and social movements can be. Women's clinics in particular have become gathering sites of protest between voluntary pro-life and pro-choice associations. Spectacles by counter-cultural groups taking temporary control of public, and sometimes private, space include demonstrations in People's Park in Berkeley or in Chicago's Grant Park during the 1968 Democratic Convention. Variants of the spectacle are the Ku Klux Klan, Aryan Nation, and Skinhead marches, shaping territory in their cases by fear and paranoia. More widely representative are various successful organizing and mobilizing efforts to improve civil society through dissent or civil disobedience—the legitimacy of which Martin Luther King, Jr., demonstrated by nonviolent means.

Landscape formation

How can this great mélange of spaces, sites, structures, and shrines form a coherent picture of the voluntary landscape of civil society?

There is surely a national landscape of civil society comprising the artifacts of social movements spread across the nation, starting with the democratic signatures that so impressed de Tocqueville. Prime among these are the land division system, a high level of land and home ownership, and a significant architectural ideology across the country. (Ironically, the motive force behind Manifest Destiny, which legitimized transcontinental expansion, also produced the wholesale and highly undemocratic displacement of other peoples.) Thomas Jefferson's monumental design of an academic village on a hilltop in Charlottesville, Virginia, became the model for the public university campus, the place where states train citizens as leaders to perpetuate the democratic principle. Many private colleges and universities reflect the denominational pluralism of the Second Great Awakening, whereas the establishment of land-grant institutions after 1862 furthered the democratic mission. Broad social movements aimed at improving civil society have included abolition, unionization, and urban reform. The roots of the Civil Rights Movement extend back into the 19th century. The founding of the National Association of Colored People (NAACP) in 1909 signaled the modern push for legal and judicial redress, though not until the 1950s did defiance through large-scale organizing become a generalized means to affect public opinion. The mass movement that began with the Montgomery bus boycott led finally to dramatic changes in American race relations as well as a new egalitarianism in civil society, a redefinition of civil solidarity, and modification of the cultural landscape. The environmental movement, for its part, with its focus on protection of clean air and water, restoration of plant and animal species, and enhanced appreciation of resource conservation, is most explicitly about the tangible, cultural landscape of the nation as a whole.

Every nationwide social movement also has regional and local manifestations. Key public universities, sometimes in towns with names like Athens or Oxford, Miami University in Ohio (1809) and the University of Mississippi (1844), for example, arose largely outside of New England and the Northeast, where many denominational institutions, including today's Ivy League, already had a long history. Historically black colleges and universities arose after the Civil War and largely in Southern and border states, while comprehensive public universities and community colleges tended to have an urban orientation. Although colleges and universities are recognizable landscape features with a common sense of place across the United States, and indeed have become massive arts, cultural, and sports centers, each has its own distinctive regional design and functional elements. The Civil Rights Movement affected schools, workplaces, professions, higher education, and neighborhoods, as well as shifts in the locational arrangements of new social relationships between blacks and whites. Federal affirmative-action policy, for instance, helped create in greater Washington, D.C., a very

large black middle class, much of it concentrated residentially to the east of the District in Prince George's County, Maryland. Likewise, the environmental movement has shaped the landscape by helping to clean up municipal waterways and reduce clear-cutting in Maine forests—and long gone are the days when Cleveland's Cuyahoga River could catch fire.[13] The Nature Conservancy regularly purchases land for localized bio-reserves, and Americans' avid level of geographic mobility has helped multiply regionally distinctive national, state, and local parks.

Finally, there are memorialized social movements with shrines and monuments, visual containers of the narrative of civil society that ensure a collective memory, enhanced national identity, and profound sense of place. The Civil War settled the seemingly intractable issue of the expansion of slavery, and it also created a national movement toward ritual remembrance that shaped a landscape of regional and local patriotic shrines and militaristic memorials (Fig. 16.8). Cities across the country now have Martin Luther King, Jr., schools and highways and other landscape features memorializing his struggle, and a network of civil rights markers, shrines, and museums stretches across a wide swath of the South, including the National Civil Rights Museum in Memphis at the Lorraine Motel where Martin Luther King, Jr., was assassinated. When military-style violence, on the other hand, has been turned upon civil society in acts of terror, the response can blend injured national honor with poignant remembrance of the innocent victims (Fig. 16.9).

Social movements, it is clear, play out in historical and geographical contexts, with some movements spawning others or producing effects in one part of the country while not appearing in another for

Figure 16.8
The Civil War Monument in New Bloomfield, Pennsylvania, identifies those who gave their lives in the conflict.

Figure 16.9 The Oklahoma City National Memorial, commemorating the disaster at the Alfred P. Murrah Federal Building in 1995. The symbolic chairs mark the locations within the building of victims seated at their desks at the time of the bombing.

many years, all creating a complex tapestry of landscape features with characteristic regional and local manifestations. There were two grand episodes in American history in which social movements emerged in distinct but cross-fertilizing and reinforcing fashion as they worked to constitute and reconstitute civil society: much of the 19th century up to the Centennial of 1876 was devoted to defining American civil society, and much of the period since to reforming it. A measure of historical perspective on the present will no doubt reveal other movements whose efforts helped create a richer and more nuanced voluntary landscape of civil society, as well as reflections of Americans' engagement, acquiescence, and resistance to these movements.

Defining civil society

Prior to the American Revolution, Pennsylvanians were most responsible for stimulating an associational movement, one that also fostered a revolutionary political agenda. William Penn himself, and in later

generations Benjamin Franklin, Thomas Bond, Benjamin Rush, among others, all exercised leadership in laying the foundations of civil society. Penn built a city of public spaces. Franklin organized Philadelphia's Union Fire Company in 1736; members of such companies formed both mutual aid associations and social clubs, and they were also central players in fostering talk of revolution. Bond founded, and Rush made famous, the Pennsylvania Hospital. Pennsylvania is also where the nation's first philosophical and scientific societies evolved, including the American Philosophical Society (1743) and the American Academy of Arts and Sciences (1780). Fraternal orders, too, Freemasonry in particular, emerged from ancient guilds as members sought privacy and exclusion while talking with one another about revolution. The first American Freemasonry lodges date to the 1730s. Freemasonry promoted the values of the Enlightenment and, like most such associations, offered mutual assistance. Its early American members, like Franklin and Washington, although few New Englanders, comprised a revolutionary elite, and Freemason symbols showed up repeatedly in government buildings and on currency after the Revolution.[14] In the 19th century, Freemasonry spawned imitators that spread the service and mutual assistance message across the country, and many Masonic halls are among the oldest and most visible extant buildings of civil society in many cities (Fig. 16.10).

In New England, we can attribute to Bostonian Samuel Adams efforts at organizing and mobilizing public opinion, and providing

Figure 16.10
The Scottish Right Masonic Center perches atop the highest point in McAlister, Oklahoma, by far this mining city's most prominent feature. The building, begun in 1907, was greatly extended in 1928, when the local organization claimed over 6,000 members.

the moral force behind revolution. To his cousin John Adams goes the credit for framing the ideology of the movement. Associations like the Sons of Liberty, meeting in parlors and taverns, were the forums for such organizing and mobilizing. Likewise, one can look to Virginians Thomas Jefferson and George Mason who articulated the arguments behind the very rights of speech, press, assembly, petition, and exercise of religion that emerged from the colonial period. Newspapers were critical modes of communication and formation of public opinion, as were pamphlets, such as Thomas Paine's *Common sense*, that fanned the flames of revolution and helped build the democracy movement. It ensured that freedom of press was codified in the First Amendment to the Constitution and endowed the postal service with a noble vision of the federal government in action. Lexington and Concord, Bunker Hill, Trenton, Valley Forge, and Yorktown rank among the sacred sites that memorialize the Revolutionary War. Independence Mall in Philadelphia, with its remaining buildings, similarly memorializes the intellectual and political efforts required for civil society to take root. More generally, Thomas Jefferson saw to it that an ocean of freehold farms and township governance would blanket much, if not most, of the nation as it spread west.

Following the Revolution, Americans began a sustained period of national formation, stretching past the Civil War and beyond to the Centennial of 1876. This movement allowed democratic principles to flower, new social movements based in voluntary associations to rise, and more and more people to vote. It created a national identity out of those of Massachusetts or New York or Delaware or North Carolina. In the decades following the Revolution, voluntary associations of all sorts flourished, political parties formed and reformed, the Second Great Awakening drew many into engagement with one another, and support for common education began, each of these movements reinforcing the others and leading to competition for public opinion. These associations formalized what, in a society that had depended on the aristocracy for political leadership, did not explicitly require governmental organization.[15] Frontier churches, fraternal organizations, schools and colleges, and political parties proliferated with geographical expansion and growing civil solidarity, and created a landscape of civil society.

The Second Great Awakening was an especially powerful agent of democratization, stimulated by a gospel that was anti-hierarchical, opposed to deference, and that supported democratization.[16] Because religious organizations also undertook to influence public opinion, the Awakening engendered middle-class temperance organizations and benevolent associations, for instance, which in turn developed constitutions, elaborating the democratic principle and reinforcing civil society.[17] The landscape effect was an increasingly complex array of features. The spread of religious pluralism, for example, led to proliferation of competing churches in close proximity to one another, a continuing feature

Creating landscapes of civil society

of the American landscape today, and these churches housed secular associations, as well.

Several movements developed in New England, a number of them consciously trying to make the region central to the narrative of American civil society and nationalism—even though it took Concord, Massachusetts, residents half a century to reach some consensus on how to memorialize April 19, 1775. The cult of domesticity, focused on human relations, had an impact on the design of homes, and New Englanders were interested in missionary work, the re-colonization of African slaves in Africa, and improved treatment of the insane. Transcendentalism flourished as well, spreading and sustaining voluntary associations that supported an increasingly literate populace, giving rise to athenaeums, lyceums, and libraries.

Figure 16.11
Central High School, Little Rock, Arkansas. Built in 1927 as the largest and most expensive high school in the nation at the time, its architecture symbolizes the importance to local communities of public education. In 1957, it was the site of the first major test of racial desegregation of schools in the United States following the 1954 Supreme Court decision on the matter.

New England interest in things literary also encouraged educational reform, training people in patriotic virtue by reading classics, and agitating for compulsory education, such as the New England-based Common Schools movement of the 1840s and 1850s. Outside the region, however, the movement was less ideologically coherent, with a greater interest in social control than in shaping citizens.[18] Schools have long been venues for associations to assemble, and schools have become fundamental anchors of civil society (Fig. 16.11). What American town or city today does not support local schools with local taxes, subsidized by state and federal funds, and what town or city does not struggle with the same tension between motives of social control and citizenship?

Other regions followed New Englanders' interest in means for socializing, enhancing literacy, and affecting public opinion, as well as learning mercantile news. Artisanal societies replaced what in Europe were guilds and, with fraternal organizations, built community buildings; lodges, museums, libraries, and assembly rooms, while most numerous in New England, multiplied everywhere in the early decades of the 19th century, a key feature of the voluntary landscape. Philadelphians built the nation's first modern Museum of American Art in 1805, and the fine arts became an integral part in developing a cultivated society and a national spirit.

What especially fascinated de Tocqueville when he visited the United States was how communities of all kinds were taking on political issues and engaging in party politics. Although the Constitution of 1789 had not anticipated formal political parties, the Revolution of 1800, as the election of Thomas Jefferson has been called, established them fully, if not coherently. During the antebellum period, parties proliferated and

Figure 16.12
The Corn Palace in Mitchell, South Dakota, a unique community arena used for concerts, sports, and exhibitions, was originally built in 1892 to promote South Dakota's productive soil. Rebuilt in 1921, and redecorated annually with corn cobs, the structure has long been a tourist attraction.

struggled for recognition. The Anti-Masonic Party, founded in 1831, had as its objective restoring moral order and transparent democracy, believing Masons too secretive and elitist. Women, who could not vote, were counted for proportional representation and could still petition Congress, as many of them did on abolition. The abolition movement effectively politicized the social fabric of the period and led eventually to the Civil War. Certain patterns of African American population geography resulted, such as pockets of free blacks in the North, while certain settlement forms remain in the South as a result of political but not economic emancipation.

In following decades, women's political organizational efforts were important to reform movements and the development of charitable institutions, and they shaped parties' platforms.[19] And even as the agricultural frontier strained beyond its limits in the West, women never lost interest in voluntary associations to support one cause or another. The Grange dates from 1867 and the Farmers' Alliance from 1874,[20] and the rural landscape to this day is marked not only by solitary farmsteads but also by grange halls, county fairgrounds, or other structures devoted to fraternity and agricultural productivity (Fig. 16.12). Small towns hosted community centers, opera houses, and recreational spaces for baseball

Figure 16.13
The Love–Larson Opera House in Fremont, Nebraska. Built in 1888, the theater on the upper floors once could seat an audience of 1,100. The ground floor was designed as, and long used for, retail space.

and parades and Independence Day celebrations, all offering a sense of civil solidarity (Fig. 16.13). The Chautauqua Movement was born in 1874 at Lake Chautauqua, New York, as a summer-training program for Sunday-school teachers, but it evolved into locally organized assemblies that linked Bible study to lectures and recreation. By the 1920s, as many as 10,000 communities a year hosted a Chautauqua.[21]

National pride and nativism also engendered social movements. The 1876 Centennial ushered in efforts to bring order to ungainly local landscapes, especially in response to industrialism. More comfortable now with their nation's historic roots, Americans looked back for symbols of legitimacy, and so the Colonial Revival style of architecture gained popularity. Any number of houses were built or rebuilt in Colonial Revival style as part of this national movement. Meanwhile, the Mount Vernon Ladies' Association saved the first president's mansion, creating a national shrine, and almost single-handedly created a voluntary landscape tourist industry. At the same time, fraternal orders explicitly reflecting ethnic, racial, or religious exclusivity proliferated. While the

Figure 16.14 Road signs give notice of regular meetings of the local chapters of popular international fraternal orders at the entrance to Cudahy, Wisconsin.

Figure 16.15 True Friends Benevolent Society Hall, Donaldsonville, Louisiana, circa 1883, served as a meeting place and cultural center for black citizens who worked to strengthen local civil society.

end of the 19th century marked their zenith, they are very much part of the fabric of local communities today (Fig. 16.14). In response, various ethnic groups, usually with distinctive regional patterns, set up their own associations, benevolent societies, and fraternal insurance societies as well as social organizations with community rooms and dance halls. Black Americans especially created a parallel civil society marked by their own local and national voluntary organizations (Fig. 16.15). By the end of the 19th century, the American landscape reflected all of these movements and efforts at constituting civil society—and did so in broad national patterns, localized situations, and memorials.

Reforming civil society

Americans have been engaged in social reform since the colonial period, and many early voluntary associations had a reformist bent, perhaps most visibly the abolitionists. But by the end of the 19th century there was an explosion of new national voluntary associations with explicit

reform platforms. Examples included movements to promote workers' rights and battle against child labor, improve sanitation and public health, fix up slum housing and clean up cities, integrate immigrants, improve schools or playgrounds, expand women's rights, clean up the environment, and strengthen civil rights. Models were the Young Men's Christian Association (YMCA), transplanted from England in 1851 with the purpose of serving youth in cities through social and, after the Civil War, recreational facilities to supplement its religious emphasis; the Young Women's Christian Association (YWCA) followed in 1858. These movements were religiously based and associational on the one hand, but increasingly they were explicitly reform-oriented. The Salvation Army, a Christian charity and service organization, likewise started in England in 1865 and spread to the United States in 1880. Hull House, founded in Chicago in 1889, was one of the first settlement houses in the United States. It grew to be one of the largest and has long epitomized the work of hundreds of others as enterprising centers for civic life, improving living conditions, educational opportunities, and philanthropy. The Association of Community Organizations for Reform Now (ACORN), with some 850 neighborhood chapters, is the contemporary version of a "community reform organization," which addresses housing, schools, neighborhood safety, health care, job conditions, and other social issues through community organizing, all with local manifestations and memorials.

Counter movements to prevailing orthodoxy were also important to reforming civil society. Labor unions provided for working men what artisan societies had for artisans a generation and more before. The Knights of Labor started in 1869, and the American Federation of Labor in 1886, as associations of unions helping to organize labor to push for improved working conditions and pay. Labor organizing reflected regional geographies—industrial workers in Detroit and miners in Butte, Montana, for instance. Local union halls hosted labor-themed theater and music, representing public space for people in confined quarters, but also from increased opportunities to gather, from changes in time allocated to leisure instead of to work. Not surprisingly, socialist organizations formed as well, serving both as labor temples and as community and party halls. The labor union movement was successful in legitimizing itself, but socialism was not, even if elements of its ideology are now embedded in the civil sphere. Increasingly, these social movements required some form of legislative or executive action, or a court order, to come to fruition, but all required activists, community organizing, and mobilizing public opinion to get underway and succeed.

By the beginning of the 20th century, several significant social movements developed or matured politically under the banner of the Progressive Movement. World Fairs served as important stimuli for civic leadership, philanthropy, and engagement in urban redevelopment,

central to Progressive Movement efforts. One cannot overstate the particular importance of the 1893 Columbian Exposition in Chicago to reform efforts, including sanitation, rationalized urban functions, women's involvement in culture, civic improvement, and urban reform, in addition to building design, artistic collaboration, urban planning, architectural professionalism, and civic spirit.[22] The City Beautiful Movement epitomized this reform character. A social, environmental, and aesthetic movement, it was also an exercise in participatory politics and place-making. The movement generated development of comprehensive planning and embraced beauty in the cityscape.[23] Most major cities can demonstrate some element of landscape that flowed from the City Beautiful Movement. Public spaces of all sorts, including parks, libraries, art, history, and natural history museums, and symphony halls, plus new urban universities, all interconnected by wide avenues and boulevards, anchored the rise of civic cultural centers—and presumed civic virtue. In larger cities, newspaper buildings reflected the immense importance of the press in helping to mold civil society. In New York City, Times Square memorializes the press still, although perhaps not as meaningfully as intended.

Philanthropy as a means of projecting civic leadership and shaping a landscape of civil society came into its own especially at the beginning of the 20th century. Andrew Carnegie, a titan of the American steel industry, was also one of the foremost philanthropists of his era. He believed that men of wealth had an obligation to allocate what they did not need, not as relief, but for improvement and edification. He suggested specifically that one's philanthropy would be most fruitful if used to found a university, a free library, a hospital or medical college, a public park, a public hall for meetings or concerts, a swimming pool, or a church—this ranked last because of its sectarian nature.[24] Carnegie built all of these things, but perhaps the Carnegie Libraries are what have settled most enduringly in the small town landscapes of America as memorials to such initiative. As a form, Carnegie Libraries can be found across the country, but each reflects local issues and local solutions (Fig. 16.16).[25]

Cleveland, Ohio, offers an example of the important localized landscape effect of the reform, planning, and philanthropic movements of the period, and the inability to sustain vibrancy in later years. John D. Rockefeller located petroleum refineries in Cleveland and contributed to local charities and philanthropic efforts. Because of such turn-of-the-century civic leadership, Cleveland today has an impressive open city core around its original Public Square; a center of arts, culture, education, and hospitals in the Wade Park–University Circle area; and what was once a striking boulevard and park system. Unfortunately, by the last third of the 20th century, ownership of industrial enterprises and production had migrated and many wealthier citizens had moved away to suburban communities, leaving far less committed

Figure 16.16
Carnegie Public Library building in Boise, Idaho. Andrew Carnegie paid for its construction in 1905 once the community found a site and guaranteed permanent operating funds. It served the city's central library until 1973, but survives today in adaptive re-use.

and philanthropically oriented civic leadership to deal with a decaying inner core to the city. As so many cities did, Cleveland attempted urban renewal during the 1960s using federal funds for clearance projects and public housing, but decline continued. Post-1980s efforts were noble, and involved some renewed civic leadership from the business community. Characteristic investment in new buildings, including Cleveland State University, Cleveland Playhouse, Jacobs Field Stadium, and the Rock and Roll Hall of Fame, marked a landscape that has become increasingly market-oriented, highly specialized, and architecturally expressive. Still, there is a sense in which all of the wonderful architecture and great rebirth of the built environment of Cleveland or any of a number of similar cities is simply a charade.[26] There will be few memorials to urban renewal and its aftermath.

A counterpoise to urban renewal has been historic preservation. In 1949, the National Trust for Historic Preservation received a Congressional charter to serve as a clearing-house and advocacy organization and manage historic properties. By the 1960s, a large number of related community and professional associations promoting scores of governmental programs had arisen, all of which were further stimulated by landmark legislation, the National Historic Preservation Act of 1966. This enlarged the National Register of Historic Places to encompass a nationwide inventory of officially recognized districts, sites, structures, and objects of state and local as well as national importance—a whole national landscape ensemble. As with urban renewal, implementation represented the increasing impress of central authority in the civil sphere, yet the process is still very much citizen- and community-based, reflecting public opinion, and intended to deepen the fabric of civil society. Historic preservation, as a public good, intends to influence

Figure 16.17
Italianate-style and other late 19th-century commercial buildings on Larimer Square in Denver contribute to the urban vibrancy that historic preservation can often support in large metropolitan centers.

private landscapes by providing the imprimatur of central authority, raising the status of the national patrimony and protecting the rights of the many in the face of perceived individual rights of private property owners (Fig. 16.17).[27] Landmark buildings memorialize this movement, even while public housing projects memorialize failed urban renewal.

Conclusion

The voluntary landscape derives from practical experience and constitutional protections that include rights of speech, the press, assembly, petition, and religious affiliation. Social movements that rely on these rights to organize and mobilize contribute to civil society and affect place-making and landscape formation. We can find in the American landscape features that reflect and sustain the broad national sweep of social movements, as well as regional and local effects and memorials to their success. This complex and voluntary landscape of civil society forms a rich tapestry.

Yet many scholars and politicians believe civil society itself is fraying—de Tocqueville himself recognized that a truly democratic culture might readily succumb to mediocrity and decline.[28] Post-1960s standardization and the privatization of culture have reduced many citizens to little more than passive involvement with traditional community life, as increasing centralization of power under federal government as well as commercialization and commodification of the elements of community organization have altered the basis for voluntary association and social movements. Robert D. Putnam, for one, has argued that

Americans are "bowling alone," and are significantly less engaged than before in voluntary associations, like bowling leagues, because of higher mobility and lost rootedness, overwork, movement of women into the paid labor force, decline of traditional forms of marriage, and television.[29] Ray Oldenburg attributes this loss of community to the loss of the "great good places" of old—the corner taverns once so vibrant in neighborhoods—and thus the ability to form and sustain communities.[30]

Others counter that Americans are all "kicking [soccer balls] in groups,"[31] in other words that they are simply engaged in different forms of association than in the past. For one thing, technology has brought a proliferation of choices not available in the small towns that de Tocqueville saw as essential to association. And just as newspapers did in pre-Revolutionary America or the Chautauqua Movement 100 years later, the Internet is proving immensely capable in organizing effort, mobilizing resources, affecting public opinion, and building "virtual" civil societies. What are the place-making and landscape-formation possibilities of Facebook and MySpace, for instance? Of course, new distinctions in social, ideological, and class identity, let alone the digital divide, also all have new, often labyrinthine, geographic dimensions. At the very least, local and regional forms of association have been supplanted by national, transnational, and global forms of associational activity. All of this should have landscape manifestations, if we can but trace them.

Chapter seventeen

Imposing landscapes of private power and wealth

WILLIAM K. WYCKOFF

> In order to gain and to hold the esteem of men it is not sufficient merely to possess wealth or power. The wealth or power must be put in evidence, for esteem is rewarded only on evidence.
>
> (Thorstein Veblen)

> To dismiss Society as vanity or vanities or as a *chronique scandaleuse* is to throw away a rich segment of human experience, molded of wisdom and folly, graciousness and snobbery.
>
> (Dixon Wecter)

ALTHOUGH ALEXIS de Toqueville was struck by "the general equality of condition among the people" of 19th-century America, the national landscape, from the graceful Georgian houses of its colonial era to the luxury condominiums of the present day, owes significant portions of its character and diversity to a numerically small but powerful upper class. These landscapes of private power and wealth represent the imprint of perhaps only one-half of 1 percent of the national population, and yet their mark is pervasive, spanning every region of the country, and encompassing urban, suburban, and rural settings.[1]

The special role played by the nation's affluent class in shaping the American scene often has a complex expression on the 21st-century landscape. Wealthy tastes have changed through time and the result is an accumulation of features that reflect the varied preferences for house styles, neighborhood settings, and resort playgrounds enjoyed by successive generations from 1700 to the present. Further complicating the picture is the fact that these landscapes are often partially obscured or profoundly transformed in their contemporary settings. Today, old mansions are converted and rural estates are subdivided to make way for suburban housing, upscale resort complexes, and new shopping centers (Fig. 17.1). In addition, there is a regional unevenness in the geography of such landscapes and an uneven distribution of affluence across the nation. Portions of the Virginia countryside, New York State's Hudson Valley, old Newport, or the smart suburbs of Hillsborough

Figure 17.1 Successful Scottish-born lumber manufacturer William Renwick's Italianate mansion, in Davenport, Iowa, high on a bluff overlooking the Mississippi River, the conduit of his wealth. By 1907 the villa became part of a girls' private school; it served later as senior housing and more recently as a bed and breakfast operation.

(San Francisco), Grosse Pointe (Detroit), or Dunwoody (Atlanta), literally reek of America's better sort, while in other settings, their signature is absent, forgotten, or substantially altered by subsequent changes to the landscape.

Enduring themes

English affinities

America's elite, from their colonial origins, have aped the English with enthusiasm and abandon. As one Virginian lamented in the 1760s, "Alas! Great Britain, their vices have been extended to America! . . . it must be stopped, or it will bear all before it with an impetuous sway."[2] Such warnings notwithstanding, America's prevailingly English roots are ubiquitously displayed, especially in the residential landscapes of the nation's upper class.[3] From 17th-century Virginia to 21st-century suburbia, the wealthy's fondness for English-style architecture has stamped the national scene in lasting ways. The epidemic of the balanced "colonial Georgian" house endures. English Gothic and Tudor revivals provide additional Anglo variants (Fig. 17.2). Gardens surrounding such homes almost invariably echo English landscape tastes, whether they be the formal symmetrical displays of fountains, statuary, and arranged shrubbery or the presumably more natural assemblages of irregularly shaped lawns, wandering fieldstone paths, and rambling arbors and trellised vegetation of late Victorian-era esthetics.[4] Even the

Figure 17.2
Stylized English country-house living in the affluent American suburb. Its British architectural counterpart became known as "stockbroker Tudor."

swimming pool and private bathhouse, occasional residential additions by 1920, and increasingly common thereafter, were diffused through British traditions of garden and ornamental pool design.[5]

Beyond the home, the upper crust often identifies itself with distinctively British social institutions. The steady dignity of the Episcopalian church perhaps is one of the more enduring symbols on the landscape that reflects the public expression of upper-class values and tastes.[6] In addition, the wealthy's hunger for private social clubs on the London model sparked the initiation of such metropolitan organizations after 1830,[7] and their wider appearance in the downtowns of most American cities is linked to the economic growth of the post-Civil War era.[8] Other Anglo traditions shape the proper education of elite youth.[9] Private day schools serve such needs within urban and suburban areas. In addition, elite boarding schools have been an educational option since prestigious Philips Academy began the tradition in Andover, Massachusetts, in 1778. Regionally focused from New England south to Virginia, the private boarding school saw renewed growth between 1880 and 1910.[10] Such an institution consciously copies the look and presumption of its English counterpart (Fig. 17.3). Traditionally rural or village-set campus landscapes are heavily Anglicized, and such exclusive environments still pave the way for further training at elite private universities such as Harvard, Yale, and Princeton.[11]

America's elite also play the British way, and many national landscapes of sport and leisure reflect these traditional connections. The aristocrat's penchant for fox hunting continues in northern Virginia, nearby areas of Maryland, the Kentucky Bluegrass country, and upstate New York.[12] The pleasures of the hunt are also replicated on

Figure 17.3
Lawrenceville School, Lawrenceville, New Jersey. View of campus showing rural, Anglicized landscape elements, original design features (the Circle) from Frederick Law Olmstead (upper left), and recent additions (upper right).

the large woodland plantations of the South on acreage accumulated by moneyed Northerners who purchased extensive tracts in portions of South Carolina, southern Georgia, and northern Florida after the Civil War.[13] Hunting on extensive tracts of private land across the Mountain West has also attracted enthusiastic participation by those wealthy enough to do so.

Other sports reveal similar Anglo roots. Horse-racing became popular in late 17th-century England and the sport was readily transferred to Virginia, South Carolina, and Long Island.[14] The Kentucky Bluegrass affiliation with the horsey set began early: Louisville had its first racetrack in 1784 and Lexington in 1790, beginning a long regional elite tradition that persists today.[15] American pleasure-boating also has British roots.[16] The New York Yacht Club was organized in 1844 and their first cruise was to the nearby stylish resort of Newport, Rhode Island. Today, more than 150 years later, the older yachting communities of New England and Long Island and the newer Sun Belt marina landscapes of conspicuous consumption, replete with mega-yachts, dockside condominiums, and exclusive shops and restaurants, still display a distinctive ever-buoyant brand of American affluence.[17]

Modern golf, via Scotland and England, was introduced in the United States after 1880, precisely when the elite were busily suburbanizing on the edge of many larger American cities.[18] The result was the peculiarly American institution of the suburban country club. Golf typically has served as the sporting focal point in such settings since the Country Club was first established near Brookline, Massachusetts, in 1882. By

the 1920s, over 5,000 golf courses, both private and public, dotted the American landscape as the sport diffused widely to the ranks of the middle class (Fig. 17.4). Tennis followed a similar pattern.[19] Introduced via Bermuda to New York in 1875, the sport found ready acceptance in such elite haunts as Newport, Nahant, and suburban Germantown. By the 1920s, the avocation spread to lesser social circles, although many of America's better sort still distinguish themselves by building their own backyard courts or, particularly in the Sun Belt, by improving their game and tan at any one of several hundred exclusive tennis resorts.[20] Polo, never widely adopted by the middle class, also arrived in America from Britain (where it was acquired from 19th-century India). It quickly gained favor with the horse- and game-loving upper class once it was introduced in 1876 by J. G. Bennett.[21] Extensive suburban and often country club settings are best for the sport since regulation polo grounds require eight times the cleared level land necessary for a football field. Such sites continue as useful landscape signatures in identifying the rich today and modern concentrations focus on the suburban northeast; the metropolitan clusters of Chicago, Dallas, Denver, Los Angeles, and San Francisco; as well as traditional resort settings such as Saratoga, West Palm Beach, and Palm Springs.[22]

Figure 17.4
In northeast suburban Tucson, fairways and upscale homes mingle with the desert slopes and vegetation below Mt. Miguel at the Lodge at Ventana Canyon Golf and Racquet Club, built in 1984 adjacent to the Coronado National Forest.

Social and spatial exclusivity

According to social historian Mary Cable, "In America the rich always herd in colonies."[23] Indeed, the rich are an enclave-creating class and their desire for privacy and security often encourages them to congregate in private clubs, schools, resorts, and communities.[24] Because the upper crust do live near one another, they frequently concentrate their impact on the landscape in well-defined neighborhoods and exclusive districts. Within urban areas, persisting affluent neighborhoods were apparent in colonial and antebellum America. In the 1840s, over half of Philadelphia's wealthy lived on only three streets, and Boston's elite during the same period were quite concentrated just east and north of the Commons.[25]

The desire for social homogeneity and spatial exclusivity is even more dramatically displayed in the consciously designed garden suburb of the late 19th and 20th centuries. These planned upper-class communities originated in the 1860s with Llewellyn Park near West Orange, New Jersey, and in later decades the garden suburb became a well-developed and almost standardized landscape feature on the periphery of most sizable American cities.[26] These "capitalist communes" persist as bastions of the upper class and their landscapes reflect wealthy tastes and preferences for proper living.[27] They feature low-density housing on large lots, a lack of commercial land uses, often gently curving and landscaped streets, and a stylized architecture that blends well with a predominantly pastoral surrounding.

The managed landscapes of the garden suburb, both in the late 19th century and today, frequently are maintained through legal as well as social codes of conduct.[28] Restrictive covenants in deeds declare minimum lot sizes and acceptable standards of architecture and landscaping. Zoning ordinances are passed to exclude undesirable land uses. Well-known examples include Tuxedo Park (near New York City, begun in the 1890s), Shaker Heights (outside Cleveland, constructed in two phases: 1910 and 1920), and River Oaks (an unusual planned enclave in an otherwise unplanned Houston, established in the 1920s). In more peripheral northeastern locales, similar exclusivity has shaped the landscape of places such as Cazenovia and Cooperstown, New York.[29] More recently, hundreds of new gated communities from Montana's Bitterroot Valley (south of Missoula) to Scottsdale (east of Phoenix) simply wall off the outside world, inviting in only those lucky enough to know the pass codes or the friendly but protective attendant at the entrance station.[30] Undoubtedly, one of the more dramatic recent displays is Fisher Island, Florida, just off the coast from Miami. The island, once the playground of the Vanderbilts, has been converted to an exclusive community of condominiums, villas, tennis courts, and swimming pools, all designed around a Mediterranean motif and accessible to the mainland only by boat or private helicopter. Replication of this model has transformed virtually the entire circumference of Biscayne Bay (Fig. 17.5).

Figure 17.5
Exclusive residential property on Biscayne Bay, between Miami and Miami Beach.

Key social transformations

Although social and spatial exclusivity are dominant themes in the landscapes of America's elite, there is a continuing tension between such tendencies and the desire on the part of the wealthy to display their success for all to see. But here an important distinction needs to be made between old and new affluence. Often the established aristocracy feels much less obliged to parade its inherited assets to the larger world, while the first-generation wealthy are far more likely to be ostentatious.[31] In the residential landscapes of the former, houses are often smaller and older, well set back from the road, and sensitive to the integrity of original architectural design, while the latter, with a similar income, might have homes that are larger, newer, well in view of public thoroughfares, and that more freely display current fads and fashions (Fig. 17.6).[32] The free-wheeling years of the late 19th century perhaps produced the most opulent examples of new wealth on the American scene, but the process continues today as first-generation recruits to the upper crust confirm their newly acquired status by prominently displaying it on the landscape.

Still, even the more recent crop of newly minted millionaires reveals increasing heterogeneity. One visible phenomenon is the emergence of the so-called Bobo upper class.[33] The term, popularized by journalist David Brooks, refers to the "bourgeois bohemians" that now gather in many traditional and newly emergent elite haunts. Brooks' thesis is that a new elite class, mostly highly educated and politically liberal, emerged out of social and economic transformations of the 1950s and 1960s. Their values and preferences represent a fusion of bohemian anti-materialism (beatniks, hippies, the counter-culture, the environmental movement) and the ongoing bourgeois penchant for the good life

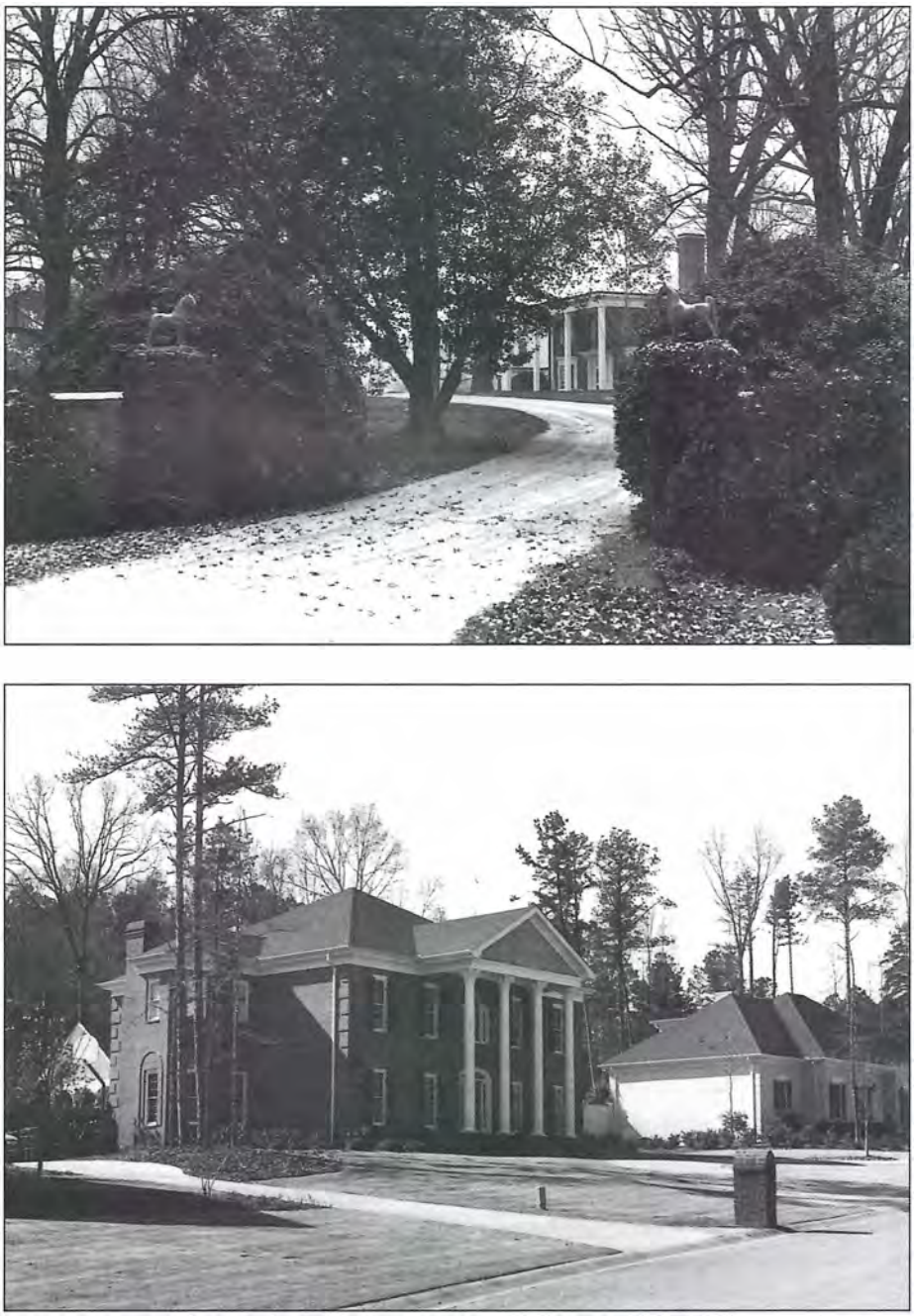

Figure 17.6
Old and new wealth on the American landscape. A secluded Georgian-style country estate near Charlottesville, Virginia (top), and a recent neo-Georgian suburban house in Athens, Georgia (bottom).

(gourmet food, expensive outdoor equipment and recreational activities, health clubs, and comfortable, but not showy residences). Where Bobos have emerged (often near universities), their values emphasizing "inconspicuous consumption" have reshaped the cultural landscape. Brooks identifies so-called "latte towns" such as Burlington (Vermont), Madison (Wisconsin), and Missoula (Montana) as settings for the Bobo

ascendancy. In addition, Brooks argues, subtle Bobo landscape signatures of understated affluence have reworked more established centers of wealth from Bar Harbor to Beverly Hills.

Another related social process that continues to unfold with even greater consequences for the larger American scene is the unrelenting desire of middle- and lower-class Americans to know about and emulate the lifestyles of the rich and famous.[34] The methods of diffusing the fashions of high living include magazines, builders' guides, novels, the cinema, television, and, of course, the elite landscape itself. Large segments of the national scene have been shaped in the process. Specific architectural styles, from Georgian Colonial and Greek Revival to late Victorian, have diffused down the socioeconomic hierarchy to mold the mass residential landscapes of middle- and lower-class American neighborhoods (Fig. 17.7).[35] The entire process of suburbanization, an elite phenomenon of the 19th century, spread to the middle class, along with

Figure 17.7
The social and spatial diffusion of the Greek Revival. An affluent upstate New York farmstead in Wyoming County (top left), an antebellum version in Madison, Georgia (top right), a middle-class Southern pyramid-style house with Greek styling, also in Madison, Georgia (bottom left), and a Grecian-style Southern farmhouse in Morgan County, Georgia (bottom right).

the automobile and the decentralizing metropolis in the 20th century. Today, even modest suburban condominium developments emphasize an appeal to the good life and an opportunity to live in neighborhoods that cater to a lifestyle of swimming pools, tennis courts, and golf courses (Fig. 17.8). More generally, leisure-time activities have followed similar paths of social diffusion.[36] The institution of the summer vacation is a miniature version of the elite's enduring penchant for seasonal travel to resorts, and the modern middle-class obsessions with golf, tennis, and boating trace their roots to originally elite inclination. It is an old and familiar story: as a colonial Virginian remarked, "Extravagance, love of gaieties, the taste for modish pleasures, are in a chain of imitation carried down to the lowest people, who would seem to have a notion of what high life is."[37]

Ethnicity also has figured into the dynamic geography of American affluence. Without question, a strong "White Anglo-Saxon Protestant" or "WASP" dominance has long characterized the wealthy class from colonial times to the present. However, as other Roman Catholic and Orthodox immigrants arrived in greater numbers during the 19th century, ethnic elites emerged within these larger populations, from Boston's Irish Catholics to New York City's Russian Jews. African Americans also produced an enduring black upper class which some historians trace back to the various types of social status within slave

Figure 17.8
Life at "MiraLago." Even modest suburban condominium developments, such as this one in Littleton on Denver's far southwest side, cater to upwardly mobile buyers with promises of quiet streets, swimming pools, tennis courts, saunas, mountain views, and proximity to Pinehurst Country Club and Marston Lake (actually Marston Reservoir).

populations.[38] After the Civil War, growing numbers of black physicians, dentists, lawyers, and business leaders graduated from prestigious institutions such as Howard University, Spelman College, and Morehouse College, and elite black neighborhoods became well established in cities such as Atlanta, Washington, D.C., Nashville, and Memphis. Later, similar enclaves appeared in northern cities (Chicago, New York City, and Philadelphia), as well as in vacation resorts such as Sag Harbor, New York, Highland Beach, Maryland, and Idlewild, Michigan. While median incomes for African Americans still sharply lag behind those of their WASP counterparts, a nouveau black upper class, often pulled from the ranks of business, entertainment, and sports, is an increasingly visible part of 21st-century America.

A growing and diverse collection of Asian immigrants (and their native-born children) adds further ethnic heterogeneity to the ranks of the affluent. Upper-class Asian neighborhoods in the San Francisco Bay area, suburban Los Angeles, and Seattle have grown rapidly since 1980. In fact, even the median home values for Asian householders are now more than 50 percent *higher* than for their Anglo counterparts.[39] Many wealthy, often entrepreneurial Chinese and South Asians, for example, have embraced the good life in newly minted mansions from Monterey Park east of Los Angeles to the hills overlooking Silicon Valley.[40]

The lineage of landscape change

Changing elite geography: townhouses, country seats, and resorts

Traditionally, rural and urban environments have been shaped by distinctive elements of America's upper crust (Fig. 17.9). But the record of landscape change is complex because of the high mobility of elite populations. Even in the colonial era, America's wealthier sort revealed an avid predilection for maintaining multiple residences. Northern merchants who kept townhouses as permanent homes often designed nearby country retreats for seasonal living. The proper Philadelphia gentleman was obliged to have a rural estate along the Delaware or Schuylkill River, and even the less ostentatious Bostonian might have a nearby, perhaps less showy retreat in Milton, Medford, or Roxbury.[41] In the South, townhouses were relatively uncommon for many of the colonial Virginia gentry, but Charleston, South Carolina, developed a distinctive and early urban aristocracy that included many absentee landowners who spent summers removed from their rice and indigo plantations.[42] Longer trips to colonial-era spas and resorts were increasingly in vogue after 1760 and included excursions to take the waters at Bristol and Yellow Springs near Philadelphia and Warm Springs in Berkeley County, Virginia.[43] Seaside resorts such as Newport, Rhode Island, offered dancing, racing, and boating to an increasingly cosmopolitan colonial upper class.[44]

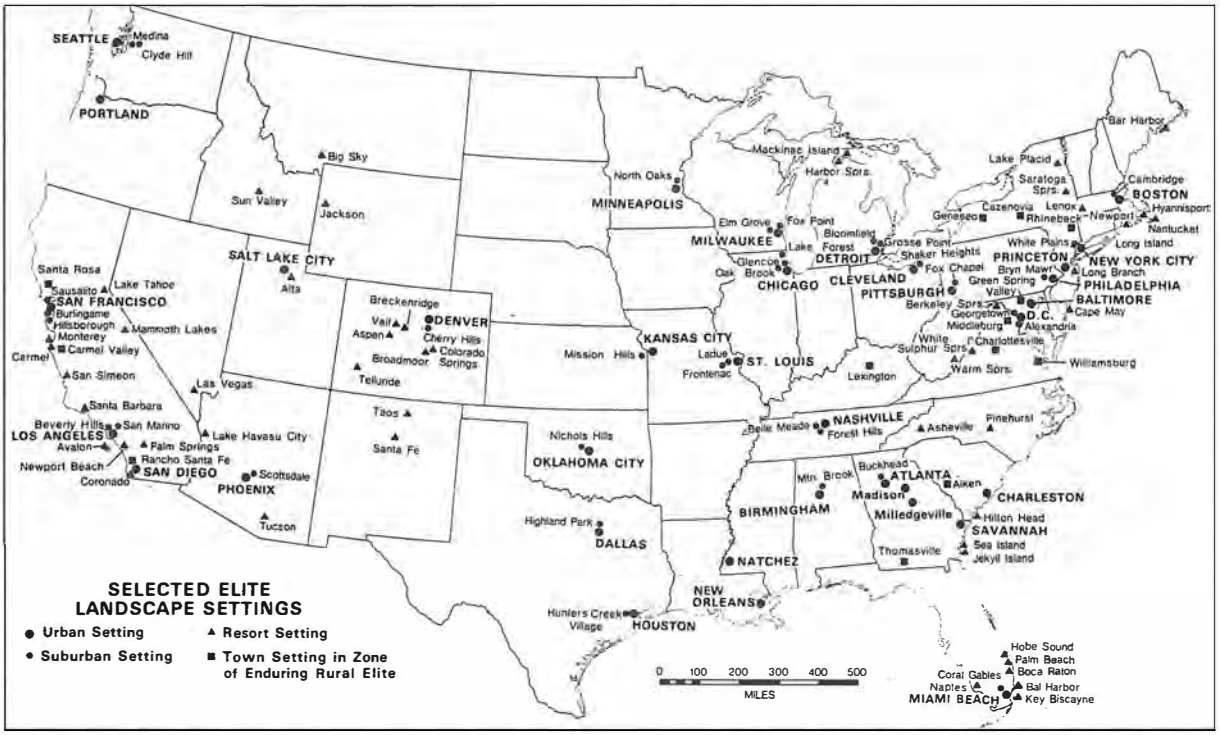

Figure 17.9
A typology of American landscape settings of the wealthy and powerful.

During the antebellum period, the Southern elite's penchant for both rural and urban life expanded along with the cotton frontier. As a result, some of today's finest architectural displays of high living in the South are not in the countryside, where plantation houses often were quite modest in scale, but in towns such as Macon, Madison, and Milledgeville, Georgia, and Natchez, Mississippi.[45] In the North, life in well-defined elite neighborhoods became ever more opulent in Philadelphia, New York, and Boston.[46] Increasingly, the wealthy also took advantage of improved steamboat and rail connections and maintained second homes, typically in rural or village settings within a few hours' to a day's travel from their urban base. In fact, by the 1850s, improvements in urban-focused railroads in the Northeast were so great that a new option in lifestyles was available. The creation of elite exurbs along the rail lines meant that it was possible to live in a low-density, pastoral, residential setting and yet have ready daily access to urban amenities and employment.[47]

Transport improvements also lessened travel times to more distant seasonal resorts. Although the older spa tradition remained popular in some areas (the interior South, Saratoga Springs, New York), most of the tremendous expansion seen in the summer resort industry was focused on facilities providing a wide variety of diversions including swimming, boating, horse-racing, gambling, and dancing.[48] By 1860, regional variants of these resorts included mountain settings (the Catskills, White Mountains), as well as seaside locales (Nahant,

Newport, Long Branch, Cape May). Within large cities, the antebellum period also witnessed the growth of the "palace hotel" tradition, which made distant travel to urban areas more endurable.[49] Boston's elaborate Tremont House (1829) and the widely read architects' guide that followed sparked the construction of a multitude of huge and sumptuous downtown hotels (New York's St. Nicholaus, 1850s; Chicago's Palmer House, 1870s; San Francisco's Palace Hotel, 1870s), a tradition surviving today in the luxury hotel chains of Hilton and Marriott that offer the penthouse suite to those who can afford the view.

After the Civil War, the expanding national affluence, especially in the Northeast and Middle West, prompted a new cycle of concurrent changes. Within the city, townhouses quickly established new standards of size and luxury.[50] It was, after all, the age of J. P. Morgan's dictum, "Do something big." These voluminous urban residences were near increasingly plush theaters, social clubs, luxury hotels, and shopping districts. Spatially, they often extended linearly along key boulevards in grand avenues of display. New York's illustrious Fifth Avenue had its parallels in Boston's Commonwealth Avenue, Chicago's Prairie Avenue, and Cleveland's Euclid Avenue (Fig. 17.10).

Beyond these urban promenades of the new plutocracy, the late 19th-century railroad and the early 20th-century automobile accelerated the suburbanization process in which many of the upper class were drawn to convenient countryside living.[51] Frequently, the outreaching suburbs incorporated older elite enclaves, seasonal country retreats, or resorts. Such was the case for New York City's expanding elite suburban periphery as it worked its way northward up the Hudson Valley and eastward along the north shore of Long Island. Such processes produced complex expressions on the landscape. For example, even in the 1860s, Charles Sweetser describes how Salem's older elite, a class created from successful early 19th-century trade, was overwhelmed by the town's newer role as an outer Boston suburb. Of Salem, he notes, "by day it is almost depopulated, many of its most noteworthy citizens going to Boston for business purposes, and returning to dinner and domestic joys."[52]

New seasonal resorts and a new magnitude of luxury in resort living also characterized the late 19th century.[53] More isolated northeastern settings such as the Adirondacks and the Maine coast were opened as railroads and then automobiles brought these areas closer to rapidly growing cities. The biggest shift, however, was toward both winter and summer elite resorts in the South and West. Georgia's sea islands and Florida's peninsula became popular winter enclaves, often with the help of land promoters, railroad investors, and hotel builders. Further west, a trickle of upper-crust visitors explored the curative powers of southern California's Mediterranean-like environment in the 1860s and 1870s. Quickly, the trickle broadened to a torrent and, by the 1890s, communities such as San Diego, Pasadena, Santa Barbara, and Monterey sported large numbers of seasonal and even permanent residents, as well as the

Figure 17.10
The changing elite landscape in New York City. This neo-Italian Renaissance structure, built in 1902 as the Morton Plant mansion, stood for 15 years as one of the many wealthy residences on Fifth Avenue. After 1917, however, it served as the American headquarters of Cartier Jewelers.

usual collection of resort hotels (Hotel Del Monte, near Monterey, 1880; Hotel Del Coronado, near San Diego, 1888). Colorado was an early elite destination in the Intermontane West.[54] Railroad promoter William Palmer designed Colorado Springs as an elite health resort in the 1870s and the image was successfully reinforced with the 1918 completion of the Mediterranean-style Broadmoor Hotel, replete with polo grounds, golf courses, and private landing strip (Fig. 17.11).

The regional spread of elite landscape influences continued during the 20th century. In the West, a sensitivity to the health-related and esthetic benefits of desert living prompted the creation of new resorts and permanent wealthy retreats. Elite haunts still include Santa Fe (after 1910), Palm Springs (after 1920), Phoenix (after 1925), and Las Vegas (after 1945). During the same period, the growth of skiing encouraged

Figure 17.11
The Broadmoor Hotel, near Colorado Springs, Colorado, a classic resort hotel boasting 350 rooms, built in 1918 for a wealthy clientele attracted by mountain air and the natural beauty of Pike's Peak. It anchors a resort complex that now features 700 rooms, 18 restaurants, 3 golf courses, a high-grade spa, and a vintage car and carriage museum.

landscape changes in traditional eastern mountain resorts (Adirondacks, White Mountains) as well as large new investments in heretofore isolated western settings such as Sun Valley, Idaho, Alta, Utah, Aspen, Colorado, and Big Sky, Montana (Fig. 17.12).[55] This modern diffusion of elite landscape settings has meant that today's wealthy have incredible financial and social freedom to live wherever they please, whether it is a Park Avenue apartment, a suburban estatelet, a Bluegrass horse farm, or an alpine chalet.

The more recent amenity-driven diaspora of the wealthy has had profound ecological consequences. Luxury beachfront homes have proliferated along coastlines prone to hurricane damage, flooding, and landslides from Cape Hatteras to Malibu. Many mountain settings tell a similar story. Wealthy retreats in high-altitude localities often expose homes to avalanches, or in forested areas to the threat of wildfires. Ironically, the economic price for living in these exotic centers of affluence is borne by society as a whole in the form of higher insurance rates and the increased costs associated with hazard protection, rescue, and mitigation.

Changing elite architectural tastes

Before the American Revolution, colonial excellence in Georgian-style architecture was nowhere better expressed than in Virginia, where plantation houses echoed the rigid elaborate symmetry, axial entrances, and geometrical proportions made popular by Englishmen such as Christopher Wren and James Gibbs.[56] In northern urban areas, Georgian townhouses often were architecturally simpler, set on smaller grounds, but structurally as large as their Virginia counterparts. Although most of the northern urban elite recreated the same two-story, four-over-

Figure 17.12
Elite landscape modification in the Mountain West. This view at Big Sky resort, near Bozeman, Montana, captures some of the landscape elements that appeal to 21st-century ski enthusiasts who can afford to live the high life in the Rockies. The resort opened in 1973.

four-room, rectangular Georgian style, differences between cities were apparent. In Philadelphia, the Quaker elite, perhaps because of the decline of their social preeminence, became increasingly sensitive to the need for grander visual displays of wealth, while more socially sure-footed and secure Boston bluebloods felt less compelled to reveal publicly their aristocratic status in the solid but hardly showy homes of North Square or the West End.[57] Elsewhere, the stubborn individuality of Charleston's upper crust already showed itself in a unique blend of British and West Indies architectural styles encouraging detached houses set perpendicular to the street.[58]

After the War of Independence, while acknowledging the continuing English pedigree, America's grand architecture reflects an increasing number of other influences. The Federal period ushered in a turn to lighter, more varied, ornamented, and delicate shapes and styles in elite houses, gardens, interior design, and furniture.[59] The shift drew upon the unique contribution of the Adam brothers in Scotland and was embellished further from closer affiliations with France and from the special

genius of an increasing number of professionally trained domestic architects, such as Boston's Charles Bullfinch.[60] In governments and in buildings, Thomas Jefferson, for one, felt emboldened to depart from the unending predictabilities of the Georgian style. He blended his francophilia with elements of classic Roman design.[61] Jefferson anticipated the major trend of the pre-Civil War era. Elite styles in houses, businesses, and public buildings evolved to draw strongly upon historical associations. "Grecian architecture" became the rage after 1825 (Fig. 17.7).[62] Drawing on the classic columns and pediments of the Parthenon, the style became the norm in Boston townhouses, upstate New York farms, and eventually across the South in the standardized antebellum plantation house. After 1835, in many areas outside the South, the spires, turrets, and steep gables of the Gothic Revival and the characteristic flat roof and often frescoed interior walls of the Italianate style signaled a turn toward an increasingly eclectic elite architecture and displayed an antebellum upper class that, according to Alan Gowans, was "growing ever richer, but not yet vulgarly aware of it."[63]

Between 1865 and 1925, America's upper-class esthetics leaned largely towards bigness and any decoration, European or otherwise, that displayed, if not one's good taste, then surely one's economic success and undoubtedly one's inviolate individualism.[64] It was a grand and gaudy era of ostentatious townhouses, mammoth resort "cottages," and plush metropolitan theaters. Architects such as R. M. Hunt, H. H. Richardson, and McKim, Mead, and White gave the wealthy whatever they wanted, whether it was a French Second Empire mansard roof, a Moorish minaret, a Victorian tennis court, or an Egyptian dining room. Regional divergences were evident, however.[65] New York City bested all in its displays of riches. Other cities such as Chicago, Denver, and San Francisco did their best to emulate the trend, while older, more aristocratic, and more slowly growing Boston and Philadelphia shunned some of the more exotic and extreme styles of the Manhattan millionaires.

By the early 20th century, however, a powerful modernist–internationalist style was selectively adopted, combining various continental European (Raymond Schindler and Richard Neutra), American (Frank Lloyd Wright), and even vaguely oriental influences (Fig. 17.13).[66] In addition, regionally, the innumerable versions, authentic and otherwise, of the Spanish Colonial Revival became well developed in parts of California, Florida, and the American Southwest.[67] In mountain resort settings, the wealthy similarly borrowed from German, Swiss, and Austrian traditions, combined them with modernist shapes and styles, and produced the homogenized alpine landscape so favored by the ski set.[68] In general, the last century has produced an American upper class with overwhelmingly eclectic tastes that are increasingly diffuse, often more informal, less attuned to any single arbiter of style, and broadly less dependent upon overt visual differences than the rest of American

Figure 17.13
The Dana–Thomas House in Springfield, Illinois, designed by Frank Lloyd Wright and completed in 1904 for Susan Lawrence Dana, who inherited a family fortune drawn from Rocky Mountain silver mines. It is a fine example of a wealthy patron prepared to invest in avant-garde architecture, in this case an iconic building of the Prairie School.

society.[69] The result is a modern elite esthetic in architecture as difficult to characterize as the upper class itself, but one which repeatedly reveals the almost limitless range of choices available to those who can afford to pay.

Reading the American elite landscape

Evolutionary processes

Understanding the cumulative impact of powerful and wealthy Americans on the national scene is made more difficult by the fact that such imprints, once made, continue to evolve, becoming part of a long accumulation of dynamic landscape features often dating from the

colonial era to the present. One expression of the process is the American readiness to append new architectural fashions on to their homes and other buildings.[70] In 1836, financier Nicolas Biddle, enamored with the Greek Revival, engaged an architect to add a Doric colonnade to the front of his Georgian-style mansion. As Gothic became the rage, scores of Georgian and Federal homes sprouted towers, turrets, and scrollwork. Mansard roofs and Victorian embellishments provided further

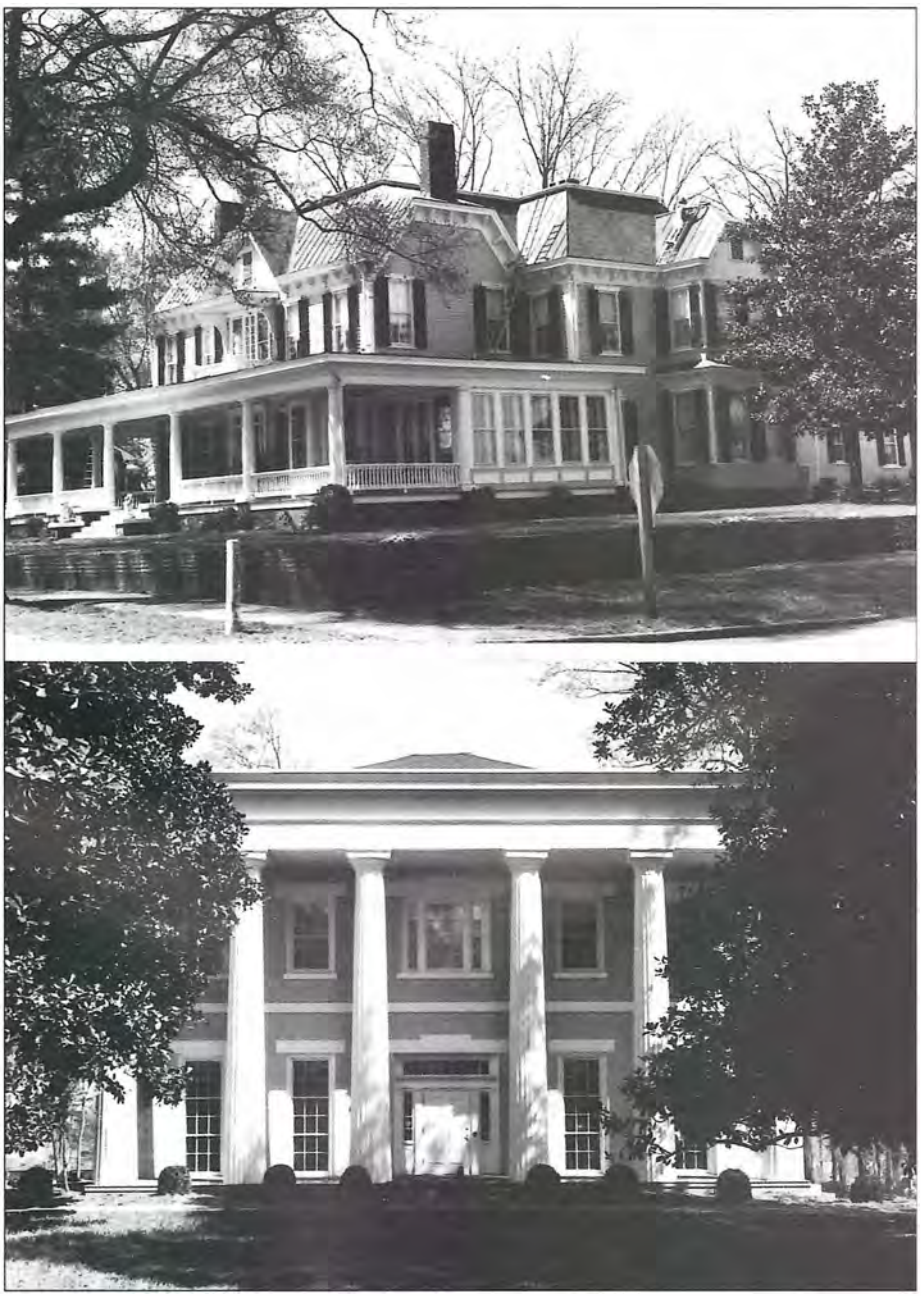

Figure 17.14
Evolutionary processes in the elite landscape. At top a Southern home, originally built before the Civil War, with popular mansard roof, extensive front porch, and entire rear half appended in the late 19th and early 20th centuries and, below, an antebellum home converted to a modern bank.

modifications for late 19th-century plutocrats. The accumulated results of such upper-crust tinkering often produce exquisitely mongrelized landscape features (Fig. 17.14).

Significant functional changes in the use of upper-class landscapes also complicate the pattern. In urban settings, most of the finer townhouses surviving demolition no longer serve as single-family residences.[71] Many are banks, museums, bed-and-breakfast establishments, stores, educational centers, or professional offices. Some remain as multifamily residential units. In central city settings, increasing numbers of 19th-century mansions pass through long cycles of decline, even abandonment, only to be renovated as new upper-class residences or businesses. In rural settings, especially on the suburban fringe, originally large country estates of 50 acres or more frequently are subdivided for smaller-scale and less exclusive upper-class housing on 1- to 5-acre lots.[72] Other estates became golf courses, shopping centers, and donated public parklands, with original mansions serving as clubhouses, meeting facilities, or even condominiums.[73]

The modern pattern

The palimpsest of landscape signatures expressing the dynamic impact of upper-class tastes and values on the American scene is now a centuries-long accumulation of changing architectural styles and settlement patterns. At the scale of the modern metropolitan area, a checklist of inner-city elite landscape elements includes persisting high-status housing districts (more likely in larger cities), run-down or renovated elite housing, elite housing in other land uses (public or private), metropolitan social clubs, refurbished grand hotels, new luxury hotels, high-rise luxury condominiums, long-established Episcopalian churches, and high-rent shopping and restaurant districts (also in larger cities) (Fig. 17.15). On the suburban fringe, landscapes of private power and wealth are best seen in exclusive high-status, low-density suburbs, larger intact elite estates (increasingly rare), country clubs, private day and boarding schools, and fashionable upper-class shopping areas.

In the larger regional context, major cities such as Boston, New York, Philadelphia, and Chicago still display sizable zones of urban affluence. Inevitably, every good-sized northeastern or Midwestern center also has its share of wealthy suburbs. In addition, older rural strongholds such as the Hudson Valley reflect the landed gentry's enduring impact. Traditional resort settings on the New England coast and in high-amenity mountain and hill locales (White Mountains, Berkshires, and Catskills) are also fruitful areas of exploration.

The American South offers old coastal colonial-era centers (Charleston and Savannah), former plantation zones (eastern and middle Virginia, western and central Kentucky, the Cotton Belt), traditional places of leisure (woodland plantations, Georgia's sea islands, Florida's West Palm

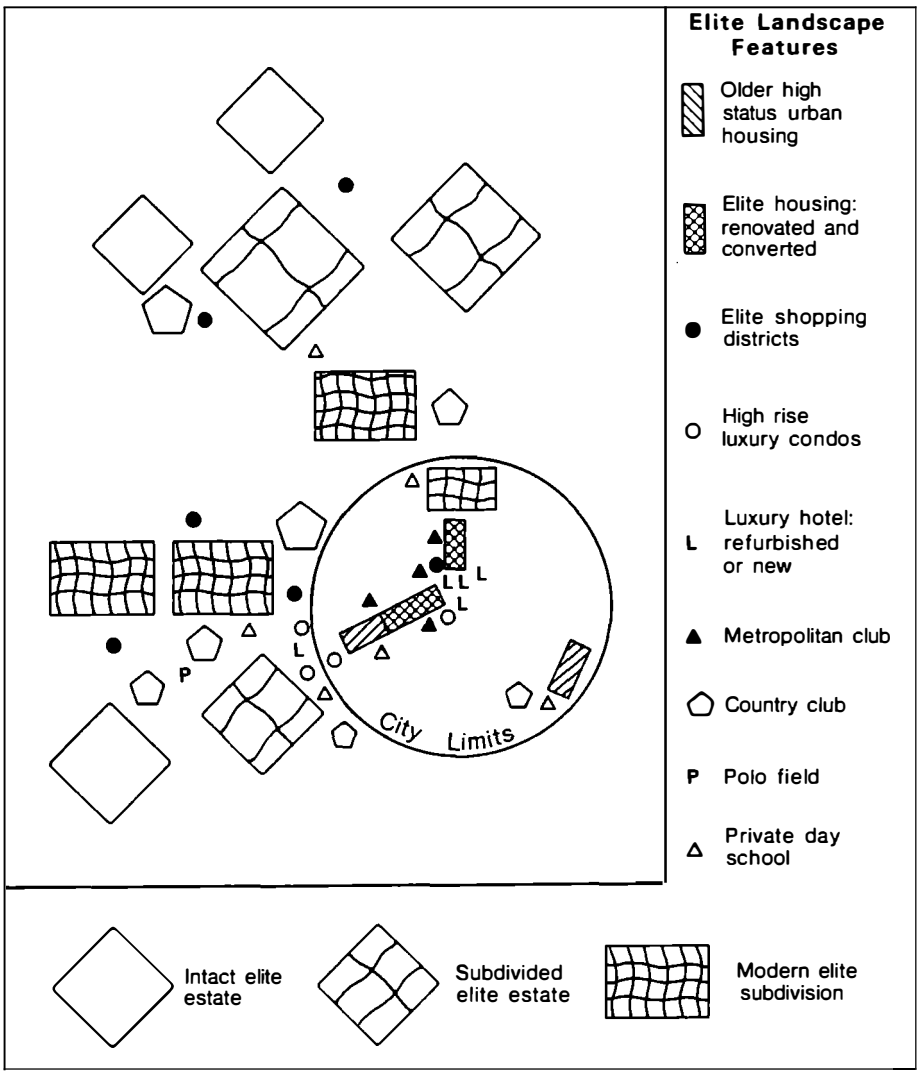

Figure 17.15
Modern elite landscape features of metropolitan and suburban America.

Beach), and the more recent affluence of the Sun Belt, well represented in 20th-century suburbs (Atlanta's Buckhead district, Houston's Hunter Creek Valley) and in newly built resorts. High-amenity zones in the American West are important and relatively recent regional additions to the geography of elite landscapes.

Rising home values provide a recent snapshot of American regions and settings that continue to attract the eye of the wealthy (Fig. 17.16).[74] In 2003, four counties in the San Francisco Bay area featured median home prices of more than $500,000 and more than 4 percent of all home sales in California were for more than $1 million. The peripheries of other large urban areas, including Seattle, Denver, Chicago, Atlanta, Miami, and much of the Northeast continue to collect affluent residents.

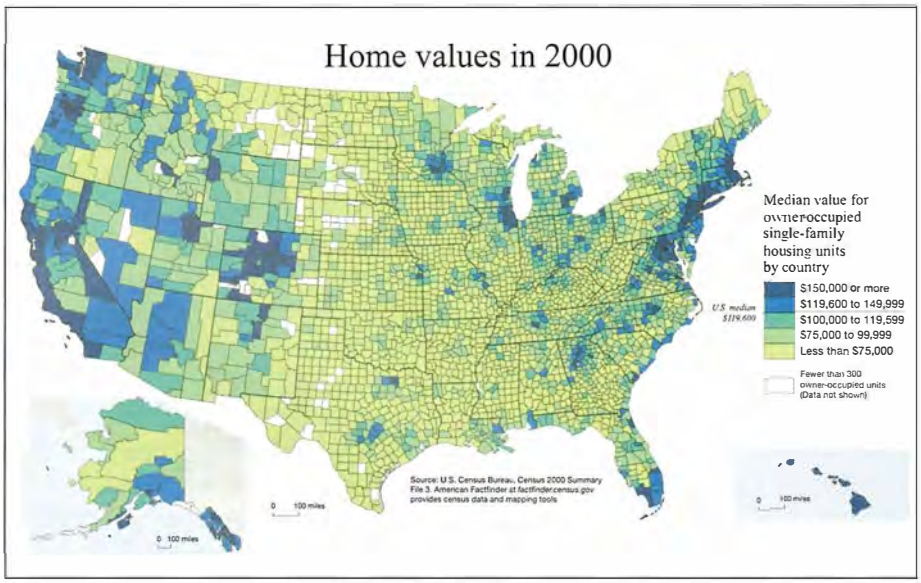

Figure 17.16
Median home values in 2000. The pattern highlights more expensive housing in suburban counties near large cities and in high-amenity environments in the Sun Belt and across the interior west.

Selective upper-class migrations to more isolated environments in California's Sierra Nevada, Wyoming's Jackson Hole, Idaho's Sun Valley, and numerous alpine retreats in Colorado put astounding pressure on housing markets and local resources.

De Toqueville's observations notwithstanding, the result is a national landscape in which the impact of the wealthy and powerful, from Bar Harbor, Maine, to Palm Springs, California, is pervasive and enduring. Their mark is likely to grow in the 21st century. By 2004, there were more than 7.5 million American households with a net worth (excluding their home) of more than $1 million and the total of super-millionaire households (net worth more than $5 million) leaped to over 700,000.[75] It is surely the most opulent and self-consciously displayed theme in the making of the American landscape. It is a visual record of changing landscape tastes, shifting regional patterns of wealth accumulation, transforming social processes that diffuse upper-class values to the broader American mainstream, and dynamic historical forces which continue to alter the form and function of elite landscapes once they are created. It is, above all, a single yet complex expression of both greed and magnificence, an expression of the continually evolving American Dream that embodies the best of its optimism and native exuberance along with its naive excesses and its uncritical acceptance of the good life.

Chapter eighteen
Paving America for the automobile

JOHN A. JAKLE

NO OTHER technological innovation has so transformed the geography of the United States as the automobile. Landscapes inherited from pre-automobile times have been remade to suit highway-oriented technology and new landscapes have emerged shaped strictly in its image. The roots of this revolution lie deep in the American experience, for the automobile has enabled Americans to act out long-established dreams. The motor car has not imposed new values so much as it has reinforced old. Underlying the love affair with automobiles is an American drive for individual fulfillment through freedom of mobility, the love of newness coupled with a naive belief in change as progress, the embracing of privatism fueled by competitive rather than communal impulses, the pursuit of the utilitarian that embodies profound disrespect for the environment, and the belief in equality whereby a tyranny of the majority often rules. These social values can be observed in the processes of geographical change for which automobile technology stands symbolic.

Automobiles

The motor car was at first a sporting device used by the very rich both as a recreational diversion and as a symbol of status. The approximately 300 motor vehicles owned by Americans in 1895 were European imports, but the next year the Duryea Brothers began to market an American product and, by 1899, when about 2,000 cars were operating in the United States, some 300 factories were in production.[1] The early automobile was a hybrid creature combining a buggy, a bicycle, and an internal combustion engine. Requisite technologies included the atomizing carburetor, as perfected on gasoline engines used on boats, and cold-rolled steel, accurately machined gears, ball bearings, and pneumatic tires, all perfected in bicycle manufacture. The buggy, or more appropriately the wagon, inspired the light, high-wheeled cars necessary to negotiate America's primitive roads. The American

automobile did not suddenly blossom into existence. Rather, it evolved out of pre-existing forms of transportation.

The automobile industry's growth was steady through the first decade of the new century.[2] By 1908, there were nearly 200,000 automobiles among a population of 90 million people. Some 700 automobile factories were active, most of them small shops producing a few hundred high-priced cars a year.[3] Thereafter, growth was explosive as Henry Ford and other manufacturers pioneered mass production using moving assembly lines. Pointing toward an inexpensive car affordable to many, Ford wrote in 1909:

> I will build a motor car for the great multitude. It will be large enough for the individual to run and care for. It will be constructed of the best materials, by the best men to be hired, after the simplest designs that modern engineering can devise. But it will be so low in price that no man making a good salary will be unable to own one.[4]

Ford's Model T declined in price from $950.00 in 1910 to $290.00 in 1924. Whereas it took the average worker 22 months to buy a Ford in 1909, by 1925 it took only three months.[5]

By 1914, the output of motor vehicles exceeded that of carriages and wagons. Two years later there were 2 million cars on the road, with 8 million in 1920 and 10 million in 1923.[6] Kansas had more cars registered than France or Germany, Michigan more than Great Britain and Ireland combined. By 1930, when automobile registration reached 23 million, the United States was building some 80 percent of the world's automobiles.[7] The number of manufacturers shrank in the competition. Only 87 firms exhibited at the New York City automobile show in 1921, and only 46 in 1930.[8] For surviving firms, the task at hand took on the dimensions of a crusade. Hudson's Roy Chapin could write in 1926: "When I sold a car, I sold it with the honest conviction that I was doing the buyer a favor in helping him to take his place in a big forward movement."[9] Americans thrived on the increased mobility. Travel by car held implicit freedom of choice and it increased personal control over the physical environment denied by other forms of movement. Cars took owners door to door by routes owners chose, and by schedules they arranged. The automobile not only enabled but it symbolized progress through widened horizons and enhanced opportunities.

Automobiles changed. The Model T with its lightweight, high-torque engine, two-speed transmission and three-point suspension was ideal for pulling rural people out of the mud. Indeed, farm and small-town Americans were the first mass adopters of automobiles, especially in the Middle West and West. Model T owners could handle most of their own repairs and, with fixed prices on spare parts, readily available through mail-order catalogs, the car was a populist's ideal, engendering a sense of self-sufficiency in transportation. With such innovations as closed

sedans, electric lights, and four-wheel brakes, automobiles became increasingly complex and less easily serviced. On the other hand, they became more comfortable and easier to drive. With the introduction of electric starters, the market opened wide to women who generally had found it difficult to use hand cranks. Increasingly, Americans of both sexes demanded style as well as performance, for the automobile provided not only transportation but came to serve as status symbol signifying those who were tied into the emerging modernism. In his Model A, even Henry Ford acquiesced to the new demand for glamour.

Only during wartime did government seek to control automobile production. The role of government became one of subsidizing automobile technology through road construction. The courts, in failing to uphold George Sheldon's patent on the gasoline engine, broke a private attempt to license car manufacturers and impose production quotas. This decision favored those who saw a victory over monopoly capitalists who put short-term, high-unit profit ahead of long-term, low-unit profit which could translate into mass use of the automobile. The decision reinforced, as historian James Flink notes, public belief that technological innovation ought to compete freely in a democratic market: a *caveat emptor* to *laissez-faire*.[10] Those manufacturers who fought the Sheldon patent presented themselves, like crusaders, as champions of an idealized free enterprise system.

Highways

New automobiles demanded new roads.[11] Street and road improvements were integrally linked to the evolving automobile in a path of circular causation. Better cars and trucks demanded better highways, but better highways invited faster and larger motor vehicles.[12] Finally, the very settlement fabric of the nation was rent asunder. The scale of things changed to accommodate the speed, flexibility, and bulk of the automobile. Patterns of accessibility were changed and land uses were rearranged. People were put into new and novel spatial arrangements with profound social implications. Old proximities were destroyed and new proximities developed. The federal government played a central role in this unwinding drama, an involvement that matured by stages. From a complete lack of concern prior to 1897, the government began a policy of accommodating the automobile within the existing geographical structure of the country. After World War I, emphasis was placed on redesigning roads to promote automobile technology, an emphasis that accelerated after 1935. After 1956, a goal emerged of national automobile dependence in landscapes fully oriented towards the automobile.

With the railroads dominating long-haul transportation, the nation had earlier seen little need to develop its highways. Rural roads served

only to tie together localities and were administered by township and county officials with limited taxing powers, officials sometimes solely dependent upon corvée labor. The invention of the bicycle and the banding together of cycling enthusiasts in the League of American Wheelmen in the 1880s encouraged the macadamizing of rural roads outside cities, especially in Massachusetts and New York.[13] In 1900, when there were only 4,000 automobiles, there were 10 million bicycles in the United States. Out of various farmer alliances, and out of the Populist Movement generally, there came a demand for improved roads to counter railroad dependence, part of the reaction to abusive freight rates and the monopolistic powers that rail corporations held in many localities. In 1891, the Post Office established the first rural free delivery service, making improved rural roads more essential. In 1893, an Office of Road Inquiry was established in the Department of Agriculture to disseminate road-building information.

Early in the century, the automobile fit easily into the American scene. Motor cars simply moved somewhat faster than horse-drawn vehicles, albeit less dependably. Only when automobiles and pedestrians conflicted, or when automobile traffic became congested, were changes imposed on streets and roads. After 1910, stop signs and traffic signals were introduced in cities. Speed laws were formulated, some excessively restrictive, against which the newly organized American Automobile Association lobbied. The first concrete highway was built in 1909 with brick and asphalt also promoted as paving surfaces (Fig. 18.1). Automobile manufacturers launched a massive lobbying effort to improve the nation's roads. Early effort formed around the Lincoln Highway Association, headed in its most active period by Packard's Henry Joy.[14] Not only was a route marked from New York City to San Francisco, but the automakers financed the building of "demonstration miles" to prove how carefully engineered highways of ribbon concrete could speed and ease long-distance travel. Joy's purpose was "a quickening—an awakening—a national revival" which meant "a bigger, better, more prosperous, and more agreeable America."[15] The Lincoln Highway was the precursor of a host of named trunk roads (the Dixie Highway, the Jefferson Highway, etc.) which predated the numbered highway system.[16]

The federal Highway Act of 1916 required states to establish highway departments in order that they might obtain, on a matching basis, federal subsidy for highway construction. Although it elevated control of highway improvement from the local to the state level, it did not call for an integrated network of trunk routes connecting cities. Rather, states could allocate monies as they saw fit (usually in response to political leverage), for Congress was as yet reluctant to impose a strong federal presence in an arena traditionally of state prerogative. During World War I, when the railroads proved incapable of meeting the nation's materiel and troop movement needs, a clear rationale for federal

Paving America for the automobile

Figure 18.1
This specially preserved stretch of original brick road on the old Chicago and Iowa Trail is the oldest of its kind in northern Illinois. Built in 1914–1915, it is seen here looking west, just east of the town of Oregon in Ogle County.

involvement emerged. The Council for National Defense appointed Roy Chapin in 1917 to head a Highway Transport Committee. Motor trucks began to move freight in convoys from the Middle West's manufacturing cities to eastern seaports, especially Baltimore. Roads, such as the Lincoln Highway, suffered extensive damage and Maryland, in order to regulate traffic and generate income for road repairs, began the first licensing of motor vehicles, and imposed the first weight restrictions. In 1919, Oregon levied the first gasoline tax as a more expedient way of garnering road repair dollars.

The euphoria of patriotism that survived the Great War was harnessed by the highway lobbyists to help create a national defense highway system. The 1921 Highway Act required each state to designate 7 percent of its road mileage as "primary." Only these roads were eligible for federal aid on a 50:50 matching basis. The overall highway network, intended to connect every city with over 50,000 residents, was expected to cover some 200,000 miles. A federal tax on gasoline charged at the pump was intended to fuel the program.[17]

The automobile's popularity as a thing to be owned and enjoyed could not be denied. The automobile promised release from the crowded cities for urbanites flocking to the countryside searching for relaxation. For rural people, it promised access to city excitement and culture. Newton Fuessle, an apologist for the Lincoln Highway, argued that automobile tourism would teach patriotism and "sew up the remaining ragged edges of sectionalism," thus revealing and interpreting America to its people. The new highways would give "swifter feet to commerce"

and thus bind Americans "into one highly organized, proficient unit of dynamic, result-getting force electric with zeal" (Fig. 18.2).[18] Americans were staunch highway supporters, not so much for implicit military rationales, but for the excitement and promise of the open road and the economic implications of increased mobility and ease of connections. By 1930, the automobile had affected all aspects of middle-class life in the United States. Robert and Helen Lynd's (1929) sociological analysis of "Middletown" showed that private cars played either a contributory or a dominant role in all areas of social life: getting a living, making a home, raising the young, using leisure, engaging in religious practice, and participating in community activities.

While state highway departments were rushing to tie the nation's cities together, municipal authorities were struggling to accommodate automobiles on streets designed for slow-moving horse-drawn vehicles. Street-widening began, especially on the major thoroughfares serving central business districts. Lesser streets near downtowns were made one-way in order to increase traffic-carrying capacities. Residential streets that once had served as open spaces conducive to neighborliness and recreation, as well as travel, were re-engineered exclusively as arteries for automobiles and trucks. Streetcar efficiency declined in the press of traffic and in many places automobile lobbyists succeeded in replacing rail transit with buses, arguing they were more flexible and cheaper to operate. General Motors Corporation, through subsidiaries, left nothing to chance, buying out the streetcar companies of over 100 American cities. Omnibus Corporation reduced New York City's 1,344 miles of streetcar line to only 337 miles by 1939.[19] City streets would not be people-oriented so much as they would be machine-oriented.[20]

Figure 18.2
Along California's Mokelumne River. Here the new road, now completed, soars above the valley as if to deny topography. Below, the old road winds where once ferries operated across the flood.

This impending change was explicit in Futurama, the General Motors exhibit at New York City's 1939 World's Fair. The model, portending American cities of the 1960s, showed miniature multi-level superhighways linked by sweeping cloverleaves. Utopian in alabaster white, the roads connected tall skyscrapers across park-like spaces of green.[21]

The American freeway was born in experimentation. The Long Island Motor Parkway, the first road anywhere exclusively for automobiles, was completed in 1911 by William Vanderbilt to speed the wealthy from Long Island estates toward Manhattan. The Bronx River Parkway, a multipurpose public endeavor completed in 1923, eliminated water pollution, checked flooding, and provided recreational space along the abused Bronx River north from New York City. New Jersey pioneered the use of road cuts, viaducts, grade separations, and controlled exit and entrance ramps at bridge and tunnel approaches outside New York City and Philadelphia. Under the direction of Long Island Park Commissioner Robert Moses, New York completed in 1934 the Meadowbrook Parkway to Jones Beach State Park. It was the first divided, limited-access road built to European "autobahn" standards. Four years later, the first long-distance intercity expressways opened, the Merritt Parkway and the Pennsylvania Turnpike.

Road standards were adopted by the American Association of State Highway Officials (10-foot lanes, 8-foot shoulders, a minimum surface thickness of 6 inches, and a 1-foot crown on a two-lane pavement) and national speed limits were set for the new highways (70 miles per hour in open country and 50 miles per hour in urban areas). These decisions determined the physical layout of the new roads and, indeed, of the landscapes they passed through.[22] Lines of sight would be long and uninterrupted, grades would be moderate, and a wide, sweeping geometry would prevail, dictated by the gentle curves of interchanges. The roads would consume much space and thus would prove especially disruptive in the cities. The first urban expressway, Los Angeles' Arroyo Seco or Pasadena Freeway, was opened in 1940.

Limited-access highways were at first special-purpose roads, as the word "parkway" connotated.[23] They were rationalized as recreational environments, means by which city people might escape the crowding, dirt, and noise of urban places. They would be the "lungs" of the city, as parks had been justified earlier, offering city dwellers access to open space. A new model for basic urban design resulted. With the central business district the hub, untouched by freeways but surrounded by an inner belt, expressways would radiate outward like the spokes of a wheel giving access to garden suburbs and surrounding countryside.[24] Once built, the new roads quickly came to serve multiple functions: freight haulage, commuting, and long-distance travel. After World War II, recreational pretenses were dropped.

In 1949, the Bureau of Public Roads was reconstituted in a new Department of Transportation. In 1954, President Dwight Eisenhower

asked General Lucius Clay, then a director of a large oil company, to chair an *ad hoc* committee (the Committee on a National Highway Program) charged with assessing the transportation needs of the nation. Not surprisingly, the committee, which included the Teamsters' Union head, a road machinery manufacturer, and the head of a large construction firm, called for the immediate building of a new dual-lane, limited-access highway system to be separate from, but complementary to, pre-existing roads. The 1956 Highway Act formalized a plan for some 41,000 miles of road, 5,000 miles within cities.[25] A Highway Trust Fund was established through which federal taxes on motor fuels, tires, new buses, trucks and trailers, as well as a use tax on heavy trucks, would be channeled to road construction. The federal government would pay 90 percent of all construction costs, an irresistible inducement to the various states to build highways. The President gave four reasons for building the new system: existing highways were unsafe; too many roads were congested; poor roads inflated transportation costs for business; and, finally, existing highways were inadequate to the evacuation of cities threatened by nuclear attack.

No real consideration was given to the railroads or to public transit as alternative forms of transport. No consideration was given to linking highways, new or old, with other transportation modes. No thought was given to how highways might affect the established geography of the nation. What was transportation for, asked critic Lewis Mumford. "The purpose of transportation," he wrote, "was to bring people or goods to places where they were needed, and to concentrate the greatest variety of goods and people within a limited area."[26] A good transportation system minimized travel in this regard. But to Mumford the proposed highway system, which would spread things out and increase travel, could only be justified as a stimulus to automobile, gasoline, rubber, and concrete manufacture. "The most charitable thing to assume about this legislation," Mumford concluded, "is that they hadn't the faintest notion of what they were doing." Planner Robert Goodman was not so circumspect. "That Washington's spending to help states build highways is one of the most expensive budget items is hardly unrelated to the fact that seven of the nation's ten largest corporations produce either oil or cars."[27] Year after year, the Highway Trust Fund pumped billions of dollars into highway construction. Earnings could not be spent for any other purpose, not even, after the 1966 Highway Act, for highway beautification.

Between 1947 and 1970, the federal government spent $58 billion on highways. Federal expenditures on airport construction and airline subsidy reached $12 billion during the same period, and $6 billion for waterway development. A meager $795 million was spent on urban mass transit.[28] In the 1960s, the average automobile carried 1.6 persons per trip into the nation's central business districts each day. Thus, less than 5,000 people traveled the average freeway lane per hour. Rail

transit, on the other hand, could move 50,000.[29] In Chicago, six rail transit lines and eight commuter railroads carried nearly 120,000 passengers away from the downtown "Loop" between 4:15 and 5:30 p.m. each workday.[30] By automobile, it would have required 70 lanes of freeway in addition to the 29 already in use in 1970. Only Chicago, New York City, Philadelphia, and a select few other metropolises continued to support existing transit systems. Even in these places, transit suffered from a vicious cycle of deteriorated equipment, declining use given increased automobile competition, declining revenue, and inability to recapitalize for needed renovation. Travel on commuter trains fell from 32 billion passenger miles in 1950 to less than 8 billion in 1970. In cities, the elimination or decline of transit actually crippled the automobile as an effective transportation mode as the new freeways and surface streets congested with traffic for longer periods. Freedom of action was greatly reduced when urbanites found their choices in travel restricted to a single alternative, the automobile.

Landscapes

Rural places

Evolution of the automobile as machine, and the highway as its container, altered rural and urban landscapes dramatically. In rural areas, it accelerated the dismantling of commercial infrastructure focused in hamlets and villages as farmers could now buy and sell readily in distant towns and cities. In bigger places, more goods and services were available from larger establishments that could offer, because of their size, lower prices. Mechanization in agriculture (especially the tractor and truck) increased labor effectiveness and farms grew larger with fewer laborers. Declining population wrought diminished tax revenue, undermining support of public services. Rural communities were impoverished everywhere. Where lack of fertile soil, flat terrain, or other resources discouraged large-scale commercial agriculture, the automobile hastened conversion of abandoned farmland to recreation or other city-oriented uses. In 1930, the farm population of the United States numbered 30.5 million, or roughly one-quarter of the total population. In 1980, it numbered only 6.1 million, or less than 3 percent.[31] The rapid spread of the automobile was a catalyst in this change.

A new kind of road, the freeway, came to dominate intercity travel in rural areas (Fig. 18.3).[32] The old roads had been, as they continue to be, a definite kind of place: the geography of the roadside as important as that at the end of the road. Direct access to highway margins encourages social contact between locals and strangers and rural ways of life can be observed close up. But limited-access roads isolate and contain the motorist in an environment divorced from its surroundings. These new roads exert a tyranny on what motorists see, with the countryside

Figure 18.3
Ohio's I-70 just south of St. Clairsville, totally hidden from view. Where once the National Road and later U.S. 40 ran, the landscape has been configured anew. The car-bound motorist, confined to a ribbon of pavement, is distanced from the world beyond. Not only has the landscape changed in rural America, but the American experience of landscape through high-speed freeway driving has also changed.

reduced to background. Interaction between locals and strangers is impossible except at freeway interchanges. Both the rural freeway, for its monotony, and the encompassing countryside, for its distance, can be safely ignored in high-speed driving. Thus, the new highways have changed not only American rural landscapes, but the manner by which Americans view and experience those landscapes, as well.

The suburbs

American cities have been remade in recent decades. Although automobiles and highways have not been the only factors operable, they have been key elements in precipitating metamorphosis. As automobiles encouraged commuting, commuting excited city growth outward: not the ordered growth previously restricted to railroad and streetcar lines, but an explosive mutation that produced a new, amorphous, sprawling suburbia oriented to highways (Fig. 18.4). As the suburbs boomed, inner-city neighborhoods declined under the assault of freeway construction and related urban renewal. During the 1970s, the nation's suburbs grew by 12 percent, while its central cities lost 5 percent of their people.[33] In the largest metropolises (those containing more than 1 million residents), approximately 62 percent of the people now live outside the central city. Today, suburbia accounts for approximately 50 percent of the nation's total population, and has in effect become the predominant place-type in the American experience. Already some 80 percent of the nation's population growth between 1950 and 1970 was located there.[34]

Whereas cities had been highly compact places with high building densities, they now sprawled with substantially lower densities. For

Paving America for the automobile

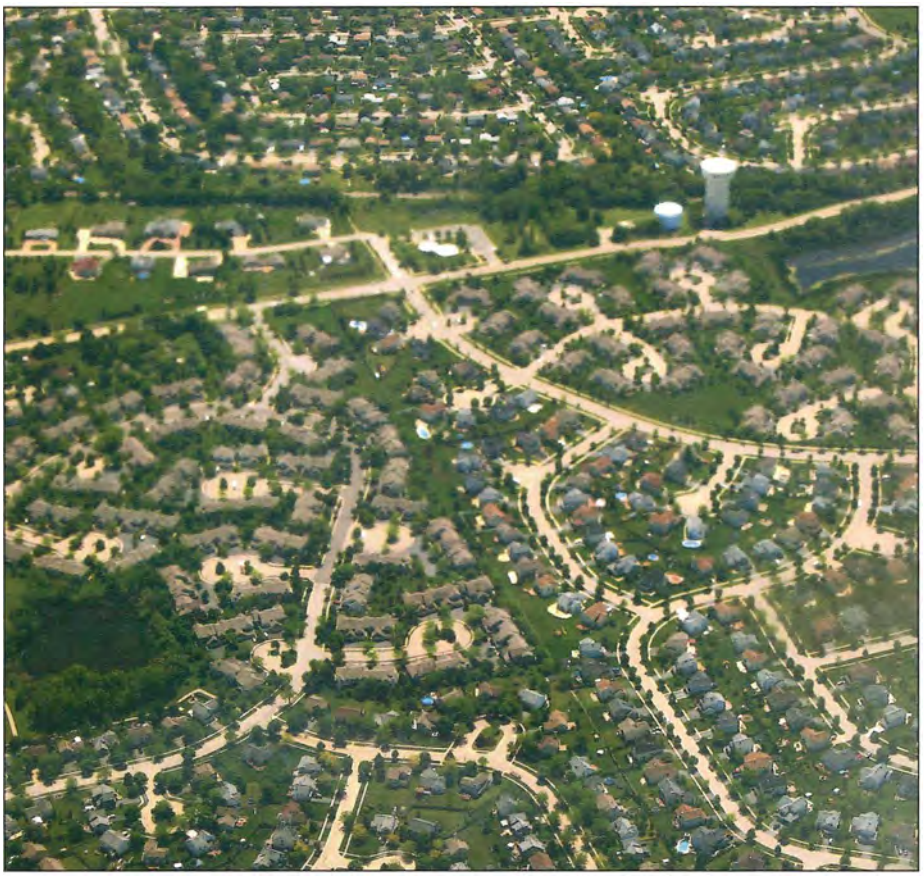

Figure 18.4
A Chicago suburb. Automobiles and the highways that serve them have encouraged urban sprawl, creating a spread-out city of look-alike houses in look-alike subdivisions. This aerial view symbolizes the middle-class response to an aging inner city, namely to escape to pastoral Edens of broad streets, double driveways, and two-car garages.

example, the urbanized area of Washington, D.C., quickly grew from 181 to 523 square miles between 1950 and 1970, and by 2000 to 1,313 square miles. Miami grew from 116 to 1,702 square miles over the last 50 years.[35] Multicentered urban agglomerations evolved. Southward from Los Angeles in Orange County, California, some 2 million people now live in some 26 cities, several approaching a quarter million each. To the north, San Jose, with 70,000 people in 1940, now exceeds 930,000 and is larger than nearby San Francisco. Such development portends what Peirce Lewis calls the galactic city comprised of loose, separated urban clusters "rather like galaxies floating in space."[36] Other terms, like "megalopolis" and "conurbation," describing these new realities, have entered the American lexicon.

The spread of the automobile did not cause urban decentralization; rather, it served as an enabling mechanism. The federal highway program provided the geographical infrastructure upon which other governmental programs fostered suburbanization. In 1934, the Federal Housing Administration was created as a means of stimulating the housing industry and thus the economy stricken by economic depression. The new organization insured mortgages made by private lenders, reducing the size of required down payments as well as interest rates

and thus making houses more affordable. By 1972, it had helped some 11 million families to own houses, increasing the percentage of Americans living in owner-occupied dwellings from 44 to 63 percent.[37] In 1944, the Veterans Administration created similar mortgage programs to aid veterans.

Building standards suggested by the FHA and VA programs inadvertently dictated the physical structuring of new neighborhoods. Subdividers and builders tended to adhere to recommendations regarding minimum lot size, setback, separation of houses, and character of yard. Spread-out places were the result. Missing were the conveniences of pedestrian travel traditional to older neighborhoods. Stores once close by at the ends of short blocks, where streetcars ran, were removed upward to several long blocks or even several miles away. Travel by car became a necessity. Whereas narrow lots had been used to pack multiple-story houses close together in the old city, now wide lots, usually with single-story houses, prevailed in the new. In this scheme there was no place for row-, terrace, or other traditional house forms. Indeed, 97 percent of all new single-family houses built between 1946 and 1975 were detached on open lots.[38] The "rambling ranch" with attached garage came to symbolize postwar affluence.

Affluent white Americans began to flood into the new suburbs during the 1950s, the black middle class excluded until after civil rights legislation of the subsequent decade. In 1970, median household income in the central cities was but 80 percent that of the suburban and, in 1980, 74 percent.[39] Economist Richard Muth estimated that median income in metropolitan areas in the 1970s increased at about 8 percent with each mile traveled outward from a city center, income doubling every ten miles.[40] The white middle class sought new housing to escape deteriorating inner-city neighborhoods fraught with social change as black and other minority groups concentrated there. The new suburbanites also sought tax benefits. Mortgage interest payments were deductible at income tax time. For businessmen, the 1954 tax code introduced accelerated depreciation on new buildings. Suburbia became a kind of tax haven for those who could afford (and obtain) the initial capitalization to live and do business there. Here was security—a place of stability where equity in private property could be protected.

Federal subsidy of municipal sewer and water systems not only accelerated urban sprawl, but encouraged the proliferation of municipal governments. Through World War II, most big cities had easily annexed peripheral areas through control of public utilities. Suburban governments had faced especially prohibitive startup costs in providing water services. But after World War II, with such difficulty eliminated, suburban governments of all kinds proliferated. Today there are over 22,000 governmental units, each with their own taxing power, in the nation's metropolitan areas, an average of 86 per metropolitan area.[41] New York City has some 1,400 governments, and Chicago over 1,000.

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With governmental authority so divided, it was difficult to plan the new metropolis. Thus, suburbia has sprawled outward, the locating of subdivisions, shopping centers, highways and other facilities largely uncoordinated. Kenneth Jackson writes of Los Angeles:

> Its vast, amorphous conglomeration of housing tracts, shopping centers, industrial parks, freeways, and independent towns blend into each other in a seamless fabric of concrete and asphalt, and nothing over the years has succeeded in gluing this automobile-oriented civilization into any kind of cohesion—save that of individual routine.[42]

Today, individual routine for most suburbanites is inefficient time-wise and wasteful of energy. Without cheap gasoline, suburbia would come unglued, and the steep gasoline price rises of the new millennium are raising this specter. Automobiles consume about one-quarter of the nation's oil needs, and over half of that is consumed in intra-city driving. In 1980, the typical American worker took 44 minutes commuting 18.4 miles to and from work at an annual personal expense of some $1,270.[43] Instead of being concentrated geographically, as in the traditional city, jobs are now decentralized. As early as 1963, industrial employment in the United States was more than half suburban-based, and by 1981 already about two-thirds. Should mass transit regain popularity—as, for example, it has shown signs of doing in 2008—its effectiveness would be substantially hindered by today's excessive dispersal of activity.

Inner cities

Central areas in most American cities have suffered decline (if not outright abandonment) in the face of suburbanization. Again, the ascendancy of the automobile has enabled and, indeed, directed change. Again, various federal programs in combination with highway building influenced substantially what we see in the landscape today. The 1949 Housing Act created urban renewal, intended urban revitalization through the bulldozing of slums. By removing physical decay, it was assumed that social decay also would be eliminated. By paying up to two-thirds the costs of land clearance, the program served more as a subsidy to real-estate and building interests than as a mechanism for solving slum problems. Indeed, the threat of urban renewal did much to destabilize neighborhoods, creating the very physical conditions planners were seeking to solve. Landlords disinvested buildings, failing to repair and maintain properties. Accelerated obsolescence reduced property values, so reducing taxes collected. With decreased revenue, municipal governments began to disinvest public streets, parks, and schools. Police, fire, and other public services were curtailed. By 1967, some 1,400 urban renewal projects had been launched in 700 cities.[44] In

most cities, displaced residents crowded into adjacent neighborhoods, fostering a spiral of slum development there. Four out of five families displaced were black.

Freeway construction had similar impact (Fig. 18.5). Engineers, and the political and economic interests that supported them, worked a tyranny on inner-city communities. Whole neighborhoods were sacrificed to generate capital gains for the influential.[45] Planners seemed unresponsive to the human needs of people displaced or unappreciative of the neighborhoods and communities destroyed. The accepted values were those of business, government, and the supporting governmental bureaucracy. As commercial and industrial properties provided employment and paid substantive taxes, so those properties should be enhanced in worth. Where vacant land or other open space (such as parks) was unavailable, residential properties were readily sacrificed to freeway development. Even where neighborhoods were partially spared, traffic congestion, noise, and dirt generated by the new roads depressed property values. Often, surviving neighborhoods found their parts hopelessly disconnected by freeways that served as barriers to local movement (Fig. 18.6). On the other hand, freeways have undeniably alleviated mounting urban traffic congestion.

Figure 18.5
South-central St. Louis, looking south from the Arch. New highways cut through the old fabric of the city have unraveled old neighborhoods. The pedestrian- and streetcar-oriented city has been sacrificed to the freeway designed to rush suburbanites downtown. Downtown's margins have been lacerated with overpasses and parking lots, forming a sea of barren concrete.

Paving America for the automobile

Figure 18.6
North-central Memphis, Tennessee. Expressway interchanges, sinewy multistory structures of concrete and steel engineered for speeding vehicles, require vast acreage and usually relegate the ground beneath to deadened neglect. Here, an attempt is underway to give the ground-level parking zone a somewhat more park-like appearance.

Central business districts

Although favored in some cases by the new freeways, most large and small city business districts have suffered decline. Retail and wholesale trade and even administrative functions have joined the rush to the suburbs. Whereas corporate skyscrapers still dominate skylines, downtown is increasingly awash in a sea of widened streets and parking lots (Fig. 18.7). Over two-thirds of the land in most downtown business districts is covered by concrete and asphalt.[46] Disappearing is the traditional downtown fabric comprised of modest buildings integrated along pedestrian streets. The change is slow: a building hauled down for a parking lot, then another and another. One by one, skyscrapers come to turn impersonal walls of stone and glass to sidewalks little used. Commuters depart in the evening, leaving downtowns deserted. Business districts may still symbolize the metropolis as center, but for most cities it is a hollow ritual. Street life is increasingly concentrated in suburban business centers; the pedestrian, for his part, an animal increasingly caged in enclosed shopping malls.

Retailing changed when the affluent moved to the suburbs. Stores long located downtown, especially those selling convenience and expensive shopping goods, moved to peripheral shopping centers. In 1960, there were some 4,000 planned shopping centers in the United States.[47] What survive downtown in most cities are discount and remainder stores catering to low-income, minority populations. Most of their customers are still public transit dependent and represent only

Figure 18.7
Downtown Houston. Viewed from an expressway, the edge of the central area displays three ecological dominants: skyscraper, street, and parking lot. Impressive as tall buildings may be when composing a distant skyline, close up and at ground level they stand as isolates surrounded by asphalt and automobiles. Pedestrians here are completely marginal.

a shrinking residual market for downtown merchants. In some cities, new downtown shopping malls and retail facilities opened in historic districts promise to reverse some of the decline.

Commercial strips

No landscape reflects more the automobile's impact than the commercial strip.[48] It is a built environment created for the automobile, or, more precisely, the motorist as customer (Fig. 18.8). Automobile convenience is the underlying organizing principle of space utilization. Low, sprawling buildings, dominated by giant signs, beckon motorists into adjacent parking lots. Street margins glitter with the array: supermarkets, discount stores, fast food restaurants, motels, gasoline stations. There is a sameness in commercial strips everywhere: the same basic forms decorated to advertise the same or similar corporate enterprises. Here and there a shopping center disrupts the pattern by its scale. The goods and services sold relate directly to building form and styling through "place–product–packaging": merchandise and services symbolized at the scale of landscape.

Strip development came to dominate well-traveled highways outward from literally every American city and town. It was, and is, an elaboration of the "old road," and not merely a conduit to other destinations. Most strips were unplanned. They just evolved, neither aided nor hindered by government or other central authority. An implement dealer moved to the edge of town to intercept farmers, giving himself more room to store equipment. A supermarket chain located adjacent to a new subdivision and attracted a drugstore and cleaner's shop in addition. The accumulation began early. By 1935, over 300 gasoline stations

Figure 18.8
Pennsylvania's U.S. 30 near Breezewood. Here businesses clamor for the motorist's attention along the commercial strip. A new aesthetic has been born, rooted, perhaps, in the World's Fair concept of the midway with its array of forms, colors, and signs. Along the commercial strip, the car has transformed the midway into a non-stop marketplace.

and 400 other commercial establishments lined the 47 miles of U.S. 1 between Newark and Trenton in New Jersey.[49] In Connecticut, between New Haven and the New York state line, gasoline stations averaged one every 895 feet on U.S. 1, and restaurants one every 825 feet.[50]

So pervasive has strip development become that a sort of sameness, born of roadside clutter, has emerged across the nation. As the suburbs are characterized for their homogeneities, so the roadside also suffers blandness. Lewis Mumford wrote of suburbia as a new kind of community characterized by "uniform, unidentifiable houses, lined up inflexibly, at uniform distances, on uniform roads."[51] To J. B. Priestley, the roadside communicated a similar message. There was rapidly coming into existence a new way of living—fast, crude, vivid—perhaps even a new civilization, but, more likely, another barbaric age. And it was symbolized in the commercial strip seen everywhere. Gasoline stations, restaurants, and motels were trivial enough in themselves, but they pointed to the most profound change (Fig. 18.9). Here was a way of life, informal and potentially equalitarian, "breaking through the old like a crocus through the wintry crust of earth."[52] The American strip has permeated the urban mass as kudzu spreads through Southern groves. In an automobile world, it is unimpeachably convenient.

The automobile's hegemony over American landscapes is rooted in values which run deep. They are most certainly values inherited from a frontier experience whereby an essentially European culture brought a continent to heel, exploiting its resources and developing new possibilities socially and politically. At base was belief in individual freedom of action as well as respect for change as progress. Basic also was the pursuit of privatism, utilitarianism, and egalitarianism, values honed by

Figure 18.9
What's wrong with this picture? The Phillips 66 gas station in Baxter Springs, Kansas, is missing its pumps. Built in 1930, this Tudor Revival-style service station catered to travelers on U.S. Route 66 until the 1970s. Reflecting this highway's mythic popularity, the building was placed on the National Register of Historic Places in 2003 (note plaque on wall) and serves as the town's visitors' center.

pioneer circumstances. Thus, Americans were predisposed to embrace automobile technology. Indeed, no other invention of such far-reaching geographical importance has ever diffused so rapidly across a society.

Almost universal access to the automobile promised freedom of a basic geographical kind. Geographical mobility, as it broadened opportunities through ease of reach to new places, promised social mobility and enhanced status. Here was an important American core value supported by automobiles and highways. As an individual's fortunes waned, the opportunity of a fresh start could be had elsewhere—if not on a western, then on a suburban frontier. In city terms, utopia lay in moving to a better neighborhood in the suburbs, as it had once meant moving west. Freedom carried, as before, an escapist theme. Americans were promised an equal right to compete for resources, not a guaranteed equal share of them. Change through mobility always has seemed

requisite to this competition. The ability to reach new horizons has been a necessary ingredient for success.

A distorted kind of equality prevails when people and communities suffer the impact of dislocation dictated, for example, by city freeway construction condoned for the majority good—the majority interpreting the common benefit in terms of the rewards accorded those who succeed. Those unwilling or unable to conform to prevailing ideals of success tend to remain isolated in what remains of the pre-automobile city. Once public opinion is formed on such issues as freeway construction, conformity is expected and even demanded. There emerges what Alexis de Tocqueville identified in the 19th century as a "tyranny of the majority." "I know of no country," he wrote, "in which there is so little independence of mind and real freedom of discussion as in America."[53]

Although rooted in longstanding values, America's reliance on the automobile did not evolve naturally, following set preconditions. Automotive hegemony was created by men and women working hard to encourage favorable public opinion and establish private and public institutional mechanisms capable of realizing the profound environmental and social changes which, in fact, accrued. Deliberate decision-making and not impersonal social forces continue to promote automobiles and highways as a basis for American life. The American citizenry has willingly assented. Promoters of the automobile fall into at least three categories: the vested interests of corporate capitalism, the politicians (supported by business entrepreneurs) who wield the public purse, and the bureaucrats in public service who translate political will to action.

Entrepreneurs such as Henry Ford championed the automobile as a consumer product. The development of the automobile as a machine was rooted in corporate profit-taking as vested interest. The lobbying for highways was intended to enhance that profitability. By convincing the American public of the automobile's desirability, major industries were created that ultimately came to dominate the American economy. Politicians, including American presidents such as Dwight Eisenhower, supported vigorously the highway lobby, sensing strong, widespread public support. Finally, men like Robert Moses created the highway programs through which the American environment was substantially remade, building bureaucratic empires in the process.

The niches filled by such men as Henry Ford and Dwight Eisenhower in American transportation history are hardly surprising in retrospect. What seems astonishing, however, is that such men as Robert Moses could exert such considerable power in remolding the American landscape. The highway engineers as planners and implementers of the new highway-oriented America brought an arrogance to environmental change even exceeding that of the railroad barons of the preceding era. With dedicated single-mindedness, they built their highways, liquidating established places to create new places. Imposed was what Edward

Relph labels "benevolent environmental authoritarianism." Persons and communities in the paths of progress obtained little leverage in ordering their lives.[54]

The automobile became an American dominant with amazing speed. Change has driven the fast lane. In only 100 years, the automobile has evolved from an amusement for the very few to become a necessary adjunct of life for the vast majority. Values, resources, and technologies have been aligned toward a massive restructuring of the United States with profound economic benefit resulting. It remains to be seen whether the forces marshaled to produce automobile culture can be "fine-tuned" to resolve internal contradiction and wasteful inconsistency. The American nation stands challenged to place the automobile in humane perspective. It stands challenged to the making of new landscapes maximally enhancing the lives of all Americans.

Chapter nineteen

Developing large-scale consumer landscapes

MICHAEL P. CONZEN

CONSUMING IS as old as human history, but consumerism as a deliberate condition and goal of mass society has a much shorter history. The advent of the Industrial Revolution set in motion forces that over the subsequent two and a half centuries profoundly transformed the lifeways and landscapes of Western Europe and the United States, followed unevenly by the remainder of the world. The replacement of animal power by fossil fuels made possible an explosion in the production of material goods and the creation in time of regional economies and societies geared to, even dependent upon, mass consumption. This progressed through early forms of mechanization to large-scale standardized manufacture, and on to customized forms enabled by flexible production underwritten powerfully by the digital revolution. This has been reflected in radical changes in the American landscape, from the so-called industrialization of agriculture to the emergence in urban environments of large-scale facilities for manufacturing, distribution, and consumption, all representing a major increase in the size and landscape impact of the built structures and the accompanying land-use compositions they required. The theme can be traced across many dimensions, a number of which have been considered obliquely in earlier chapters on industrial landscapes, cityscapes, and the impact of the automobile. But it is useful now to examine directly a group of landscape phenomena that have become decidedly assertive if not yet dominant in the landscape—the emergence of large, predominantly corporate spaces devoted exclusively to mass consumption. Among the many forms this has taken, we will consider the emergence of mega-retail spaces, corporate spaces of leisure and entertainment (from arts performance to sports vacations, and gambling), the convention industry, and a few other large consumer sites such as museums, the megachurch business, and landscapes of outdoor advertising. The penetration of large corporations into practically all spheres of material consumption and entertainment in the United States during the latter half of the 20th century and the way this has been registered on the American landscape presents a central theme for this exploration.

An emerging culture of mass consumption

Industrial processes lowered the costs of material goods, which brought them within the reach of more and more people. For a long time, manufacturing and commerce were organized in relatively small-scale, family-oriented businesses whose facilities were correspondingly modest. But as commercial capital opened the door to industrial capital, scale economies entered both fields and the modern corporation came into being.[1] During the century from 1850 to 1950, most large corporations were to be found in heavy industry and transportation, but slowly, during the course of the 20th century, corporate organization took over wholesale and retail trade as well and, more recently, the vast world of entertainment.[2] These changes were accompanied by the rise of branding and franchising of essential goods and services, and the general commodification of leisure. A rising standard of living spurred demand for an ever-expanding array of consumer goods. Mechanization freed people from drudgery, and discretionary time increased.[3] The rise of national brands enlarged markets and concentrated supply in ways that corporate businesses proved adept at providing.[4] Innovations in entertainment created new mass markets for movies, sports, and other recreations. Recreation for the masses was once based in the home and at taverns, family picnics, and company outings. Travel was for the well-to-do. Today, leisure pursuits come in every form imaginable, available virtually round the clock, usually involving specialized equipment and other investments, and to a large extent supplied in specially designed facilities by large-scale corporations.

Landscapes of shopping

Before the 19th century, shops were a comparative rarity in American towns and villages. Households produced most of their domestic needs at home, especially in rural areas. Finished dress shops were unknown; families bought cloth and ribbons at general stores or haberdasheries and made clothes at home. Food was bought at markets; implements at artisans' workshops. Gradually, retail shops proliferated, lining up along well-used thoroughfares, sharing space with other providers of consumer services: banks, fire insurance companies, post offices, apothecaries, inns, livery yards, and the like. As the scale of towns was pedestrian, so stores and craft shops nestled also in the neighborhoods, retailers and artisans living on the premises. Food markets began in the street, and later moved into halls, the most famous of which is probably Quincy Market in Boston (completed 1826).[5]

By the middle of the 19th century, fixed-shop retailing became general in American towns and cities. Main Street became the retail focus of this activity, and in thousands of small towns across the nation Main

Street has remained, even to this day, a potent symbol of a need-based, family-oriented, pedestrian-scaled consumer landscape created before the automobile. In larger cities, as the century matured, a "downtown" took shape, lined with stores shoulder to shoulder. The advent of the price-tag permitted fixed-price browsing that eliminated face-to-face haggling, economized on employees, and expanded inventory. Throughout large cities, streetcar routes confirmed and reinforced the shopping character of certain streets. At key intersections away from the central business district, clusters of shops and other services came to define retail subcenters serving groups of neighborhoods in the city's different sectors.[6]

Department stores, chain stores, and supermarkets

Perhaps the boldest innovation of the 19th century was the invention of the department store. It offered the convenience of a wide range of merchandise at a set price in a number of spatially distinct "departments" under one roof. This required a major change of scale, and gave rise to multistory structures that occupied large portions of city blocks, often whole ones.[7] By the end of the 1860s, the first such stores had been established in New York (Stewart's, Macy's), Chicago (Field & Lyter), Philadelphia (Strawbridge & Clothier), and Salt Lake City (Zion's Cooperative Mercantile Institution) (Fig. 19.1). Department stores emerged as the largest single retail enterprises in American cities of significant size and became the leading symbols of their downtown shopping infrastructure (Fig. 19.2). Customer service found expression,

Figure 19.1
The first incorporated department store in America is memorialized here in the disemboweled reassembly of the 1876–1880 brick-and-cast-iron front of the former Zion Cooperative Mercantile Institution (ZCMI) store in Salt Lake City, stemming from its 1973 conversion to a shopping mall, seen here in 1988. Such insensitive façadism no longer passes muster with historic preservationists, and a further redevelopment of the property is planned that may substantially restore the storefront's historic appearance.

not just in Marshall Field's dictum "give the lady what she wants," but also in conscious architectural embellishments, such as Louis Sullivan's famous entrance and wide store windows to what became the Carson, Pirie Scott building in Chicago.

Towards the end of the 19th century, some merchants found success in opening multiple stores and slowly the concept of the chain store, with its foundation in bulk purchasing of stock, took shape. Beginning with "five and dime" variety stores, such as F. W. Woolworth's and later S. H. Kress & Co., chains eventually established branches in many cities and some became national in scope. Their standardized storefront designs became easily recognized "brands" on the shopping streets of America and paralleled the rise of national brands for many products. Such expansion required advertising and access to greater capital, which led to the formation of limited companies.[8]

The almost daily patronage of grocery stores by most families opened the door to expansion of product lines across the food spectrum, and by the 1930s the self-service supermarket came into existence, fueled by low prices through bulk buying and the provision of free parking.[9] This changed the size, design, and location of stores, since the convenience of single-floor shopping and the need for dedicated off-street parking placed supermarkets outside the central business district in the neighborhoods and increasingly in the suburbs.

Shopping malls

The steady spread of mass automobile ownership through the 1950s and the explosion of suburban growth with the GI Bill following World War II brought a further increase in the scale and geographical pattern of retail organization, realized ultimately in the form of the regional shopping mall. Commercial strips had been developing along the main arterial streets leading out of towns since the 1920s, and small-scale roadside plazas and shopping clusters with an apron of parking next to the highway had become common by mid-century (Fig. 19.2).[10] What was revolutionary was the integration in new suburban locations of department stores, numerous small retail stores, and eateries in single, giant, enclosed buildings that came to be called shopping malls. Heavy commercial advertising on television and the spatial freedom of the car brought shoppers flocking.

Victor Gruen, an Austrian émigré architect, introduced the mall concept in reaction to the formless sprawl, sterility, and lack of community apparent to him in America's postwar suburbs. The Southdale Master Plan, in Edina, Minnesota, provided him with an opportunity to offer a solution, in which he envisioned a large district to be developed around an enclosed shopping center with a central garden plaza that would serve as a community focus, ringed by apartment towers, schools, a

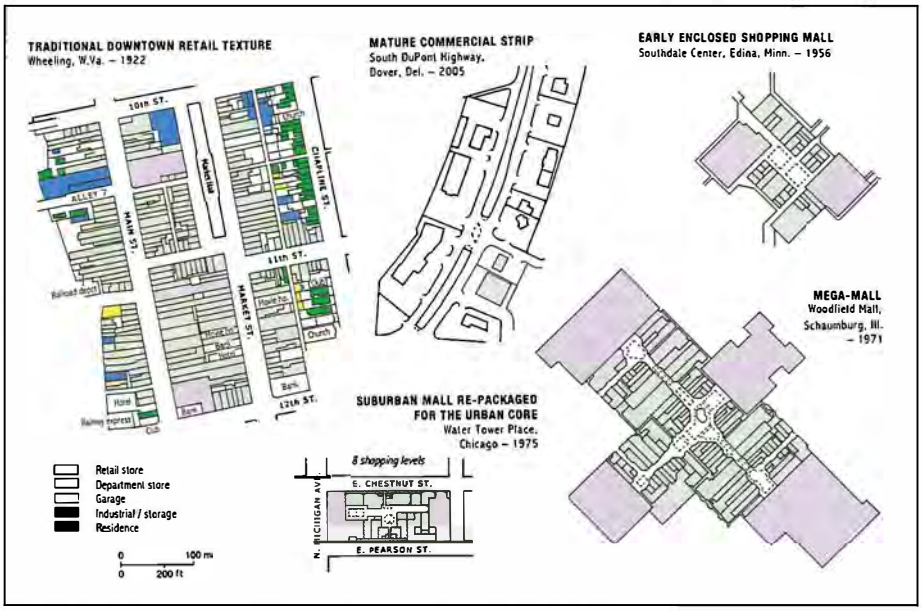

Figure 19.2
The morphology and the experience of shopping have changed greatly over the last century. Here, clockwise, are several stages in the transition from pedestrian and streetcar-based higgledy-piggledy small retail patterns to car-based commercial strip formation and enclosed planned shopping mall forms developed in the suburbs and brought back to the city center.

park, a lake, a medical center, and wide boulevards. His belief that the project's developers, the Dayton Corporation, a Minneapolis department store company, would "undertake a large-scale planning effort benefiting everyone, instead of just their pocketbooks" proved chimerical, and only the shopping mall, completed in 1956, with its acreages of peripheral parking lots, was erected.[11] It provided a model for retail agglomeration so suited to the suburban sprawl it was intended to curb, however, that it was replicated and expanded upon across the continent to the point of over-saturation.[12]

Woodfield Mall, in northwest suburban Chicago, opened in 1971, illustrates this aggrandizement (Figs. 19.2 and 19.3), and the current size leader is the Mall of America in Bloomington, Minnesota, with 2,768,399 square feet of retail space, shortly to be exceeded by Meadowlands Xanadu mall in East Rutherford, New Jersey, at almost double the size.[13] Characteristic of all regional shopping malls built in the four decades following Southdale Center is their unified, bulky, modernist exterior design with large planar surfaces, often of concrete, little decoration, and vast surrounding parking areas, usually bereft of trees. Inside, too, the design aesthetic, while striving for variety, is nevertheless highly uniform. Built in one piece, shopping malls lack the historical complexity of downtown retail districts.

Variations upon the shopping mall

As is typical for many commercial forms, new variants spin off from older models, particularly in a competitive context framed by alternate

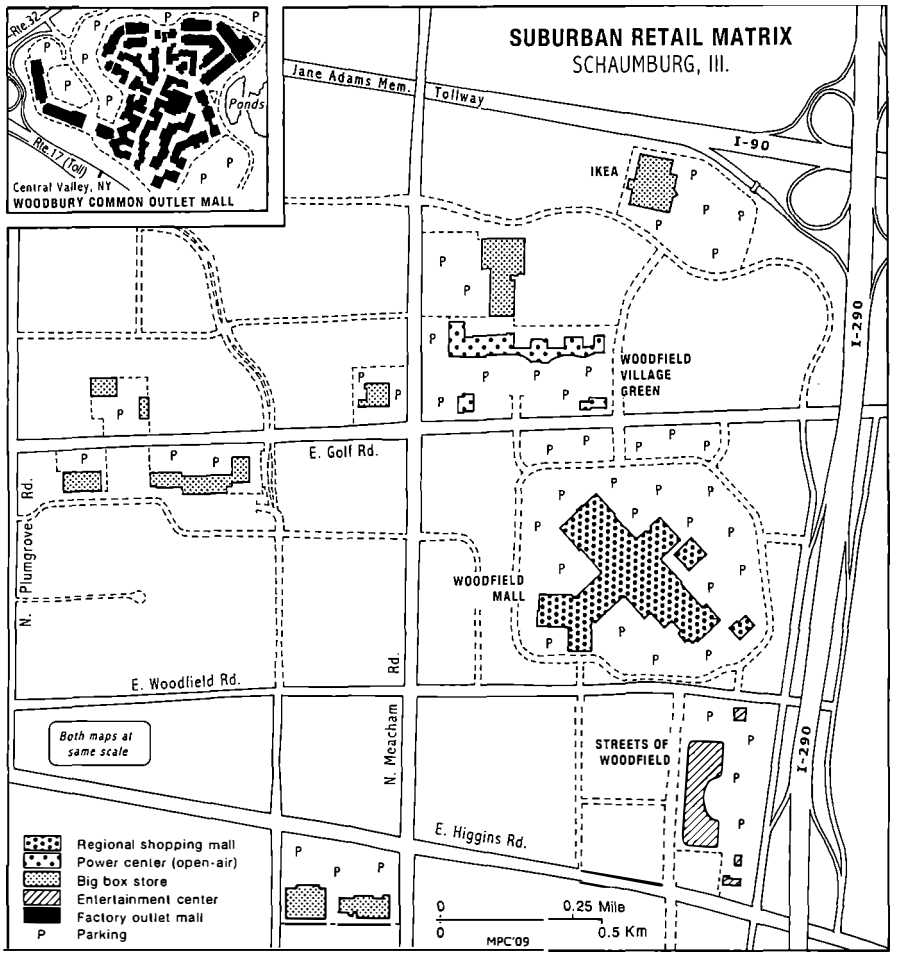

Figure 19.3
Modern retailing innovations generally emerge in the suburbs. Examples from metropolitan Chicago and New York illustrate the resulting landscape outcomes, nestling in super-blocks as much as half a mile in length, and the rise of "shoppertainment" venues.

organizational strategies for attracting customers as well as simple geographical competition for highly mobile shoppers. J. C. Penny, a cash-only department store, switched in 1957 to offering credit purchases on a mass basis, and started a trend that greatly expanded consumer spending. In the following decade came federal legislation that ended price-fixing, which had supported high prices in department stores determined by manufacturers, leading to the emergence of discount department stores, such as Korvettes, Target, and Wal-Mart. Wal-Mart's rise to national and international dominance in retailing is a story of rural origins, non-union labor, urban-fringe location (often just outside municipal boundaries, thereby avoiding city taxes and land use control), and mounting economies of scale in bulk buying and other store organization. The role of Wal-Mart stores, particularly the company's "superstores," in weakening the retail draw of small-town downtowns has become a source of significant social criticism. However, the presence of vacant storefronts on countless Main Streets

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across America often preceded the company's arrival at the edge of town.[14]

Physically, these stores are, literally, "big box" stores, flimsy cubes of indoor space set either on their own parking-lot-rimmed sites, or within shopping plazas known as "power centers." These are concentrations of discount and off-price stores, warehouse clubs, and other "category-killers"—that is, outlets that offer a huge selection in a limited range of products at low prices. Their geography at the district level is shown in Fig. 19.3. Similarly low-cost "factory outlet stores" congregate in outlet malls with a different form intended to ease car-to-destination access and recreate a friendlier "village" atmosphere for the development, and with no dominant anchor tenant.

The rise of suburban retailing and stressful decline in downtown shopping produced a reaction among city planners and urban boosters that took the form of shopping makeovers that introduced new strains of entertainment, starting in the 1960s. Festival markets were organized, such as Faneuil Hall in Boston, which incorporated the Quincy Market complex in a signature in-town project that sealed the reputation of revitalization architect James Rouse. Central to these initiatives has been to design them as places of urban nostalgia and spectacle, in which shopping merges imperceptibly with entertainment.[15] In the case of The Grove in Los Angeles, nostalgia is expressed as neo-Art Deco and other historicist building styles (Fig. 19.4). The Xanadu Center being constructed at the Meadowlands Sports Complex not far from Manhattan represents the fullest manifestation of this "shoppertainment" merger, promising, among a bewildering number of diversions, year-round skiing.

At the same time, the suburban mall has come full circle by returning to large-city downtowns. Given its suburban success, developers found ways to repackage the shopping mall in vertical form to accommodate the much higher land costs of the city center. For example, Water Tower Place on Chicago's "Magnificent Mile" (North Michigan Avenue) combines 758,000 square feet of retail space on eight levels with a 74-story-high residential tower, home to, among others, TV celebrity Oprah Winfrey (Fig. 19.2).

Related landscapes of wholesale distribution

In landscape terms, we cannot leave the retail domain without a backward, as well as a forward, glance at one other, parallel retailing form—mail-order commerce. It generated distinctive landmarks in American cities, and has seen a new era of intensity since the Internet was made profitable for business, which in turn has created its own new pattern of distribution landscapes.

Montgomery Ward developed the general merchandise mail-order

Figure 19.4
The Grove, a so-called "boutique outdoor shopping mall" in the Fairfax district of Los Angeles, which opened in 2002, features upscale chain stores, an antique-looking trolley plying a 440-yard track, and an aerobic fountain synchronized to piped recordings of Frank Sinatra and others. Office towers on Wilshire Boulevard to the southwest loom through the smog.

business in 1872, based upon railroad delivery to customers' nearest railroad station. Undercutting the highly marked-up prices of middlemen and local retailers, the business prospered immensely and eventually drew competition from Sears, Roebuck & Company starting in 1886. Each quickly established their firms in Chicago, by then the undisputed railroad center of the country. Each firm offered fixed, nationally uniform prices on a extremely broad range of consumer items via catalogue advertising, building trust by guaranteeing satisfaction or money back. Helped by the spread of rural free delivery from the U.S. Post Office, beginning in 1896, and with parcel post begun in 1913, allowing cheap delivery of merchandise, both firms' sales soared. In turn, this spurred construction of massive distribution warehouses next to railroad lines (Sears in 1906 on Chicago's West Side, Wards in 1908 along the North Branch of the Chicago River). In the mid-1920s, both firms entered the retail store business and for decades provided stiff competition to traditional firms in the field.[16] While Sears joined other department stores in the move to suburban malls, Wards lagged behind and ultimately lost ground and fell into bankruptcy by 1997. Sears, which constructed the Sears Tower in Chicago in 1974—for nearly a

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quarter-century the world's tallest building—also lost market share in the fast-changing retail business as it became a conglomerate company, and has seen much upheaval and reorganization since. In the Internet age it has proven impossible to regain dominance as online retailing, with many old and new merchandising firms jumping in, has taken off.

What these giant catalog-order companies highlight in particular, historically, is the great physical underbelly of American consumerism, namely the vast wholesale warehousing needed to sustain the entire system, retail and otherwise. Just as vital as the retail stores on the street, if lacking their glamour, the warehouse districts of cities at the major nodes of the American railroad network grew immense by the early 20th century. Chicago, St. Louis, Minneapolis, Kansas City, to name a few, developed dense clusters of four-, five-, and six-story, square, hulking structures of brick and concrete, usually close to the downtown where the railroad tracks converged. Functional as they were, these turn-of-the-century warehouses often displayed a modicum of exterior ornament, often in terracotta moldings, surviving until the dictates of modernist simplicity and cost-saving hit the storage business. [17] As the truck gradually replaced rail as the main vehicle of metropolitan distribution, warehouses decentralized and relocated to empty sites

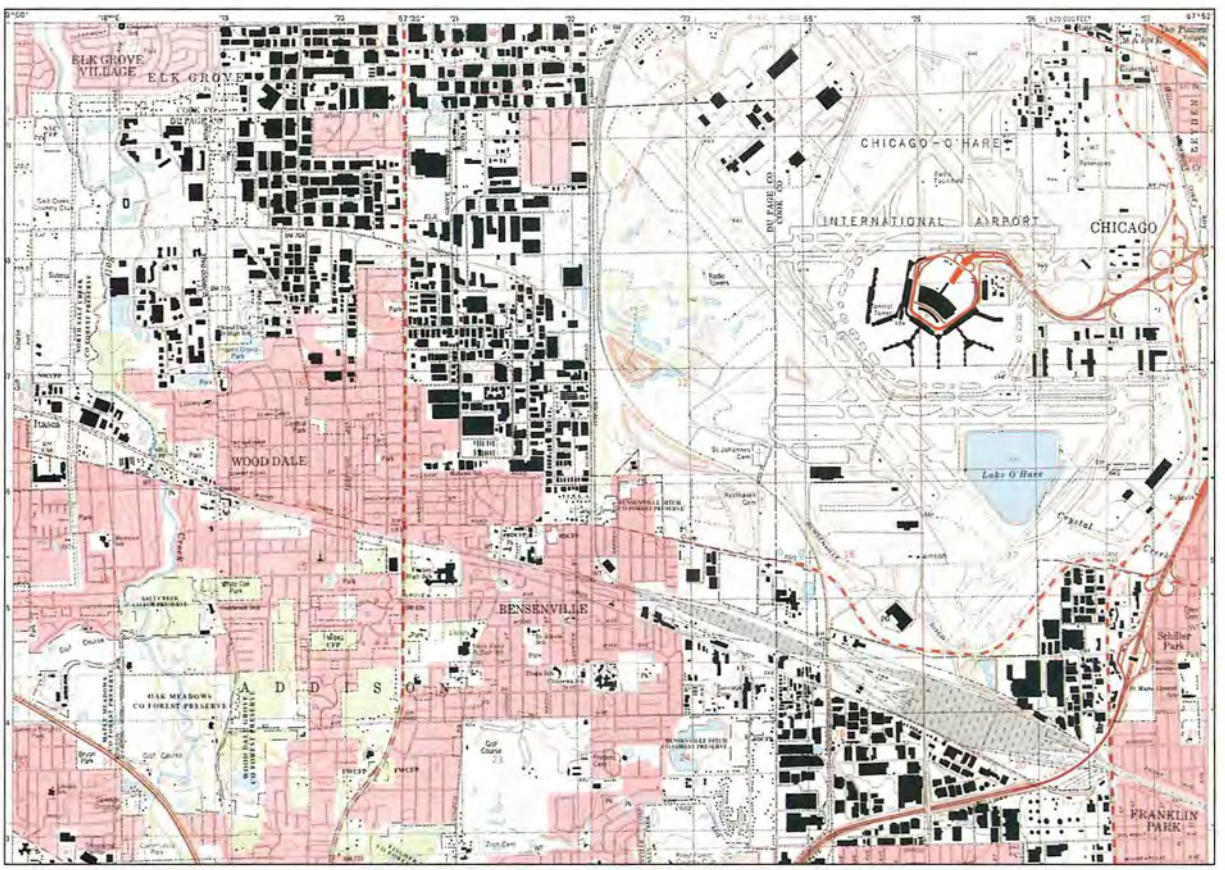

Figure 19.5
The black structures on this USGS topographical map of 1997 delineate portions of the discontinuous but vast warehouse landscape that encircles O'Hare International Airport, essential to the supply chain that supports the nation's corporate retail infrastructure.

along the new arterial freeways at the urban edge. The old railroad-era central buildings were left to molder until torn down for urban renewal or saved to provide loft-conversion space as "cool" places for inner-city living. As more high-end consumer freight, particularly electronic gadgets, have come to travel by air, so the warehouse quarters have relocated again, clustering around major hub airports (Fig. 19.5).

Leisure and entertainment landscapes

Performance arts venues

For most of American history, amusements were separate entities from shopping. As with all sites of public congregation, their scale has increased over time with increase in leisure time. This has less to do with building technology—medieval builders put up enormous cathedrals long before there was steel skeleton construction or reinforced concrete—than with the nature of the entertainment and scale of business and social organization. As with other types of entertainment, the development of performance beyond participant activity into a spectator pastime depended on the rise of entrepreneurs, the professionalization of performance, living standards, and larger capital requirements leading to corporate business organization.

Sustained quality in the performing arts virtually demands indoor spaces, and concerts, stage productions, circuses, and, later on, movie screenings have long commanded special facilities. In the American landscape, these have evolved from buildings barely distinguishable from those housing offices, stores, warehouses, and even homes, to purpose-built structures that clearly signal their interior character. In towns and cities in the early 19th century, musical events and plays were staged in assembly halls that externally appeared close cousins to business blocks, courthouses, and even country villas. They either sat in planted grounds as compact individual structures, or lined up shoulder-to-shoulder with other "row" buildings on city streets, tight along the property line. Rarely did windows and entrance doors suggest their interior purpose, a function left to explanatory signs hung outside.[18] As small towns matured, "opera" houses appeared on Main Street, where traveling troupes put on shows during brief visits. Carved stones in the cornice proudly declared the building's social role in the town's life.[19]

Later in the century and well into the next, theater spaces became significantly larger, and in places like New York or Chicago came to occupy large portions of, if not whole, city blocks. Their architecture increasingly declared their public function: large entranceways with canopies, or even marquees.[20] When movie houses came along in the 1920s and 1930s, however, with their large footprints tucked into the rear portions of the urban block, street facades still obeyed the old street

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and lot lines. But the cultural worlds of fantasy they presented found rich expression in elaborate and playful exteriors often employing the Art Deco styles or "oriental" motifs then in vogue (Fig. 19.6).

By the late 20th century, as artistic performances came to be controlled by companies and large corporations, typical audience size had risen to the point that stand-alone, specially designed facilities with requisite acoustic properties became the norm. As the Disney Concert Hall built in 2003 in Los Angeles reminds us, no modern symphony hall of that stature would occupy anything less than an entire city block, with access to three adjacent blocks for parking. And on the more architecturally prosaic plane, modern movie theaters have become a heavily suburban feature, clustered in "multiplex" box-like buildings often associated with shopping malls.[21]

Figure 19.6 The Chicago Theatre, built in 1921 by the Balaban and Katz partnership, a seven-story-high, 3,600-seat auditorium, was the first large, lavish movie palace in America, and served as the model for all others. The French Baroque-style façade mimics the Arc de Triomphe in Paris, finished in off-white terracotta. Closed in 1985, it was saved from demolition, remodeled, and reopened the following year, as seen here.

Outdoor performances have also carved a niche in the American landscape. From bandstand concerts in the town park, to contemporary music festivals in New York's Central Park or Chicago's Millennium Park, grass has had a place in American music. And it has not been confined to cities, as the quiet and graceful remains of small-town Chautauqua campgrounds and rural retreats such as Tanglewood in western Massachusetts or Ravinia in northern Illinois attest. Even films found outdoor venues, as the movie "drive-in" became a staple of small-town and suburban America by the 1950s. Rising land values from urban development ultimately rendered the innovation an endangered species.

Sports stadiums and arenas

In contrast to artistic performance, large-scale organized sports have developed more in the outdoors than indoors, though the invention of the gymnasium encouraged the emergence of a number of sports within walls. Already in the late 18th century, enterprising businessmen laid out grounds for sporting events, such as horse-racing, that allowed them to accommodate spectators and control entry (the first racecourse was opened in Lexington, Kentucky, in 1789). But the real growth in popularity of organized sports came with the spread of industrialization in the later 19th century and its strict routines of work and leisure. This matched well with the iron rules that underlie the very concept of sport. Special facilities for sports were not needed until they passed from folk pastime to mass entertainment. Team sports flourished as leagues were formed, first at colleges, and later, beginning in the 1870s, for professionals making a living from playing. Franchising emerged to control the scope of competition, enabled by, and early on restricted to, the dense railroad networks of the eastern United States.[22]

The rising popularity of baseball and American football led to large stadiums, often designed for use by multiple sports. For baseball, the Polo Grounds (Manhattan, New York, 1891), Shibe Park (Philadelphia, 1909), Fenway Park (Boston, 1912), Ebbets Field (Brooklyn, New York, 1913), and Wrigley Field (Chicago, 1914) were emblematic. The early stadiums occupied entire city blocks and consisted of modest two-story steel-girder stands surrounding the playing field on two or three sides, and seated generally between 20,000 and 35,000 spectators. Over time, bleachers and additional stands were added. As newer stadiums for both sports with larger capacity were built, variations settled into three broad categories: the "classical," such as Fenway Park and Wrigley Field, which maintained their idiosyncrasies; the circular or oval "concrete saucer"; and domes or roofed-over facilities, with capacities reaching 91,000 spectators.[23] The standardization movement in stadium design may have run its course with the appearance of "retro" parks (beginning with Camden Yards, Philadelphia, 1992) and more individual designs,

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such as Seahawks Stadium (now Qwest Field, Seattle, 2002) (Fig. 19.7). Football and baseball stadiums are most likely to be owned by private corporations, although their construction has often involved significant municipal investments. Pressures for maximizing profits from stadiums has triggered replacement facilities and significant makeovers to add or increase the number of enclosed, luxury skyboxes to the seating inventory.

College and high schools in many parts of the country have become so invested in sports, especially football, that in the national consciousness they are often better known for their sports prowess than their academics. Beaver Stadium at Pennsylvania State University in State College holds 107,282 fans, the third-largest sports stadium in the entire world. Jones High School footballers in Orlando, Florida play in the Citrus Bowl, which seats over 70,000 viewers.

Basketball and ice hockey as professional games have long required indoor arenas, since neither rain nor sun can be tolerated by their playing surfaces. These buildings, which can also be used for rock concerts, circuses, and suchlike, usually seat between 6,000 and 20,000 spectators, often depending on the nature of the event, and are more likely to be municipally owned and operated. Most are large box- or bowl-shaped buildings surrounded by sizeable parking lots. While many have cropped up in suburban locations near expressway intersections, the better to draw on a metropolitan-wide audience, many are key elements of inner-city urban-renewal projects, such as the United Center on Chicago's near-west side. The miniaturization of football to fit within indoor arenas has widened the scope for temperature-controlled football pleasure beyond the Houston Astrodome.

Figure 19.7
Seattle's Seahawks Stadium (2002), re-branded in 2004 as Qwest Field, host to American football and soccer games. The site's soft soil dictated the structure rest on 1,700 pilings driven 50–70 feet below ground, and earthquake hazard led to an articulated construction design. The playing field has a plastic surface on a rubber foundation, making it ineligible for World Cup tournaments, and replaced a similar surface that lasted only six years.

For most of the 20th century, organized sports have forged an ever-closer bond with mass media, first newspapers, then radio, and most powerfully, since mid-century, television. This crucial link built audiences and helped teams become large-scale businesses. The bargain was to accept the commercialization of sports on practically all fronts. This is most obvious in the ubiquitous product and corporate advertising displayed in sports facilities and on players' clothing, and in the naming rights to the stadiums and arenas themselves. But it has reached off-site, too, so that sports equipment companies not only distribute images of successful athletes in ads and on billboards, but sell sports gear in shopping venues far removed from the sporting events themselves. They have helped create sporting needs where none existed before. Before Nike, there was really no such thing as a sports shoe, but now most Americans are exposed to them.[24]

The corporate character of commercial sports, with its control of rules and concentration of ownership, has led to a standardization in the design and location of sports facilities and mobility of franchises that have reduced their connection to, and reflection of, local communities.[25] The continuing attachment of fans to places such as Fenway Park (with its close-in left-field fence and hand-operated scoreboard) and Wrigley Field (with its famous ivy-covered walls and the unofficial rooftop bleachers on Waveland Avenue), however, suggest this has not been completely lost. The Green Bay Packers even promote their strong local identity with tours of Lambeau Field as part of vacation packages aimed at the Chicago market.

Vacation places: hotels, resorts, theme parks

Leisure can be filled either at home or away. Tourism has appropriated and created an extraordinary range of landscapes: natural, organically cultural and historically authentic, and artificially designed for the trade. What does the tourist seek? Tourist destinations vary from the specific to the general, but involve some kind of entertainment, whether it be the individual's geographical exploration of localities or whole regions arising simply from curiosity, or the consumption of some specially developed attraction. There is room to touch on only a few of the most significant artifacts and ensembles that constitute those landscapes. Again, the emphasis is on large-scale efforts and the resulting scenic compositions.

The most nearly universal feature of the contemporary American tourist landscape is the motel, or in more upscale circumstances the hotel. Hotels have long catered to all travelers, but during the later 19th century tourists swelled among their patrons, and railroads made possible the luxury resort hotel in scenic rural places, particularly at spas and near the new national parks, most of which attempted to reproduce the grandeur of their urban predecessors. If traditional hotels had spent

a century or more seeking to project a more or less palatial character, the democratization of tourism brought by the automobile produced a stripped-down version, the motor-hotel.[26] In the three-quarters of a century that it has been around, the American motel has passed through six stages: auto camp, cabin camp, cottage court, motor court, motor inn, and finally the highway motel, evolving essentially from small roadside camping-site parks, through detached cottage bedroom groupings, to single-story attached bedroom rows, and then to enclosed, multi-story guestroom buildings. As the national paved highway network expanded, motels followed, and today motels have appeared in most communities over 5,000 population, as well as lining most freeways at various intervals. With the motor court came the rise of what has been called "place–product packaging," and the dominance of motel chains, starting in the 1930s but becoming widespread by the 1950s.[27] Hotel and motel brands received distinctive architectural designs in order to distinguish competitors, and this principle has remained fundamental in the roadside landscape ever since. The uniformity of design and the predictability of service at each price level did much to expand tourism, though at the visual cost of widespread blandness, sprawl, and generic "placelessness."

Touring regions calls for accommodation and transport, but in sharp contrast to personal driving and fly-drive excursions are the highly organized package tours to designated attractions, such as resorts and theme parks, which became popular following World War II.[28] Theme parks are self-contained areas from a few acres to many square miles that feature thrill rides, idealized settings evoking real-world places, games, and other entertainments arranged according to one or more themes. Disneyland opened as a fantasy theme park in Anaheim, California, southwest of Los Angeles, in 1955. It was an immediate success, but Walt Disney realized that the location was beyond easy reach for the two-thirds of the national population that lived east of the Mississippi River, so the Disney Corporation developed Disney World near Orlando, Florida, which opened in 1971 (Fig. 19.8).[29] It was planned from the outset on a gigantic scale, and today includes four theme parks, two operating water parks, and numerous residential resorts with their own array of amusements and activities catering to a wide variety of children's and adults' interests, as well as sporting recreations of several kinds. In 2008, Disney World's combined attractions garnered 50 million visitors (while Disneyland added over 14 million, and the corporation's worldwide total came to 118 million visitors). Unlike most resorts, Disney World is composed legally of two shell "cities" within a Florida "improvement district" controlled entirely by the Disney company, which avoids outside jurisdiction over its land use developments. While considerable swampland remains undeveloped within the original improvement district, which still contains the bulk of the park's attractions, much additional acreage has been added to the

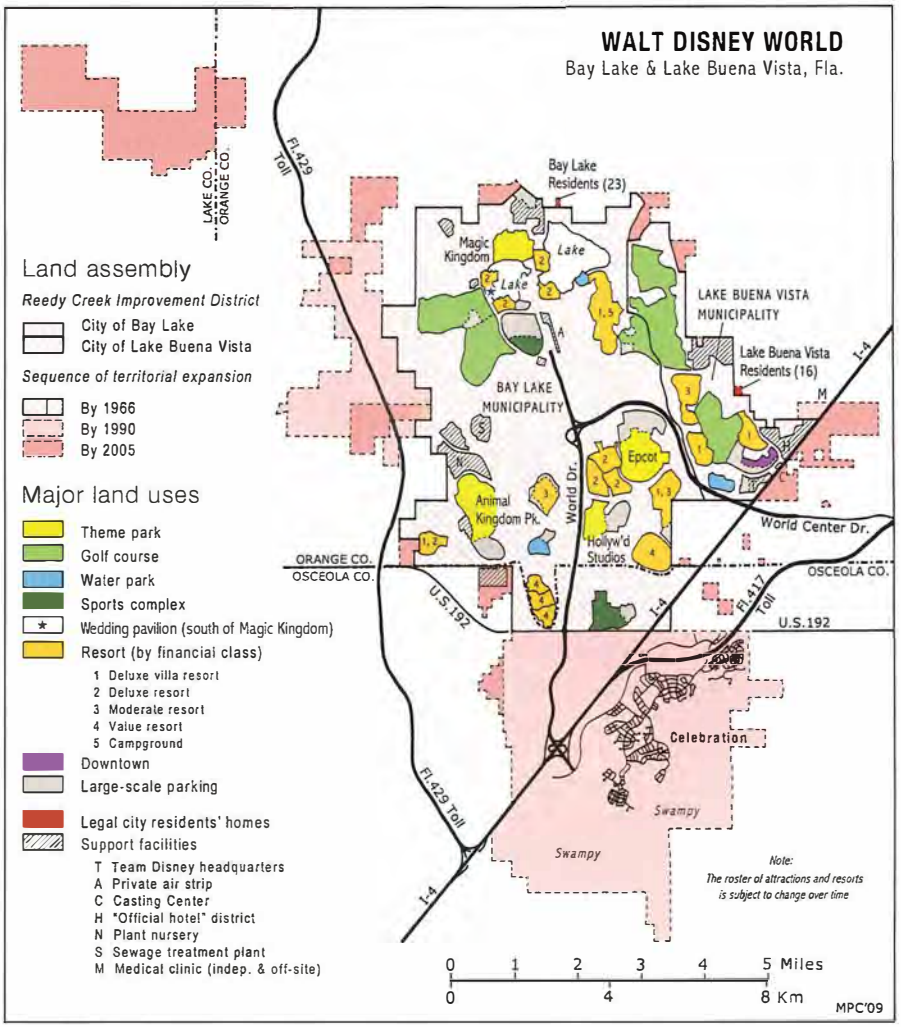

Figure 19.8
Walt Disney World Resort, a 25,000-acre recreation attraction near Orlando, Florida, opened in 1971. Boasting four theme parks and numerous further entertainments, the site rivals the territory of San Francisco and is twice as extensive as Manhattan.

corporation's holdings, including a large southern tract devoted to the development of a model recreation-oriented town given the boosterish, self-congratulatory name Celebration.[30]

Themed attractions such as Disney's "Main Street U.S.A." or the New Orleans streets in the Port of Orleans resort section of the park, curved for site convenience but grossly misleading as an evocation of the real place, have had a profound impact, if often indirect, on Americans' perceptions about how whole towns can be themed, packaged, and promoted to tourists for economic revival and growth. Ethnic theming has become widespread, ranging from *bona fide* cases of a dominant heritage—Swissness in New Glarus, Wisconsin; Danishness in Solvang, California—to arbitrary and accidental assignments, such as the ersatz and ahistorical Bavarianism of Leavenworth, Washington. In New Glarus, a few small architectural reminders of the Old Country were soon embedded within a standard American townscape, reflecting

cultural assimilation, and only in the later 20th century with the rise of ethnic tourism did the town undergo a vigorous and commercially driven Swissification. In Leavenworth, there was nothing Bavarian about the town's heritage, and its re-invented townscape adopted this association thanks only to tourist-minded local leaders' perceptions of the town's mountain setting as "alpine." Not far away, in Roslyn, Washington, theming took an interesting turn. Television producers chose the town as an inexpensive filming venue for the popular series *Northern exposure*, set in a mythical Alaska town, Cicely, and consequently Roslyn, a former coal-mining town, became a destination for media tourism.[31]

Ship cruises offer yet another kind of package holiday. They visit coastal waters and exotic islands where customers disembark and explore the ports for a few hours, while offering onboard lavish food, entertainment, and other diversions. Ports frequented by cruise ships overflow with harbor-side tourist shopping, restaurants, and museums. When the ships are docked, the local landscapes are utterly transformed by the mammoth vessels (Fig. 19.9).

Gambling

Gambling is certainly a vacation pursuit, but it is more; it is for many within easy reach a habit, for some a local addiction. Legalized gambling is not yet a ubiquitous phenomenon in the United States, though its spread in the last three decades beyond its modern homeland in Nevada

Figure 19.9
Giant cruise ships dominate Juneau's dockside facilities along Franklin Street. Holland-America Line's *Ryndam*, left, carrying 1,258 tourists and 602 crew, is docked for an 8-hour visit during its trip along Alaska's Inside Passage. Celebrity Cruises' *Infinity*, center, built in 2001 and carrying 2,046 passengers and 997 crew, is longer than three football fields.

has seemed inexorable. Gambling has long been woven in the fabric of American society, and became particularly widespread in, and later romantically associated with, the West during frontier days. The two decades before the Civil War represent the glory days of the riverboat gambler. But lottery scandals, the war, railroads, and social reform movements tainted the practice and prohibitions arose in various times and places, usually driving gambling underground rather than eliminating it. Following a near-universal ban by 1910, the business made a slow and steady comeback. Nevada legalized gambling in 1931, seeing in it a complement to regional tourism, especially in the light of increasing prohibition in California. Las Vegas in particular, founded as a railroad town in 1905, benefited from the development of casinos, most concentrated in the downtown area. As changing vacation tastes after World War II precipitated the decline of Atlantic City as a seaside resort, New Jersey legalized casino gambling in 1978 as an economic revitalization measure. Opposition to tax hikes led to the legalization of lotteries and the spread of casino gambling in several additional states. Many Indian tribes, exempt from many state restrictions, found in casinos a rare chance to suck some wealth and resources back from the larger society, and those not too remote from metropolitan centers developed extensive casino operations.

The landscapes produced by gambling were for a long time small-scale and inconspicuous, comprising taverns, roadside hangouts (often just outside city limits), and bingo halls. With the invention of slot machines and the growing popularity of casinos, specialized facilities grew to accommodate the traffic. For four decades after Bugsy Siegel's Flamingo opened in 1947 on what would become known as the Las Vegas Strip, casinos were relatively small operations, though the larger ones came to occupy portions of city blocks and included substantial hotels, necessary given the town's desert location. In the late 1960s, the Mob was substantially bought out by legitimate interests and its presence otherwise reduced. Gambling became fully corporate, and with the advent of the Mirage in 1989 the era of the mega-resort began. As casino gambling spread to other states and cities, Nevada interests, such as Harrah's, extended their franchise and have become well represented in many other centers.[32]

Gambling licenses have often followed the Atlantic City model, being awarded to decrepit rustbelt towns in need of a lift. The shiny casino complexes contrast strongly with their run-down environs, such as in Elgin, Hammond, and other Chicago satellite industrial towns. Initially justified as a return to the rollicking days of the Mississippi steamboat era, gambling was required to be on the river in boats that moved. But the need for land-based auxiliary facilities, such as parking, restaurants, and staging areas led to permission for the boats to function in dock, and then in some cases for the boats to be dispensed with (this happened in Joliet, Illinois). Elsewhere, riverboats from Davenport

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(Iowa) to Tunica (Mississippi) still ply their trade where legislators are still skittish about fully land-based operations. Meanwhile, Indian casinos multiply, even off-reservation, wherever they can succeed against opposition. The irony of Indian gaming as a successful means of plying a significant portion of white society with liquor while relieving it of its paycheck cannot be lost on the historically minded visitor.

The most remarkable landscapes produced by gambling are to be found without doubt in Las Vegas (Fig. 19.10). Here, the activity of gambling has been married to a comprehensive approach to vacationing and entertainment, generating 44 million visitors in 2008. Not only are the casino resorts outfitted with numerous attractions besides slot machines and betting tables, they are designed to attract families with young

Figure 19.10
The budget section of the Las Vegas Strip at Tropicana Avenue. Everything but the street signs is themed, from the New York New York casino, left, to the MGM entertainment center, right. Only the rusting power-line pole, right, betrays a mundane reality beyond the neighborhood's visual fantasies.

children, shoppers, golfers, and thrill-seekers of every description. The Strip has become jammed with "experiencescapes," from the miniaturized New York skyline of one casino complex to a half-size Eiffel Tower of Paris, the temples of Caesar's Rome, the pyramids of Luxor, and the brassy digital world of Hollywood at the MGM entertainment center. Viewing the elaborate recreations of Renaissance architecture and art in the extravagant "Forum" shopping center adjunct to Caesar's Palace, a writer for *Preservation* was spurred to ask: "has the new Las Vegas, with its mishmash collection of the world's greatest cultural icons, raised the American love affair with the fake to the level of high art?"[33]

Visitors along the Strip wander from one architectonic spectacle to another, a collage of fragmentary cultural references from around the world. At the budget end of the spectrum there is biker heaven at a Harley-Davidson establishment. At the high end there is, for example, the Venetian resort hotel and casino, featuring an indoor mini Grand Canal shopping and food court with gondola rides, a Madame Tussaud's wax collection of American celebrity stars, and an elaborate assortment of restaurants, bars, shows, nightclubs, sports lounges, pools, spas, wedding packages, limousine rentals, as well as extensive gambling facilities that include a 112,000-square-foot poker room. Thirty of the largest of Las Vegas' 88 casinos line the Strip, jarringly jumbled along a boulevard with vehicular traffic around the clock and meandering sidewalks that force pedestrians to the set-back entrances of each attraction. It is, in the words of one observer, an "assemblage of absurd spaces." But it drew 37.4 million visitors in 2008.[34]

Casino gambling is concentrated overwhelmingly in Nevada (254 casinos) and a few other western states (California 59, South Dakota 46, and Colorado 44), where it has given old mining-town tourism a large boost. Other concentrations reflect Indian gaming operations, riverboat casinos along the Mississippi River, and the occasional resort, such as Atlantic City. With some exceptions, casinos are absent from east coast, Appalachian and Ohio Valley states, and Utah.[35]

Convention and exposition facilities

Conventions and expositions bring products and people together in very large quantities, and in some ways this can be thought of as the most fundamental basis of American urbanism. Trade shows and big conferences have spawned some of the largest unified structures in American cities. Their origins can be traced to the medieval trade fairs of Champagne, Leipzig, and Piacenza, and their appearance in the United States was foreshadowed by the great expositions of the later 19th century (Philadelphia's Centennial Exposition, 1876; Chicago's Columbian Exposition, 1893). Trade and professional associations proliferated in this period, reflecting the increasing size of and distances within the expanding nation. By 1896, Detroit had established the nation's first

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convention and visitors' bureau, and since then the business has been regarded as essential to local economic development.[36]

In earlier decades, meeting rooms and display spaces for products were quite small, but the railroads eased interactions and fostered increased scale. Often, trade shows were accommodated in hotels at spas and resorts and conferences on university campuses. In 1930, Marshall Field & Company, exploiting Chicago's centrality, built the Merchandise Mart as a national meeting place for storage, display, and deal-making, with 4 million square feet of floor space, setting aside the 5-acre fourth floor for display. It was then the largest building in the world, and even today (2009) remains the twenty-second largest.

From the mid-20th century on, an "arms race" developed as other cities built convention and exposition buildings to compete, particularly as such facilities were seen as a palliative to inner-city decline and a suitable anchor for many urban renewal schemes. McCormick Place in Chicago, with 2,700,000 square feet of exhibition space, is the largest single convention complex, begun in 1960 and expanded to four megastructures, the last added in 2007 (Fig. 19.11). As with regional shopping malls, the national convention hall infrastructure may well have achieved saturation level, and competition among the leading facilities for big-ticket events is keen. Orange County Convention Center, Orlando (2.5 mill. sq. ft.), and two large, nearly adjacent convention centers in Las Vegas (3.4 mill. sq. ft. combined), offer major challenges to McCormick Place, owing to their access to low-wage labor, lack of union complications,

Figure 19.11
With 2.7 million square feet of exhibit space and 173 meeting rooms, McCormick Place in Chicago is the nation's largest convention and exposition facility. Four huge buildings comprise the complex, the oldest of which dates from 1967. Here, the Grand Concourse, left, added in 1996, links to the South Building, center-right.

and proximity to Disney and gambling entertainment.[37]

Other pursuits

There are two other types of consumer landscapes that do not easily fit the categories discussed earlier. The activities they encompass have little to do with material gain, and hence do not belong with commercial trade or mass entertainment venues as such. Yet they can produce large-scale buildings and landscape settings, and are distinctive in drawing significant audiences.

Museums

Museums are above all educational in purpose. They preserve objects and images in an exhibit and storage environment that requires sometimes substantial physical plant. The International Council of Museums defines a museum as "a non-profit making permanent institution in the service of society and of its development, open to the public, that collects, conserves, exhibits, researches, and communicates for purposes of education, study, and enjoyment, the tangible and intangible heritage of humanity."[38] Museums have arisen to celebrate almost every aspect of human culture, and the range of specialized museums is almost beyond count, from the potent (art, history, national culture) to the peripheral (cookie jars, International Towing and Recovery Hall of Fame).[39] Museums differ from performance arts venues because of the nature of the space: they have no mass seating areas—except perhaps a small video theater—and store permanent collections of cultural material. Visual exhibits are their main educational function.

Only during the 20th century did American museums grow significantly in size, many originating as private collections donated to non-profit foundations with mandates to present their wares to the public. Civic effort also created many art and history museums, and, when enlarged enough to merit dedicated buildings, most early museum architecture strove for classical authority and dignity. Classical Revival and Beaux Arts styles were popular for this, and some museums could have been mistaken for city halls or banks. As the century progressed, the most renowned museums became larger and more adventurous—particularly art museums—turning to modernist, and later postmodern, designs to signal their avant-garde posture. The Museum of Modern Art (1939) and the Guggenheim Museum (1959) in New York City were perhaps the most dramatic examples. The opening of the Denver Museum of Art's latest building (2006) might be said to have inaugurated the Startrek style.

In the landscape at large, the most prestigious museums have often been able to develop "campus" settings, in which one or more

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buildings sit within park-like surroundings, sometimes against a dramatic backdrop. The Getty Center in Los Angeles (1997) commands a ridge-top site in the Santa Monica Mountains overlooking the central metropolitan area. The greater Grant Park area in Chicago contains the Art Institute, Field Museum, Shedd Aquarium and Adler Planetarium, not to mention also Soldier Field stadium.[40] By far the largest concentration of museums, however, is the central Smithsonian complex in Washington, D.C., where a dozen national museums, filling superblock sites on both sides of The Mall between the United States Capitol and the Washington Monument, are anchored by the striking, original red-brick "Castle," built in 1855.

There are numerous open-air museum landscapes, too, containing "living history" sites of immense diversity. The oldest and largest is Colonial Williamsburg (opened 1932), which preserves and interprets what remains of the former capital of Virginia, supported by a foundation with a large restoration program that reconstructs additional elements of the colonial town through archaeological and historical research into its material culture (Fig. 19.12). Smaller historically genuine venues include Historic Deerfield, Massachusetts, and the Pleasant Hill Shaker Village in Kentucky (begun 1961). Museums consisting of historic structures moved to an artificial site for preservation and interpretation range from Henry Ford's Greenfield Village in Dearborn, Michigan (begun 1929), to Old World Wisconsin in Eagle, Wisconsin (opened in 1976), which has focused on the state's many ethnic groups. Modern museums that have recreated nearby historic settlements because the original sites have been lost or developed include Jamestown in Virginia (begun 1957) and Plimoth Plantation in Plymouth, Massachusetts (begun 1947).

Figure 19.12
Unlike Disney World, the landscape at Colonial Williamsburg is historically genuine, although similarly manicured and branded. Here, the wooden Peyton Randolph House (white, 1715–1730) is seen across Market Square from the south in 1968. Since then, historical research has dictated a return of the building's exterior color to dark reddish-brown.

The visitor's experience of such open-air museums stands somewhat apart from that gained from casual visits to historic towns and rural areas because of their programmed access and interpretation. They provide usually a well-researched and professionally presented impression of the site's history more concentrated than most tourists would gain on their own, even with guide books.

Churches as big business

The United States is noted for its traditions of religious tolerance and of the separation between church and state, as well as for the extraordinary historical variety of church organizations. While many denominations, sects, and congregations have had only small-scale impacts on the American landscape because of their size or independent organization, some have long had corporate structures that developed elaborate signatures across the land. The Roman Catholic Church is the premier example, based on hierarchical principles steeped in history. Considering its resources, and their links to the collection plates of its parishes, it is not surprising that some of its largest church edifices in America rival the cathedrals of Europe. But if the vast majority of church facilities in the United States, regardless of denomination, are relatively modest in size and ornamentation, there is a more recent phenomenon springing up that owes much to the conscious adoption of modern business methods—the megachurch. While a broad range of religious signatures on the landscape have been examined in an earlier chapter, it is worth mentioning megachurches briefly here, particularly since their emergence has had much to do with the strong application of commercial tenets of business organization, such as "boards of directors," marketing and customer service, and leadership by "pastorpreneurs."[41]

Megachurches made their appearance in the 1950s in evangelical circles and have been multiplying rapidly since. The threshold is generally considered to be a weekly attendance of 2,000, and some organizations claim as many as 20,000 or more. With size have come resources and economies of scale. What distinguishes megachurches from traditional churches as venues is the comparative de-emphasis on religious iconography and a focus on theatrical performance, comfort, sophisticated media presentation techniques (including jumbotrons), large arena-style "worship centers," and entertainment. Auxiliary services, including nurseries, food courts, libraries, game rooms, and sometimes health clinics and other social functions, create substantial building complexes. Willow Creek Church, in South Barrington, Illinois, often cited as one of the earlier and now most fully developed of the genre, occupies a 155-acre campus. From the outside, the complex might be mistaken for a shopping mall, surrounded similarly by a vast parking lot. It is no accident that the architectural character of many megachurches bears

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a strong resemblance to commercial retail, office-block, convention, and sports facilities, because their interior activities require similar scale; only the occasional slender, out-of-scale spire or tall lamp-post thin steel cross affixed to the buildings hints at their special orientation. The Lakewood Church in Houston relocated its main gatherings to the former Compaq Center, the city's erstwhile basketball arena.[42]

Advertising in the landscape

One last construction qualifies for inclusion here on grounds of its sheer frequency in the American landscape: the billboard. Advertising has been fundamental to the rise of all consumer societies, and in the United States there has been a long tradition of unabashed outdoor advertising to complement what is purveyed in printed materials and the electronic media. It is the essential lubricant in a mobile and far-flung society and necessarily underlies all the forms of activity considered in this essay

Figure 19.13
Wherever Americans are found out and about in large numbers, billboards crop up like mosquitoes seeking a meal. This sign dwarfs a humble cottage near the Kennedy Expressway in Chicago, where residential atmosphere long ago lost out to corporate marketing opportunity.

and is therefore of most universal significance, notwithstanding the individually limited dimensions of the equipment when viewed across the landscape. But as signs go, modern billboards are mega-structures.

Large advertisements painted on the sides of downtown buildings have existed for well-nigh two centuries. When commercial strips developed on the edge of compact towns and cities and throughout sprawling suburbs, billboards—which have "to scream to get motorists' attention"—took up residence.[43] As expressways were carved through neighborhoods and laid out in green fields to accompany, and attract, the spread of development, the elevated, night-lit, steel-pillar mega-billboard became a fixture (Fig. 19.13).

Although outdoor advertising is banned within national parks and in a few similarly controlled environments, there are few domains where it is completely absent. From the neon and LED excesses of Times Square and Las Vegas Boulevard to the amateur mile-interval signs along the Interstate announcing the approach to "Wall Drug" in South Dakota, urban and rural scenery everywhere has become vulnerable to the ceaseless promotion of products. Beautification movements have had their moments, and the planting of wild bluebonnets along the freeways of Texas provides a strikingly attractive counterpoint, but advertising has reached so deeply into the American psyche and achieved such assumptions of normality that, even in conditions of chronic overload, resistance is weak or nonexistent. The dignity and rider comfort of urban buses and trains with ads plastered across their windows can be compromised by the mere lure of a little outside income for stressed budgets. And Americans have become inured to the irony of paying visually and financially for the dubious privilege of personally carrying around advertising for the outsize egos of their clothes and equipment designers, such is the power of commercial branding.

Conclusion

There have always been large buildings. From Egyptian pyramids to British stonehenges, Roman colosseums, and French cathedrals, size has always impressed. Size has also held a special affection for Americans, and decades of serial prosperity and cultural evolution have brought larger and larger structures to city and countryside, spurred by the twin opportunities provided by economies of scale and inexorable specialization. At the same time, as the sizes of many facilities have grown, their design has aimed for interchangeability and multiple use. Hence, exposition centers, for example, can double as conference centers, as the attendance of many professional meetings has reached into the thousands. Sports stadiums host rock bands, papal visits, and political conventions. For other facilities, design is specific enough that changing concepts to stay competitive requires demolition and new construction,

which feeds the "growth machine." Many shopping malls, depending on location and purchasing power, have entered ineluctable cycles of utility and obsolescence, necessitating near-constant enlargement, revamping, or replacement. Whether the creatures of private capital or municipal expenditure or both, the large consumer venues discussed here have shown a remarkable convergence in their organization and architecture. Just as architects have struggled to keep skyscrapers human (and in the view of critics, often failed), so have the designers of mega-facilities closer to the ground discovered the downsides of size. A century ago, a church was a church, a shop was a shop, a theater a theater, a city hall a city hall, a warehouse a warehouse. In the 21st century, many of these institutions inhabit structures that seem to be fundamentally variations of the last mentioned, both inside and out. Sheer capacity wins.

This is not to say the picture is bleak. Competitive forces among cities have been generating pressures for designs that assist in defining identity, especially that which strengthens the "branding" of cities. As the appearance of the Brooklyn Bridge and the Lincoln Center will always help define New York, and the Gateway Arch St. Louis, so will newer creations shape the image of other places: Millennium Park and its "Bean" for Chicago; Disney Hall in downtown Los Angeles. Of course, when every large city has its plumbline-challenged Frank Gehry concoction, and gravity-defying Santiago Calatrava contraption, how different will the cities actually seem? What is clear is that when commerce needs something showy and splendid, it will pay for it; when not, there is a surfeit of employment for routine designers with too often mediocre results. And the push for spectacle may also have its limits. A website listing all the failed shopping centers in metropolitan Chicago—all once touted as wonderful spectacles—makes for sober reading, until one remembers that this is the destructively creative side of capitalism.

How do the large-scale structures of consumerism fit with their surroundings? This is not just a question of the occasional building and its current neighbors at a moment in time. The trend is clearly toward the development in many places of vast landscapes of contiguous mega-structures (see Fig. 19.3). The large extent of the impermeable surfaces exposed to the sun's heat and rapid precipitation in such districts has already been reflected in new patterns of urban floods and heat islands. The loss of small-scale texture is everywhere (Fig. 19.14). In some cases this is not an issue: the Getty Center represents a bold use of scenic outlook, as well as a bold display of cultural artifacts, and its relative buffering from adjacent residential neighborhoods helps create a landscape of contrasts. Foxwoods Casino, set deep within a wooded region of southeast Connecticut far from other development, offers a visual surprise to the approaching motorist, with its high-rise hotel block springing seemingly out of nowhere. Essentially, the low densities and large open spaces obtained for many mega-structures in rural and

Figure 19.14 Large-scale consumption venues generally stand in strong contrast to their older, fine-textured surroundings. As products of the late 20th century, they feature not only building complexes of enormous size but massive spaces for parking. Museums generally face smaller parking pressures.

suburban settings offer room enough, as long as the cheap transport costs that underwrite their clientele stay low. For urban settings, the issue is more fraught, but still the trend seems inexorable: more large facilities and, as they are shoe-horned into urban fabric that never anticipated them, bigger issues of juxtaposition and tension between conflicting needs.

But such perceptions are not new. Each generation has had to acclimatize to greater levels of population density, congestion, consumerism, and concurrent changes in architectural scale and spatial mobility. As always, the landscape remains a barometer and a site for investigation. It is the compositions on the ground that socio-cultural forces produce and the questions these compositions raise about the human scale within them and how well they satisfy people that give the landscape its enduring intellectual importance.

Chapter twenty

Designing the American utopia

Reflections

BRET WALLACH

WHERE BETTER to begin an essay on utopian America than in Dallas/Fort Worth's new Terminal D? On the mezzanine there is a coffee shop that calls itself a coffee studio and, in addition to very decent coffee, has little bags of chocolate-covered Rice Krispies. These ingredients are revealed only in the fine print on the bottom of the package: the part of the label that is meant to be read says "Taste Love." Whoa! Make note: here, in microcosm, is utopian America.

But let us back up, especially for academically minded readers. In the first edition of this book, the late James Vance contributed a chapter on American utopias. In it, he made two main points. The first, which he made very swiftly, was to address, then set aside as trivial, those usually tiny, usually ephemeral intentional communities that come up in every discussion of American utopias. Vance's second point was that the real story of utopia in America lay in the family farm and, later on, in the suburbs.

Vance's first point, about the marginality of intentional communities, makes a lot of sense to me, but it will not please everyone. Some may insist upon the importance of the Amish, the Hutterites, and the colonies at Amana and Oneida. They may demand discussion of the far more populous Mormons and, perhaps, the 3,000 or so communes that sprouted in the 1960s. Most of those communes were ephemeral, but more than 500 were listed a few years ago in a directory published by the Fellowship of Intentional Communities.[1] Critics may insist upon the importance of these surviving intentional communities, whether The Farm, in Tennessee, or the various Ananda cooperative villages, mostly on the west coast (wouldn't you know!). At the very least, though people sympathetic to these groups will not appreciate the suggestion, these communities can be studied as part of the psychology of cults, which rarely but tragically erupt in violence, whether at the People's Temple in Guyana in 1978 or among the Branch Davidians in Waco in 1993 or the Heaven's Gate suicides in 1997.

Is the charge of "cult" unfair? Consider George Ripley's famous Brook Farm, famous mostly because it attracted many literary figures.

It is still studied closely, for example by Sterling F. Delano in the recent *Brook Farm: The Dark Side of Utopia*.[2] Nathaniel Hawthorne was a charter member, writing to his fiancé in 1840 to say that he intended to settle in "Mr. Ripley's Utopia."[3] The following May he wrote to his sister that the farm was "one of the most beautiful places I ever saw in my life," but by July he was writing that "I have no quiet at all" and that she should not "expect pretty stories from a man who feeds pigs." By August, Hawthorne was gone, although he returned to visit and then—ingrate!—embroider what he saw into *The Blithedale Romance*. In the preface to that book, Hawthorne explicitly denies that he is writing about Brook Farm, but his fictional characters include a leader who rules with charismatic absolutism and followers who are blindly devoted to him. Both existed at Brook Farm.

Despite the literary big guns, Vance refused to pay much attention to Brook Farm because he wrote as a geographer, which meant to him, as it does to me, that he always had an eye not on the printed page but on the landscape. (I remember him at a professional panel once brusquely saying, to the annoyance of the planner seated to his left, that he did not "give a damn" about planning; he wanted to know about cities as they were, not as they might be.) And from this geographical perspective, America's intentional communities *are* trivial. Amish communities are certainly startling both to eye and ear—who can forget the charming sound of clip-clopping horses coming down a Pennsylvania highway?—but set in the vast expanse of the American landscape they are next to invisible. So, too, are Mormon temples, though they are perhaps the most startling sites offered by any intentional community. I remember driving some 30 years ago straight through from Maine to Washington, D.C., and in a state of exhaustion finding myself at dawn on the north side of the beltway. In front of me loomed the then-new Mormon Temple in Kensington. For perhaps a quarter mile it is straight in front of viewers driving counterclockwise. Am I the only one to have kept rubbing my eyes to clear away what I thought must be a hallucination—so odd were the spires, so much like a science-fiction drawing of an extraterrestrial world?

However interesting these exceptions may be, Vance argued that there was something much bigger going on. Which brings me back to Terminal D and the La Duni coffee studio. Americans are too practical to like the label "utopian," which magnetically attracts adjectives like "naive" and "foolish." The utopian ideal that Americans accept—even demand—is "life, liberty, and the pursuit of happiness." This translates, in the language of modern marketing, to *aspirational lifestyles*. What is the difference between that and utopian? The only real difference is that intellectuals will scoff at the idea that a *macchiato* is utopian. Vance would have dismissed that objection, too, as one only to be expected from an elite always eager to mock anything popular.

So let us talk about the aspirational coffee landscape, where the old cup of coffee, like the old, gum-sticking slices of Wonder bread, is dying a slow death. As I write, Starbucks has about 160 stores in Manhattan (Fig. 20.1). By my calculation, a motorist driving from San Francisco to New York on Interstate 80 can keep a warm Starbucks cup at his side almost all the way across. You get off to a thoroughly diuretic start with 25 stores in Sacramento, and you can refill in the Sierra Nevada at Rocklin, Auburn, Colfax, and Truckee. Coffee in a thermos will stay warm from Reno to Elko, and it is only a short hop to the Starbucks in the Nugget Hotel in Wendover. A Salt Lake City refill will almost last to Rock Springs. From there you jump to Laramie. And so it goes across the country, with Starbucks in Lincoln, Omaha, Des Moines, Iowa City, Davenport, Chicago, Toledo, and Cleveland. Pennsylvania is a barbaric surprise: midway across the state you have to detour about 15 miles south to State College. If you do not, there is nothing between Youngstown, Ohio, and West Rockaway, New Jersey.

Despite this deplorable gap, Starbucks is far ahead of Dunkin' Donuts, its blue-collar competitor. Dunkin' recently hired consultants for advice about catching up. The consultants reported that Dunkin's customers were conformists, desiring to be one of the crowd. How 20th century! Starbucks customers wanted to be appreciated as individuals. Could Dunkin' attract this new and affluent population without alienating the cops who are always there on break? Dunkin' decided to split the difference. It began by redecorating with fake granite countertops. The menu grew with the addition of lattés and sandwiches served on flat bread. Would it work? Maybe not, but Dunkin' is watching the rising

Figure 20.1
Starbucks, Long Island, New York. Just in case you're wondering whether you're now firmly within civilization's force field, here is a Starbucks with a drive-thru. This is in Coram, about halfway across the island. From here on west, you don't want to know.

standards of American consumers and believes that it must reach this finicky audience or slowly die.[4]

The same trend is evident in restaurants. This has nothing to do with the proliferation of Michelin-starred restaurants or the success of the Zagat surveys. Nothing fancy: we are just looking at the mainstream. There, Denny's and IHOP once seemed like a reasonable place to take the family. Hard to believe. They are part of a group that the trade calls family-style restaurants, and in case you have not noticed, they are being crushed, squeezed between fast-food operators and places like Olive Garden, Chilli's, and Outback Steakhouse. These new chains, part of a group called casual dining, are growing fast and squeezing the life out of the slightly cheaper family restaurants. The message, delivered by the millions, is that Americans have moved beyond Formica and plasticized menus.

Let us clarify: is a bag of chocolate Rice Krispies actually utopian? Yes, indeed, and Vance would likely agree. Certainly utopias are projects of opposition to an existing social order, but those Taste Love Krispies are a sliver off a huge project of opposition, a project that quite simply has been so successful that it is now all around us. It is a project at the heart of the American experience, and it extends from the colonial settlement of New England right through Henry Ford's cars for Everyman. From the get-go, America repudiated Europe's classbound society in favor of an egalitarian and self-reliant society in which people generally believed, generally with good reason, that each generation of Americans had a better life than the one before.

Vance did not explain why Americans had rejected Europe: he probably thought it self-evident that people, given a chance, will always choose equality over hierarchy. Maybe that is so, but the colonists got help. Jefferson's belief that all men were "endowed by their creator with certain inalienable rights" was not original with him or anyone else on this side of the Atlantic: it was rooted in Cartesian skepticism, with its trust in only the judgmental self. One thinks of Albrecht Dürer's self-portrait of 1500, revolutionary with its bold assertion that the individual mattered. In Dürer's Europe, however, about the only way a peasant could matter was to leave and build a life in the New World.

There is good reason, of course, to be critical of America's furious "pursuit of happiness," not least because Americans seem little happier than anyone else. Still, the American experiment has been hugely successful and overwhelmingly popular. Not virtuous, not morally superior, but incinerating the opposition. Try telling the proud owner of a new car in China that bicycles are better! Try telling one of those youngsters working at a call center in Delhi that the only good marriage is an arranged one with a caste-mate! Around the world, people are ready for the taste of love: that is why the U.S. Border Patrol and the Immigration and Naturalization Service have a hopeless task, at least until other countries prosper. Intellectuals, with their polemics about

brutal capitalism and vulgar popular culture, will not derail this train. You cannot find a peasant in Europe or Asia who is content to live as his ancestors did, hoping for nothing more than the chance to live undisturbed in poverty.

We come now to Vance's second point, that America's utopia was primarily visible in the family farm and its urban permutation, the suburban home. The first is quickly dealt with, the second needs extensive comment.

Family farming does not sound very utopian today, even if we stretch the definition to include 5,000-acre operations run by very sophisticated businessmen. Yet Vance was right in the sense that for a very long time the family farm *was* utopian (Fig. 20.2). We know this not only from conventional literary sources—novels like *The Emigrants, Giants in the Earth,* and *My Ántonia*—but from the much more reliable fact that homesteaders continued to place their bets on it, even if that bet was on 160 acres of Dakota badlands. This was in the 1920s, when America's better agricultural lands had already been taken. Yet people would come out and settle in the Little Missouri badlands in what is now the Theodore Roosevelt National Park. It was crazy—nobody could survive here on 160 acres unless they had some other source of income—but the homestead had an allure, a mystique, and understandably so. The government was giving away 160 acres. What did that mean to a family with no land or a few acres whose crops had to be shared with a hereditary lord who never worked a day in his life?

Too much work, too little reward, and urban alternatives. Those are the things that killed the family farm, mostly in the second half of the 20th century. Still, Americans regret its passing. The proof is that

Figure 20.2
Farm in the Palouse region near Uniontown, Washington. While the farm today commands a vast acreage, the yard still evokes the feel of the traditional family farm.

developers can still make a lot of money promising a more comfortable version of what Eugene Hilgard once called "the native values of rural life."[5]

I know something about those values because I lived on a family farm in northern Maine for half a dozen years. The owner would have scoffed at chocolate-covered Rice Krispies, but it was inconceivable to him that anyone would prefer a salaried city job. Just now I am reminded of him by a newspaper story. It is about a meeting in Rotterdam of small farmers on their first trip to Europe, where they have come at the invitation of Agrofair, a fairtrade fruit company. A banana farmer with a few acres in Ecuador says,

> I don't find the same satisfaction in a meeting room that I do in my field. There I put something in, I take something out. There's a rhythm and a freedom to what I do. And the air is better, there's less noise and I don't have to run to catch a train.

We will come back to this anti-urban sentiment, which drives substantial parts of the American real-estate market, but before leaving it let us remember that in an era of fewer and fewer, bigger and bigger farms, the old ideal is still visible with relic houses and barns still in use, or abandoned, or burned down to foundations. It is there in the section lines that spread over the center of the country and shape a road network conceived for a community of small farms. It is there in rural post offices, far too many of them to please budget planners in the Postal Service. It is there in the small towns—near ghosts in many cases—that once served rural communities that were tidily arrayed with 144 families on every 6-mile by 6-mile township. It is there in intangible ways, too. How absurd that the federal government should have a Department of Agriculture when farmers are, at most, a few percent of the nation's people! Where is the Department of Manufacturing? Of Mining? Of Retailing? Yet it would be a brave elected official who proposed abolishing the USDA, supported, as it is, not only by a few surviving farmers but more broadly by the old mystique.

If the family farm was the utopia of the 19th century, then the utopia of the 20th was in suburbia. And let me recall Joseph Eichler. Who? Vance did not mention him, though surely he knew of him. If Joe Eichler had worked on the east coast, I suppose the *New York Times* would have made him famous. As it is, Eichler is best remembered in California, where in the 1950s and 60s he built 11,000 homes known even now as Eichlers. That is, before he got in over his head and lost his company.[6]

I remember at that time often visiting a friend who lived in an Eichler home. It was incredible to me, a graduate student living in an apartment, that anyone could live in such a perfect house, but the owner was a well-paid engineer at Ampex, back then a famous name in tape recorders. My friend was—wouldn't you know it?—dissatisfied and

wanted to throw it over and move to Oregon. He did, too. It made no sense to me, because his home was paradise.

To understand my adulation, you have to understand the California of the 1960s. It was the time, you remember, of muscle cars. I had a Dodge with a 413-cubic-inch engine, high-lift cams, and a four-barrel carburetor. Anyone who had that kind of car remembers details like those. Come to think of it, it was the era when we were building the highways—we called them freeways—those cars ran on. (How many construction zones there were, mile after mile, as fleets of Caterpillar and Euclid machines moved dirt; I remember Interstate 80 emerging from U.S. 40 like a snake shedding its skin.) People expected that their control over space would expand in the years to come, not contract. It never occurred to them—or me—that we would not have cars that growled and rumbled at every stoplight, or that, 50 years into the jet age, planes would be flying slower than the first generation of Boeing 707s. Sixteen airlines had taken options on almost a hundred Concordes, and the U.S. was planning its own supersonic transport, the SST. From the perspective of the 60s, the 21st century seems a time of diminished expectations, notwithstanding the spectacular advances in communications.

It is true that these Californians did not yet expect fresh orange juice in a restaurant, down duvets in hotels, or heated leather seats in their cars. But do not imagine that they were self-sacrificing idealists of the sort John Kennedy hoped to reach in his inaugural address. Despite Kennedy's rhetoric, they believed that society existed to serve their needs, not the other way around. They were solipsists at heart, perhaps symbolized best by Bob Dylan, who could scarcely sing, who barely tolerated melody, and who composed lyrics that made no sense. Yet Dylan became huge because he expressed a determination to do what he liked, regardless of audiences, critics, or record producers. More than most, the hippies followed Dylan down this path, but a far greater number of people followed him part-way. Can one avoid mentioning the so-called sexual revolution, which gave women the freedom to be as promiscuous as men? Until herpes, there were almost no physical consequences to casual encounters, and AIDS had not yet made promiscuity a kind of Russian roulette. But then, in the 60s we did not even know that someday muscle cars would crawl along overcrowded freeways at 20 miles an hour.

The Eichler homes fit this libertarian culture like a glove.

Eichlers, it should be said, were modern (Fig. 20.3). They had no architectural ornament, no columns or half-timbering or domes or Gothic arches. But Eichler did more than share the anti-bourgeois convictions of the Bauhaus faculty. He understood that Californians of the 1960s wanted a house that was a refuge or nest in which they could live unrestricted lives. There was no market demand for social ostentation, so Eichler homes ignored the street and presented to the outside world

Figure 20.3
An Eichler home in Grenada Hills, Los Angeles.

only a wall and garage door, both in neutral colors, mostly on gray, textured plywood.

The occupants, hidden inside, lived around an atrium. Odd word! When had the American middle class ever had a courtyard, let alone an *atrium*, a word that evoked the sunny Mediterranean and the cushioned life of wealthy Romans? John Portman was still to build his first atrium hotel, in Atlanta, but here was Joseph Eichler giving families an atrium surrounded by rooms filled with private light. Filled indeed: these houses had walls of glass, because they were homes for healthy people who would always stay young and beautiful. Nobody worried about skin cancer; nobody had heard that damaging sunlight could penetrate glass. There were some opaque walls, but they were never in clunky plaster. Instead they were almost always paneled with Philippine mahogany, naked, natural, and the color of that coffee drink yet to be invented, the latté. The ceilings could not contain the energy below: that was the message of these houses, whose ceilings were raked, one edge higher than the other. It was as though Eichler had taken William Levitt's 800-square-foot econobox and kicked it to a higher orbit, a higher energy state.

If you have never seen an Eichler, this must all sound absurd, especially because there has been such a strong reversion to the bric-a-brac of historicist styles. Do not blame America's builders for all those columns and porticos you see today: the builders are just responding to a market that has concluded, with a good deal of help from the media

and advertising, that it is not enough to be happy: one must also be seen to be happy. Which means that one must display one's wealth. Houses must make *statements*, a word familiar now, yet, according to the *OED*, first used in this sense in 1977.

The equivalent to Eichler today is perhaps Toll Brothers, but they do not do modern. No fault of theirs: they would go broke if they did. Think of the owner of California's Rancho Mission Viejo. He decided to build a planned development called Ladera Ranch—population 16,000 by 2006—and he was smart enough to hire consultants to learn about the people he wanted as customers. The consultants wound up dividing those people into two groups, though "demographics" surely is the term of art. You will see a reflection of the Dunkin' and Starbucks dichotomy in Ladera's two parts. One is called Covenant Hills; the other, Terramor. They might as well have been called Bible Land and Mother Earth. These were two very different traditions, but traditional they were—backward-looking. Modern would not cut it.

Ladera Ranch is an extreme case—we are in Orange County, after all—but around the country builders are hugging the conservative character of the time. It is no accident that radio stations with upscale pretensions will often have one or more announcers with British accents—and not, if you please, the accents of Lancashire. It is a status display, of course. That same quest explains the success of the latest product of KB homes. The company, one of the industry giants, appears to have struck gold by teaming up with Martha Stewart. The first of KB's "Martha Stewart Communities" is near Raleigh, North Carolina; others are coming to suburbs of Atlanta and Houston. The homes are "inspired," according to KB, by Martha Stewart's own much larger homes in Maine, upstate New York, and on Long Island. They come in three styles, named Lily Pond, Skylands, and Katonah, and they are built in the shingle style or with stacked-stone or a colonial facade.

Stewart has explained her purpose this way: "You could go into a house painted terrible colors or you can go into a house painted beautiful colors. Which would you choose, you know? That's what we're here for."[7] The implications are that KB, on its own, and the homebuyers, too, are brainless but, with a hand from Martha, can taste love.

These homes are cravenly reactionary in their aping of the aristocracy from whom America's European immigrants escaped, and alongside them the Eichler homes seem not only simple-minded but rustic. Eichlers often had less than 2,000 square feet of living space. That was large for their time, when the average new house had 1,600 square feet, but it is small for today, when the average new home has 2,200. The Eichler floor was a concrete slab, and there was no attic: instead, the ceiling was the roof, supported by exposed beams. There was almost no insulation on that roof—just a bit of fiberglass under tarpaper and gravel. There were huge windows, but they were single-paned and untempered. Hot? It is said that candles could melt in an Eichler home

in summer. You mean there was no air conditioning? Exactly. For a time, the only thing homeowners could do was cut holes in the walls and install window units. Ducting in the basement was impossible, because there was no basement. Ducting in the attic was impossible, because there was no attic. You could put ducts on the roof, but that looked terrible. Only recently has a better alternative been available with the split-units commonly found in Asia.

The Eichlers—the list of deficiencies goes on!—had only two bathrooms, even if they had three or four bedrooms. Astonishing! Many of them had single-car garages. The kitchen countertops, I blush to report, were of speckled Formica. All in all, living in an un-updated Eichler today is like driving a car without power steering. It is primitive. But, then, "decadence" in the 60s still implied decay; it had not yet acquired the sense in which we use the word now to indicate a small, faintly naughty indulgence—something, dare I say, chocolate. Words like "sybaritic" and "sumptuous" had not yet been put to work by advertising copywriters.

We shall return to homes, but since we are in the suburbs let us now go shopping. Vance did not do this, but one can expand his suburban utopia in several ways, of which shopping is just the first. Shopping is, of course, utopian. Perhaps we are too jaded to realize it; maybe we have to remember the Russian housewives who, in the 1970s, were known to accompany their husbands on important missions to the United States, where—on their first visit, at least—the wives would be taken into a Safeway or A&P, only to burst into uncontrollable tears. The stores certainly seemed utterly utopian to them.

Shopping also is a very large part of civic life today. How can it be otherwise, when most of us drive between home and work? The average person rarely rubs elbows with people outside of family and work except when shopping. Think of Renzo Piano, who in an interview explained why he, an Italian, wins so many architectural commissions in the United States. The Americans, he said, "want something European, a more subtle, more humanistic approach. They want to rethink the relationship between public and private space, between the building and the street."[8] It is a challenge.

Meanwhile, we shop. Most of us do it bimodally. We watch our pennies while buying laundry detergent but then splurge on $4 frappucinos and $20 manicures. You see the logic: we are not rich, but we want to live rich, indulge ourselves, taste love. Welcome to the world after Hershey, a world in which people only buy chocolate bars with a minimum of 60 percent cocoa solids. It was not always this way, but utopian America is evolving in tandem with our rising aspirations. Super-premium ice cream did not exist in the 60s. Berries in winter were canned or frozen.

You will understand now that the shopping center of the 1950s can no longer carry the load. The old dumbbell or dogbone design is dead. Remember those two department stores, separated by a gauntlet of

independent merchants who struggled to catch a few shoppers on trek between the anchors? Those that failed to capture passersby failed, period.

Shoppers today are tired of department stores and irritated both by the deliberately confusing layout and the management's refusal to provide shopping carts. Department store owners are trying to hang on, but it is tough when shoppers are so impatient that they want to walk straight from the door to exactly what they want to buy. What would you expect in a society where, with the exception of the geriatric crowd, nobody is willing to sit through even a 30-second TV commercial?

Welcome to the lifestyle shopping center, which seems to be recapturing consumers. Lots of trees. Maybe some live music. Lots of places to sit and enjoy that glass of wine that your grandparents never saw when shopping. A lot like heaven, when you think about it (Fig. 20.4). Academics and other superior types will laugh with derision—one of their specialties—but how deep are their pockets? Heaven help the retailer who relies on tenured radicals.

Figure 20.4
The Galleria in Dallas, Texas. Here's another successful mall, which opened in 1982 and has recently been remodeled to further heighten the sense of "lifestyle" shopping.

Vance's suburban utopia can be stretched in yet another way. Downtown is no longer a dead-after-five collection of department stores, office buildings, and off-to-one-side warehouses. Downtown now has condos attractive to people who cannot stand mowing the grass and washing the car. It has a cultural center, so-called despite the absurd pretentiousness of the name, because people want to look at something beautiful. It has festive retail for shoppers who want to have fun while buying something at least half beautiful. It has a huge stadium for athletic events. Downtown, in short, has become part of the good life, even if most of the people who enjoy it drive in from the suburbs.

Think you can find a big city that does not strive to attract those suburbanites and their money? In the last 25 years, Oklahoma City has built a good art museum, a spiffy library, an impressive botanical garden, an entertainment district from recycled warehouses, and a riverfront along the dammed North Canadian River; it has built new hotels in conjunction with a new convention center, and it has recycled old ones. People from the coasts will turn up their already upturned noses, but people in the Oklahoma City suburbs come downtown once again, because downtown offers things they think they deserve.

It is not enough, because there is no satisfying Americans, at least for very long. The collective epitaph, when it is written, should certainly include the word "more."

So a survey of Vance's suburban utopia also brings us back to rural America. This, however, is not the rural America where men farmed, mined, and logged. This is a landscape where we have so mastered nature, so got it to do our bidding, as the narrator of Francis Bacon's *New Atlantis* put it, that we can relax and enjoy the view. The wilderness no longer howls; it purrs. We may hunt or fish, but not for food. We do it for the experience of what some enthusiasts have called "Absolute Unitary Being."[9]

That is not the language of Middle America, God be praised, but there is no other way to explain why Alice Walton recently spent $35 million buying Asher Durand's *Kindred Spirits* for her new museum in Bentonville, Arkansas. There is no other way to explain why hardbitten western ranchers are furious with the federal government—and the Republican administration they helped elect—for welcoming energy development on the public lands. There is no other reason to explain why Orange County, in taking over the old Marine Corps air station at El Toro, is going to spend $400 million developing a 1,300-acre Orange County Great Park, which, on an otherwise featureless marine terrace, will be built around an artificial canyon. Americans do not talk the talk of Absolute Unitary Being, but they often walk the walk.

It is not enough for them to look at nature: they want to be enveloped in it. You do not believe this? Well, read now from the magazine in the airplane seat pocket. It lists the top 10 U.S. spas. At La Costa, guests apparently rave about the Avocado Cilantro Body Masque, which uses

a "ground avocado seed exfoliation." You think I am making this up? At the nearby Spa Montage, you can get a massage with "a slimming algae-based cream." At the Spa du Soleil, in what is now apparently francophone Sonoma County, "fresh Napa Valley peaches are blended with cream and painted on your body." Who would have thunk it? If you do not mind being really sticky, you can try the Four Seasons Resort at Hualalai, Hawaii, where "warm Lehua honey is drizzled over your body." Did I mention decadent?

We are ready now to come back to the family farm, this time in the guise of the second home in a natural setting, which is sensuous and staggeringly expensive.

The historically minded will think of Nantucket, which has been called Nature's "ultimate gated community." Money came here with the Vanderbilts, Mellons, and duPonts, but there is new money now, so much of it that the old money is being upstaged. What is a private plane against a private jet? For a $300,000 entry fee, you can join the Nantucket Golf Club or the Great Harbor Yacht Club. This makes life a little tough for the carpenters, plumbers, and gardeners who take care of Nantucket, where the average house costs $1.7 million. Still, those guys are smart: 400 of them fly in every weekday. The Nantucket Housing Office is meanwhile proposing a McMansion tax of $8 a square foot on homes over 3,000 feet; it would be spent building houses for poor families, defined as those making less than $120,000 a year.

Sure, this is exceptional. But Pitkin County—that's Aspen, Colorado—has decreed that no new houses shall exceed 15,000 square feet. It is all the fault of Prince Bandar, the Saudi who came to town in the 90s and built a 55,000-square-foot cottage unkindly nicknamed the Garage Mahal. So why the house-size cap? A County Commissioner explains: "They've got a masseuse, a caterer, a landscape guy, a hot-tub guy, the lawn people, the plumbers and electricians, the maids and a caretaker."[10] They all use county roads and services. Meanwhile, Teton County, Wyoming, has since 1994 had a 10,000-foot cap. Hardly room for a decent wine cellar.

Come down a notch or two to California's Mammoth Mountain.[11] For decades, Mammoth operated as a mid-price ski resort, mostly for people driving four or five hours from southern California. Then, in 2005, the developer, 90-year-old Dave McCoy, sold the place for $365 million to Starwood Capital, which is run by Barry Sternlicht, who built the Starwood hotels conglomerate. Mammoth's house prices average $1 million now, but the path is straight up. An airport is coming, and a realtor says, "I think the airport will explode this place." Sternlicht plans on turning over resort management to Intrawest, the same people who built British Columbia's Whistler resort and, more recently, resorts at extravagant Lake Las Vegas.

Want more space than you are likely to get at Mammoth? No problem. There used to be dozens of dude ranches in the West, working ranches

that welcomed visitors who stayed for a week or more in the summer and lived, sort of, like cowboys. Now, there is too much money chasing Nature for those ranches to make much sense. Some have been snapped up by the truly wealthy, like one of 150 acres that Meg Whitman of eBay recently bought for $20 million. Others are being carved up, like Colorado's 8,000-acre C Lazy U Ranch. It has been in operation since 1946 as a dude ranch near Rocky Mountain National Park. Listen to its pitch:

> Experience the color of Colorado's alpenglow, the whisper of a mountain breeze and star filled skies that inspire new dreams. These are some of the luxuries of a horseback riding vacation in the spectacular mountains of Colorado. Nature surrounds you and the stresses of city life disappear. Peace and quiet, fresh air and cool streams cleanse the body and the spirit and you experience a newly found level of comfort and well-being.[12]

Homesites cost over $1 million, and 35-acre tracts cost a cool $35 million. Then, perhaps in a class by itself, there is the St. Joe Company. With 820,000 acres and 39 miles of oceanfront, it is Florida's biggest landowner. The company was created after the death in 1936 of Alfred du Pont, who had acquired the land several decades earlier for a dollar or two an acre. Mostly in the Panhandle, the land was covered with pine, and it had little economic value for anything except the pulp and paper that St. Joe began making. In the 1990s, however, that all changed. The Alfred du Pont Trust, which still controlled the company, began selling stock: it now holds only 7 percent, down from 70 percent as late as 1997. That was the year when St. Joe hired a new CEO who had previously been chairman of Walt Disney Imagineering. Two years later, St. Joe announced that it would begin selling its lands.

The nature of those sales is glimpsed through the company's profits of $126 million in 2005 on revenues of $938 million. These were, you will understand, no longer the lands that Alfred du Pont had bought on the cheap. They had morphed from lands good only for spindly timber to land where Americans would find a perfect place.

If that sounds farfetched, here is a quotation from a St. Joe publication. "JOE," the company says familiarly, "is an expert at 'place making'." Americans have lost their "sense of connection to each other," as well as their "intimate connection to the land." The company says that "we see in our target markets a growing desire to recapture these connections, and we have created two distinctly different portfolio of products to meet, what we believe will be, an increasing demand."

The first of these products is a dozen towns modeled on Seaside, the much publicized experiment in what has become widely known as the New Urbanism. There is nothing very new about New Urbanism, apart from the name. Where the Victorian promoters of Garden Cities sought

an escape from industrial squalor, however, the New Urbanists seek to live in a town where most of the things people need are so close one does not need a car to get them. Seaside has been designed to discourage cars and to hide them when they have the temerity to enter the sanctum.

It is easy to mock the results, which in Seaside's case include stratospheric prices and almost no jobs, especially for those paying enough to buy a Seaside house. Most of the houses, instead, are second homes, occupied seasonally at most, and often held as investments. Most, to the disgust of many architects, are almost triumphantly traditional, presumably on the twin assumptions that Americans were more sociable a century ago and that, if Seaside can mimic the forms of that time, it can recreate a return to that sociability (Fig. 20.5). The truth, I suspect, is that any sense of community that exists in Seaside is founded primarily on the comfort residents feel in knowing that there are no poor people around.

The earliest St. Joe town adjoins Seaside and is called WaterColor. The bicapitalization suggests ExxonMobil and TimeWarner and through this association establishes the aura of affluence that is critically important to the developer. After all, prices at WaterColor are astronomical in comparison to historical house prices in the neighborhood.

If St. Joe's towns are derivative, St. Joe has nevertheless gone into uncharted territory with a series of developments it describes as exercises in the New Ruralism. With surprising candor, a company official says, "We honestly asked ourselves, 'will people live in this environment? We've got critters, we've got heat. We've got humidity'." The answer was yes, even at eye-popping prices. As you might expect from a CEO fresh from Disney, the company understands the popular mood.

Figure 20.5
Homes in Seaside, Florida. The average 2,000-square-foot cottage in Seaside sells for $900,000. Such prices keep shop clerks and carpenters at bay. Permanent residents in Seaside occupy only a tenth of the homes, rentals being widespread. This particular "cottage," named Proteus, appears to have been designed by an engineer last employed in 1880 by the Public Works Department of Madras.

"People," he says, "are trying to get back to a time they remember." They want "wind in the trees," "stars, no lights," and "slamming, squeaking screen doors." We are back to the homestead.[13]

St. Joe set out to create a "setting where experiences are directly linked to the rhythms of nature: rise with the sun, fish with the tides, and rest with the moon." The company would create "room to grow, quiet to think, and time to dream." It explained that "these aspirations are the driving force behind New Ruralism." It is stunningly romantic, but there is a twist. The company writes that "your front porch is a place to scan the vastness of your domain." We are plutocrats, it seems, but nice ones, sensitive.

One format of the New Ruralism will not suit all buyers, so St. Joe decided upon three, which it calls RiverCamps, WhiteFence Farms and Florida Ranches. The first RiverCamp venture was on Crooked Creek, where 450 homesites have been laid out on about 1,500 acres. Average price: $342,000, rising to a million for waterfront. This is just the site, remember, and you are talking about only 3 or 4 acres. Tract 07233D is 2.27 acres "of waterfront property on St. Joseph Bay [that] includes a nearby half-acre private island, part of a beautiful wetland area, and navigable access by kayak or canoe from the property into the bay." Price: $795,000, or $261,363 per acre.

The first WhiteFence Farm has been established away from the sea and near Tallahassee, where 1,000 acres have been divided into tracts of 5–20 acres. Average price, per acre: $20,000–$75,000. A typical tract, of 10 acres, was priced in 2006 at $315,000.

Florida Ranches run still larger in 50–150 acres cut from tracts of 1,000–3,000 acres. Average price: $4,500–$10,000 per acre. Tract 07188C-05 consists of 110.52 acres and was priced in 2006 at $224,797.68. It was one of the cheaper parcels in the neighborhood.

Not to your taste? More anti-utopian than utopian? Altogether a dystopia? (Now that is a fine word, coined by the unimpeachable John Stuart Mill some 300 years after Thomas More coined its better-known antonym.) I am sympathetic to your objection, perhaps because I am no more likely than you to snap up a few choice parcels. We are back, in any case, to the paradox of one utopia emerging from another. People inclined to reject the mainstream utopia described here will say, with justice, that the mainstream in recent decades has absorbed many of the beliefs of the small, ephemeral, intentional communities of the last two centuries. What are the New Urbanism and the New Ruralism, if not attempts to live closer to the ideals that brought Nathaniel Hawthorne to Brook Farm? What was radical a century ago—the rejection of social atomism and environmental despoliation—is now conventional wisdom and grist for the mills of fortune grinders. The important point is that in our rush to find fault with America we not miss the utopianism at its core. Miss it, and we are like the sailor who, for lack of a bottle of Evian or Pellegrino, dies of thirst on the Great Lakes.

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Notes

Introduction

1 Cosgrove 1984, pp. 1–5, 11.

2 Good examples of reading the landscape for orientation in an urban setting are Lynch 1960 and Clay 1973. The classic statement on the historical record of human adjustment to the earth is contained in Thomas 1956. The affective dimension of landscape is treated in such works as Tuan 1979.

3 Mikesell 1968, p. 576; Jackson 1964.

4 Cosgrove 1984, p. 20; Conzen 2001.

5 Lowenthal 1962–1963.

6 Mikesell 1968, p. 578.

7 Mattern 1965–1966, p. 14.

8 Coones 1985.

9 As noted in Peirce Lewis' excellent primer on "reading" the American landscape. See Lewis, "Axioms for reading the landscape: some guides to the American scene," in Meinig 1979, pp. 26–7.

10 Meinig 1979, pp. 33–48.

11 Books on this theme are legion, and the literature devoted to nature in particular localities is almost without count. Attractive examples of general treatments are Shimer 1959, Farb 1963, Thornbury 1965, Watts 1975, and Sullivan 1984.

12 Anderson 1976; Whitney 1994.

13 Cases in which environmental awareness is treated in direct relation to American landscapes can be found in Lowenthal & Riel 1972, Zube 1973, and Tuan 1974, esp. pp. 66–70.

14 Appleton 1975, pp. 41, 55; Taylor 1976; Watson 1970–1971; Cosgrove 1984.

15 Marx 1964; Jakle 1977; Mulvey 1983.

16 Harris, N. 1966; Rees 1978; Salter 1978; Mallory & Simpson-Housley 1987; Thompson 1995.

17 Tunnard & Pushkarev 1963; Nairn 1965; Greenbie 1981. Some geographers, however, have contributed to the debate, notably Lewis *et al.* 1973 and Luten 1986.

18 For an overview, see Kennedy *et al.* 1988 and Stokes & Watson 1989.

19 A hint of the reasons behind this may lie in David Lowenthal's argument that "For many Americans the past is still only a foreign body, alien and intrusive in the great national landscape of today and a positive impediment to realizing the greater creations of tomorrow" see Lowenthal 1976, p. 111; 1985, pp. 105–24.

20 By far the best writing on the geographical shaping of America, that is, offering

a general societal framework within which to view landscape development, is Donald Meinig's landmark quartet, *The shaping of America: a geographical perspective on 500 years of history* 1986–2004.

21 The seminal study of the English landscape is Hoskins 1955. A brief and lucid introduction to the general subject is Knowles 1983, containing a succinct but excellent bibliography. Modern writing on American landscape history owes much of its impetus to J. B. Jackson, who in 1951 founded *Landscape*, the influential magazine devoted to the origins and character of landscapes everywhere. While some of Jackson's writings on the history of the American landscape appear in various anthologies, see Jackson 1980, 1984, and he produced a book-length interpretation of a crucial decade of change in the 19th century, Jackson 1972, many see his most comprehensive framework for dealing with the topic reflected in Stilgoe 1982. A searching assessment of Hoskins' and Jackson's approaches is offered in Meinig 1979, pp. 195–244. In recent years, historians have taken an increasing interest in the creation of American landscapes through their exploration of environmental history. While not always making explicit use of the concept of landscape, several studies show a keen eye for the role of human action in shaping the visible environment: see, for example, Worster 1979, White 1980, Cronon 1983, Fiege 1999, Sandweiss 2001, and Donahue 2004.

22 The book also mixes in exotic comparisons with Britain, Germany, and South Africa Hart 1975.

23 These range from the resolutely scholarly compendia such as Upton & Vlach 1986, which is restricted to architecture, to popular overviews such as Smithsonian Exposition Books 1979, exhibiting a catholic set of commentaries, only some of which are historical.

24 Serious histories of particular urban landscapes—a more manageable scale—are somewhat more common. In the thin American genre of topographical histories, the classic treatment of Boston in Whitehill 1968 stands out. Among more modern work, see Mayer & Wade 1969, and Lewis 2003. More often books on a city's historical evolution treat the cityscape as graphic accompaniment rather than central focus. Occasionally, technical treatises in architectural history and landscape architecture devote a chapter to the total landscape evolution of the district considered; for example, as in the study of northwest Cambridge, Mass., in Krim *et al.* 1977, pp. 2–55; and in some Vermont townscapes in Williams *et al.* 1987, pp. 35–43.

25 Lowenthal 1968, p. 81.

26 And even this required two volumes to encompass it see Noble 1984.

27 Examples of such work can be found in Hoelscher 1998, Dilsaver 2004, DeLyser 2005, Harrison 2006, and Olmanson 2007.

28 Such a book series of regional landscape histories has appeared in Britain, thanks to the inspiration of Hoskins. For a listing, see Knowles 1983.

1 Recognizing Nature's bequest

1 Excellent introductions to the physical makeup of the United States can be found in Shimer 1959; Dury & Mathieson 1976; Redfern 1983; White *et al.* 1985; and Hunt & Trimble 1998.

2 Hart 1972, p. 267.
3 A good summary of current knowledge of the ecology of this period is contained in Wright 1983.
4 For a general introduction to regional American physiography, see Fenneman 1931 and 1938; Atwood 1940; Lobeck 1957; Hunt 1974; Chapman & Putnam 1984; and Pirkle & Yoho 1985. For a solid introduction to the distribution of soils, see Steila 1976; and for vegetation see Bowman 1914, and Küchler 1964. For historical geography of the environment, see Dilsaver & Colten 1992 and Whitney 1994.
5 Gilbert 1917.
6 Cooke & Reeves 1976.
7 On the Colorado River, for example, see Graf 1985.
8 Quoted in Parkman 1946, p. 57.
9 Hudson 1994.
10 Trimble 1985.
11 Trimble & Lund 1982; Trimble & Crosson 2000.
12 Helms 2000.
13 Hart 1975.
14 Moore 1897.
15 Trimble 1988.
16 Sauer 1927.
17 Whitney 1994.
18 Trimble 2008.
19 Williams 1989.
20 Trimble *et al.* 1987.
21 Foster 1992; Foster & O'Keefe 2000; Whitney 1994.
22 Lewis 2003; Colten 2000.

2 *Retrieving American Indian landscapes*

1 Sarnthein *et al.* 2006; Graf 2009.
2 Guthrie 2006, 1990.
3 Reeves 1983.
4 Gilbert *et al.* 2008; Dillehay *et al.* 2008; see Butzer 1991 re problems of site discovery.
5 West 1983; Harris 1987, pl. 2.
6 Porter 1983; Bryant & Holloway 1985.
7 Martin & Klein 1984; Grayson & Meltzer 2003.
8 Thompson *et al.* 1986.
9 For the High Plains, see Frison 1978; Johnson & Holliday 1986.
10 Ford 1985; Keegan 1987; Delcourt *et al.* 1998.
11 See Guthrie 1990.
12 Johnson & Holliday 1986; Meltzer & Collins 1987.
13 Waters 2008.
14 Butzer 1977.
15 Ford 1985; Keegan 1987; Delcourt *et al.* 1998; Doolittle 2000, ch. 2.
16 For the last 2,500 years or so, radiocarbon ages are here calibrated according to the bristlecone pine record (Reiner 2004), to bring them into line with tree-ring dates.

17 Frison 1978.
18 Schwarcz *et al.* 1985.
19 Brose & Greber 1979.
20 Butzer 1977.
21 Schwarcz *et al.* 1985; on evidence for advanced garden agriculture, see Doolittle 2000, ch. 4.
22 Cohen & Armelagos 1984.
23 Smith 1974; Yerkes 1987; for the Gulf Coast, Ricklis & Blum 1997.
24 Yerkes 1987.
25 Smith 1978.
26 Fowler 1978; Dalan *et al.* 2003. The Cahokia climax (Stirling and Moorehead phases) dates about AD 1135–1290.
27 Gregg 1975; Dalan *et al.* 2003.
28 Cohen & Armelagos 1984.
29 Sauer 1971, 1980.
30 Ritchie 1980.
31 Gartner 1999; Doolittle 2000, ch. 6.
32 Ford 1985.
33 Fish & Fish 1994; Doolittle 2000, pt. IV.
34 The lime for large-scale application of mortar only became accessible after Spanish introduction of iron quarrying tools (Butzer & Butzer 2000),
35 Fish & Fish 1994; Doolittle 2000, pt. IV.
36 Fish & Fish 1994; Masse 1981.
37 Haury 1976.
38 Midvale 1968; Masse 1981; Fish & Fish 1994.
39 Fish & Fish 1994; Doolittle 2000, ch. 10.
40 Fish and Fish 1994; Crown 1987.
41 Wood and McAllister 1984.
42 See Dean & Robinson 1978.
43 Minnis 1985.
44 See Fish & Fish 1994 for archaeology; Sauer 1980 for Spanish estimates.
45 Hornbeck 1982.
46 Fladmark 1986.
47 Herndon 1967.
48 Sauer 1971, 1980.
49 Sauer 1980.
50 Sturtevant 1978; see Sauer 1980, pp. 61–82, for the Southwest.
51 Denevan 1976.
52 Kay 1979; Albers & Kay 1987.
53 Ray & Freeman 1978; Peterson & Anfinson 1984; Harris 1987, pls. 33–41.
54 Feral or domesticated Spanish pigs were already seen by the de Soto expedition, and may have been ancestral to Iroquois hogs reported in 1687 (see Sauer 1971, 1980).
55 Goodwin 1977; Newman 1979; Delcourt *et al.* 1998.
56 Hilliard 1972; Utley & Washburn 1977.
57 Hudson 1976.

58 Wishart 1979; Harris 1987, pl. 69.
59 Zelinsky 1973.
60 Pollen studies can now identify forest clearance, weed explosions, and cultivated as well as collected or tended plants (Delcourt *et al.* 1998).
61 U.S. Census 2000; Canada Census 2006.
62 Nash 1982; Axtell 1992.
63 Brown 1983; LeCompte 1978.
64 Butzer & Butzer 2000.

3 Refashioning Hispanic landscapes

1 Bolton 1921; Bannon 1968.
2 Gold 1969.
3 Bolton 1917; Hayes 2007.
4 Hornbeck 1983, pp. 60–61; on the wider commercial context, see Works 1993.
5 Some good general works on this topic are Caroso 1963; Bannon 1974; and McDermott 1974.
6 Nasatir 1976.
7 Wright 1971.
8 Weber 1992; Benton 1998; Smith 2004.

4 Retracing French landscapes in North America

1 A good introduction to the geographical dynamics underlying the development of French-influenced landscapes in North America can be found in Harris & Warkentin 1974. A major new source for interpreting the evolving geography of New France, along with many of its landscape features, is the recently published *Historical atlas of Canada, volume I: From the beginnings to 1800* (Harris 1987).
2 A useful overview of the early maritime fisheries is Head 1976.
3 Clark 1968.
4 R. C. Harris 1966.
5 Lewis 1976b.
6 Ekberg 1998. An outstanding study of French river and backcountry mining settlements of the Ste. Geneviève district in Missouri is contained in Schroeder 2002.
7 Belting 1948; Gentilcore 1957; Roark 1988.
8 Johnson 1958.
9 The cartographic rivalry between France and Britain is treated in Conzen & Dillon 2007.
10 For an excellent geographical overview of the Acadian migrations that included Louisiana as a destination, see LeBlanc 1979 and Estaville 2001; a recent detailed account of the Acadian settlement of Louisiana is found in Brasseaux 1987 (see especially maps, pp. 93, 97); the Cajun building traditions developed in Louisiana are treated in Kniffen 1965, Heck 1978, and Rooney *et al.* 1982, p. 79. For discussion of 19th-century French Canadian migrations to the United States, see McQuillan 1979. See also Louder & Waddell 1993.
11 Conzen 2002.

5 *Americanizing English landscape habits*

1 Throughout most of American history, Americans have been torn between the urge to tame the land and a conflicting almost mystical urge to conserve it—even to worship it. The motivations, of course, pit economics against aesthetics and even theology—at best a complicated matter. Three intelligent treatments of this intricate subject are White 1967, Nash 1973, and Cronon 1983.

2 On the regional divisions of England reproduced, albeit with a scrambled geography, in New England, see Bowden 1994.

3 Cooper 1810.

4 Ravenstein 1885/1889.

5 Kurath 1973.

6 Meinig 1966, 1993.

7 The first major treatment of this New England diaspora was Rosenberry 1909. See also Zelinsky 2005.

8 Kniffen 1965; Lewis 1975; and Hudson 1986b.

9 Holbrook 1950; D. K. Meyer 2000.

10 Glass 1986.

11 Lewis 1976a.

12 It is noteworthy that Pennsylvania, for all its wealth and population, has produced just one American president, the hapless James Buchanan (1857–1861), mainly remembered for keeping the presidential chair warm while the nation prepared to tear itself apart in civil war. See also the scathing commentary on the membership of Pennsylvania's Congressional delegation in Barone *et al.* 1988, p. 1008.

13 This view is not mere subjective opinion, but is supported by meticulous comparative enumerations of leaders from the two regions; see Baltzell 1979.

14 Gowans 1976; Kornwolf 2002.

15 Zelinsky 1977.

16 Paint, however, was another matter. In colonial and early national times, paint was very expensive, and only wealthy people could afford to use it. As a result, the bulk of New England's wooden houses simply went unpainted and turned a weathered gray. The tendency to paint all New England houses white is a fashion of fairly recent date. Meantime, Pennsylvanians often painted their red bricks red—presumably to help preserve them from the weather.

17 Gowans 1976.

18 Classical place-naming was not confined to New York State, of course, but the region between Utica and Rochester contains perhaps the densest and most exuberant collection of classical names in North America. Almost all of them were bestowed in the first three decades of the 19th century (Zelinsky 1967).

19 This amazing episode has been chronicled by Cross 1950.

20 Classical styles were adopted by elite folk in the South as well, but they are by no means as common as viewers of *Gone with the wind* would have been led to believe. In vernacular housing built before the Civil War, aspects of Southern classicism are much more restrained (see Trimble 1988). In a meticulous count of dwellings in Georgia in the early 1950s, Zelinsky found Classical Revival houses to be concentrated mainly on the Piedmont, and mainly in towns. Classical mansions in the country, *à la* Tara, were very rare, and it seems doubtful if Sherman's army

could have burned them all down (see Zelinsky 1954). New England's western extension in the upper Great Lakes region still contains the densest concentration of vernacular classical buildings in the United States.

21 Hubka 1984.

22 Glass 1986, ch. 2, n. 10; Ensminger 2003.

23 Midwesterners commonly added a gambrel roof and red paint to the basic Pennsylvania model, to produce the "standard" American barn of popular image. Both features are also common in central Sweden, but they apparently diffused throughout the rest of the farm belt through the efforts of county extension agents from a number of university colleges of agriculture.

24 Conzen 1980b.

25 Wood 1982, 1997a.

26 This geopolitical terminology is peculiar to New England and New York State, which was largely organized by New Englanders. Elsewhere in the United States, the closest thing to a New England town is called a "township," which is usually merely a political subdivision of a larger county. Outside the New England region, townships often have very little significance, but in New England, true to its origins, towns possess a huge amount of political autonomy and power—often including zoning authority. Regional planning is hard enough in the United States, but in New England, with wildly fragmented authority over land-use decisions, planning is a nightmare.

27 For an excellent discussion of the New England village as a feature of the vernacular landscape, see Wood 1986.

28 Some of our most potent geography, of course, is not tangible, but is in the form of mental images. For penetrating discussions of the New England village as geographic image, see Meinig 1979 and Wood 1987.

29 Lewis 1983, 2001.

30 Harrison 2006.

31 D. K. Meyer 2000.

32 Stephens *et al.* 1994.

33 For a vivid and witty chronicle of what happened to one bit of domestic vernacular landscape in the process, see Watts 1975.

6 *Transforming the Southern plantation*

1 Curtin 1990, pp. 3–16.

2 Prunty 1955, pp. 460–463; Aiken 1998, pp. 5–7.

3 Herndon 1997, pp. 735–737.

4 Joyner 1984, pp. 9–15.

5 Rehder 1999, pp. 45–51, 61–122, 127.

6 Aiken 1971a.

7 Aiken 1971a, pp. 5–6.

8 Aiken 1971a, pp. 7–9.

9 Aiken 1971a, pp. 6–7.

10 Aiken 1971a, pp. 7–9.

11 Galenson 1997, pp. 351–354.

12 McColley 1997, pp. 781.
13 Thomas 1999, pp. 804.
14 Sitterson 1997, pp. 7–10.
15 Perdue 1997, pp. 354–357.
16 Schweninger 1997, pp. 258–267.
17 Stamp 1956, pp. 27–33; United States Superintendent of the Census 1864, pp. 247–248.
18 Olmsted 1856 and Federal Writers Project, vols 1–29, both cited in Aiken 1985, pp. 385–386.
19 Lincoln 1862.
20 Garner 1901.
21 McPherson 1988, p. 619, note 854.
22 United States Superintendent of the Census 1884, Part II, p. 358.
23 Barrow 1881.
24 Harris 1982, p. 249.
25 Barrow 1881, p. 832.
26 United States Bureau of the Census 1962, pp. 1–2.
27 Barrow 1881, p. 832.
28 Barrow 1881, p. 833.
29 United States Bureau of the Census 1962, p. 6.
30 Aiken 1985, p. 399.
31 Aiken 1973, pp. 198–201.
32 Spratlin, July 24, 1866, cited in Harris 1982, p. 251.
33 Aiken 1973, pp. 201–210.
34 United States Bureau of the Census 1916.
35 Lösch 1967, p. 11; Aiken 1973, pp. 217–218.
36 Aiken 1998, pp. 63–96.
37 Prunty 1955.
38 Aiken 1978.
39 Aiken 1978.
40 "Conversion of a Cotton Plantation" 1945.
41 Aiken 1978, pp. 155–164.
42 Lange and Taylor 1939.
43 Taylor 1938, pp. 861–862.
44 Taylor 1941, pp. 591–592.
45 Prunty 1957, pp. 7–9.
46 Imperatore 1963; Fisher 1970; Aiken 1971b.
47 Bailey 1970.
48 Aiken 1971b.
49 United States Bureau of the Census 1970, p. 589; 2007, p. 531.
50 Aiken 1985, 1987, 1990.
51 Aiken 1987.

7 Gridding a national landscape

1 See Pattison 1957, pp. 38, 63–66.

2 Franz Joseph Marschner's original map, after one copy was made, was sent to the director of the Lake State Experiment Station in St. Paul, Minnesota. The Washington copy was sent to the same place in April 1963, redrawn and published in color on the original scale in 1974.
3 See Pattison 1957, chs 5 and 6, for Seven Ranges with map.
4 Thrower 1966.
5 Stewart 1935, pp. 16–23, 46, 88–89 (picture of solar compass), 114, 174–175. Long out of print, this history of surveying was reprinted in a limited edition in 1975, through the efforts of the surveyors' societies in Michigan, Wisconsin and Minnesota, by Meyers of Minneapolis.
6 Marx 1974.
7 Johnson 1957.
8 Horton 1902, p. 58.
9 The four scenes are reproduced in Thompson 1966, pp. 365–367; Havighurst 1960, pp. 188–189; and Johnson 1978, pp. 19–20.
10 Sauer 1963, p. 38.
11 Conzen 1984a and 1984b.
12 Thrower 1961, pp. 365–372.
13 Johnson 1978; Rohrbough 1968, p. 51; Gates, 1978, pp. 107–108.
14 Johnson 1976, p. 140.
15 Hart 1975, p. 258.
16 For list of townsites with dates of entry up to 1880, see Donaldson 1884, pp. 300–305.
17 Borchert 1967, p. 305.
18 Conzen 1980a.
19 Personal communication from L. M. Sebert, 1977.
20 Stewart 1935, p. 45, Fig. 6, Reynolds County.
21 Langewiesche 1950, p. 188.
22 Johnson 1976, pp. 191–196 (for Coon Creek watershed, see *ibid.*, p. 194).
23 Nassauer 1986.
24 Quay 1966, p. 77.
25 Meinig 1979, p. 167; and Jackson 1979, p. 158.
26 Laforc 1971.
27 *The New Yorker*, January 1, 1979, p. 21.
28 Cirlot 1962, p. 293.

8 Clearing the forests

1 See Hall 1836.
2 Hindle 1975, 1981; Van Ravenswaay 1970.
3 Williams 1989.
4 Dobyns 1966; Jacobs 1974; Denevan 1992.
5 For reviews see Day 1953; Martin 1973; Maxwell 1910.
6 Strachey 1620/1849.
7 Belknap 1791, pp. 131–137; Cooper 1810, pp. 117–118; Dwight 1821, pp. 125–126, 325–326.
8 Danhof 1969; Bidwell & Falconer 1923; Russell 1976.

9 Chastellux 1789.
10 Turner 1849.
11 De Brahm 1856.
12 Nairne 1732.
13 Williams 1982.
14 Shurtleff 1939; Jordan & Kaups 1989.
15 Dwight 1821, pp. 295–297; Crévecoeur 1770/1970, pp. 114–115.
16 Glassie 1975; Gould 1965; Jordan *et al.* 1997.
17 Flint 1828, vol. 2, pp. 75–76.
18 Cooper 1810, pp. 127–128; Oliver 1843, pp. 239–240.
19 Gray & Thompson 1933, vol. 2, p. 533; Russell 1976, pp. 104–107.
20 Hart 1968; Hendrickson 1933.
21 Frothingham 1919.
22 A cord is a cubic measure of wood, 8 x 4 x 4 feet or 128 cubic feet.
23 Crévecoeur 1770/1970, p. 144; Gates 1972; Muntz 1959; Reynolds & Pierson 1942.
24 Bridenbaugh 1938.
25 Muntz 1959.
26 Eavenson 1942.
27 Hart 1968, 1980.
28 A board foot, or b.f., is a common measure for timber in the United States. It is 1 foot x 1 foot x 1 inch, and 12 b.f. equals 1 cubic foot. The metric equivalent of 1 cubic foot is 0.02832 cubic meters.
29 Steer 1948.
30 North 1961; Robbins 1982; Meyer 2003.
31 Dinsdale 1965.
32 Illick 1924; Latham 1957; Van Tassel & Bluestone 1940.
33 Fox 1902; Wood 1935.
34 Hough 1878, vol. 1, p. 446.
35 Fries 1951, pp. 60–83, 141–160; Rector 1953.
36 Fries 1951, pp. 204–221; Rohe 1972, 1986.
37 Erickson 1965.
38 Fries 1951; Benson 1976; Smith 1973.
39 Hartt 1900.
40 Holbrook 1943; Pyne 1982.
41 Hartman & Black 1931.
42 Carstenson 1958; Clark 1956; Helgeson 1953, 1962; Kane 1954.
43 Williams 1982.
44 Hickman 1952, 1962.
45 Bryant 1913; Hickman 1962.
46 Allen 1961; Creel 1915; Stokes 1957.
47 For an excellent account of life in such a town, Fullerton, LA, see Richardson 1983.
48 Forbes 1923.
49 Stokes 1957.
50 U.S. Congress. Senate 1909 and 1920.
51 Cox 1974.
52 Erickson 1965; Van Tassel & Bluestone 1940.

53 Thomas 1864.
54 Temin 1964.
55 Schallenberg 1975.
56 Lesley 1859; Warren 1973; Knowles 1997.
57 Ransom 1966.
58 Beatley 1953; Williams 1982.
59 Fishlow 1965.
60 Schob 1977; Williams 1980.
61 Sargent 1884.
62 Cole 1970.
63 Williams 1989; Williams 2003.

9 Remaking the prairies

1 See Alwin 1981.
2 Hart 1972, p. 268.
3 Sauer 1944, p. 552.
4 Webb *et al.* 1983, p. 163.
5 Borchert 1950.
6 Hewes & Jung 1981; Hewes 1981.
7 Sauer 1971, pp. 142–147.
8 Hudson 1978.
9 Hudson 1975.
10 Johnson 1957.
11 Hudson 1986b.
12 Hart 1972.
13 Hewes 1951.
14 Hart 1986.
15 Hudson 1986a.
16 Malin 1947.
17 Webb 1931.
18 Hargreaves 1957.
19 Kollmorgen 1969; Mather 1972.
20 Jordan 1977.
21 Atherton 1961.
22 Reps 1979.
23 Hudson 1985.

10 Watering the deserts

1 See Smythe 1905; Lee 1980; O'Reilly, 1999.
2 Marsh 1874; White 1960; Powell 1962; Abbey 1971; Johnson & Holliday 1986; McDonnell 1993.
3 Limerick 1985.
4 Shepard 1981; Hausladen 2003; Mitchell 1998.
5 White 1960; Kelso *et al.* 1973; Wolman & Wolman 1986.

6 Cameron & Tomka, 1993; Wescoat 2005.
7 McPhee 1971.
8 Templer 1978; Wescoat 1984.
9 Hundley 1966, 1975.
10 Dobyns & Byrkit 1981; Henderson & Banerjee 2004.
11 Haury 1976; Doolittle 1990.
12 Ezell 1983.
13 *Ibid.*
14 Castetter & Bell 1942; Bohrer 1971.
15 Hackenberg 1983.
16 Smith 1972.
17 Abbott 2003; Doyle *et al.* 2000.
18 Craig 2004; Dean 2000.
19 For example, see Nabhan 1984. Central Arizona–Phoenix Long-Term Ecological Research 2005; Simon 2002.
20 Simmons 1972.
21 Anschuetz 1998.
22 Weinstein 2001.
23 Clark 1960.
24 Simmons 1982; Crawford 1993.
25 Meyer 1984; Rivera 1998.
26 Meyer 1984.
27 Meinig 1971.
28 Templer 1978; Mullican & Schwartz 2004.
29 Meinig 1965; Francaviglia 2003.
30 Harris 1940.
31 Haglund & Notarianni 1980.
32 cf. Locke's natural theory of property.
33 Hudson 1962.
34 See Francaviglia 1978 on esthetic debates during recent decades.
35 Arrington 1975.
36 Maass & Anderson 1978.
37 Graf 1985; Quinn 1968; National Research Council 1968; Pisani 2002.
38 U.S. Congress. House 1947.
39 Meyers 1966.
40 U.S. Congress. Senate 1950.
41 Venturi *et al.* 1977.
42 Lawton *et al.* 1976; Hart 1996.
43 McPhee 1971; National Research Council 1999.

11 Inscribing ethnicity on the land

1 Montagnards, originally from the Hill Country in Vietnam, are a distinctive ethnic group with a strong sense of national identity. Many fought on the side of the American forces during the war in Vietnam and lived in refugee camps in Thailand after escaping from their homeland in the years during and immediately after the

war. Several thousand have gained admittance to the United States during the past two decades and now live primarily in North Carolina, a forested mountain environment much like home. See Wood 1997b.

2 Massey 1993.

3 For additional information on heterolocalism, ethnic identity, and ethnic landscapes, see Zelinsky & Lee 1997; Zelinsky 2001a; Hardwick & Meacham 2005. For one of the most recent analyses of the suburbanization of immigrants in the United States, see Singer *et al.* 2008.

4 Stilgoe 1982.

5 The working definition of ethnicity used in this chapter is the same as that used in the first edition of this book (Conzen 1990, p. 388) as it relates to a group that shares traits that are a product of their common heredity and cultural traditions.

6 Zelinsky 1973.

7 For more on the landscapes of the New England village, see Wood 1982; Wood 1986; Wood 1987; McManis 1975.

8 Nostrand & Estaville 2001.

9 Conzen 2001.

10 Conzen 2001, pp. 266–267.

11 Conzen 1993, pp. 19–21.

12 Raitz 1978.

13 Conzen 1993, pp. 19–21; Conzen 1996; Conzen 2001, pp. 242–245.

14 For more on Russian settlement on the northwest coast of North America, see Hardwick 1993, pp. 189–209.

15 Wood 1997b.

16 McAlester & McAlester 1990.

17 Fogelman 1996.

18 Jordan & Kaups 1989.

19 For this case study that expands the more common Pennsylvania German landscape story westward into Ohio, I am indebted to Anderson 2001.

20 Anderson 2001, p. 139.

21 Ensminger 2003; Noble & Cleek 1995, pp. 58–59.

22 Noble 1992, p. 10.

23 Noble 1992, p. 198.

24 For a more complete story of Swedish settlement and their subsequent ethnic landscapes in Wisconsin (and one of the first transnational studies accomplished by a cultural geographer), see Ostergren 1979.

25 Kaups 1983.

26 Ward 1971; Ward 1989.

27 Conzen 2006a.

28 For a detailed analysis of the distinctive Mexican landscapes, foods, celebrations and customs, and other cultural aspects of this Borderlands cultural province in the United States, see Arreola 2002.

29 For information on San Antonio's urban ethnic landscapes and other Hispanic urban places, see Arreola 1995; Smith 2002.

30 Aponte-Pares 2000.

31 For more detail on Cuban landscapes in Miami, see Curtis 1980; Boswell & Curtis 1982; and McHugh *et al.* 1997.
32 Li 1998. For the particular case of refugee enclaves, see Hume & Hardwick 2005.
33 Hoelscher 1998.

12 *Organizing religious landscapes*

1 Greeley 1989; Kosmin & Lachman 1993, pp. 8–9.
2 Zelinsky 2001b.
3 Sweet 1965; Finke & Stark 2005.
4 For a masterful cartographic and verbal treatment of the historical geography of the nation's many religious groups, see Gaustad & Barlow 2001.
5 Confirmation of this statement and many other aspects of the physical expression of religiosity in the American metropolis appear in the first systematic treatment of the topic (Zelinsky & Matthews, in press).
6 Zepp 1997.
7 For useful general surveys of American ecclesiastical architecture, see Kennedy 1982, Lane 1988, Chiat 1997, Williams 1997, and Loveland & Wheeler 2003.
8 Stanton 1968.
9 Hayes 1983.
10 Vaughan 1993; Thumma 1996; Loveland & Wheeler 2003.
11 See Francaviglia 1978.
12 Cresswell 1999.
13 Foster 1981, 1983.
14 Johnson 1955; Brown 1992.
15 Weiss 1987.
16 Brown 1992, p. 45.
17 Rinschede 1989.
18 McDannell 1995, pp. 246–269.
19 Among the better accounts of the history and other attributes of American cemeteries are Jordan 1982; Meyer 1989; Jackson & Vergara 1990; Sloane 1991.
20 But, at the risk of offending the more devout of animal-lovers, the author really must exclude horse and pet cemeteries from the ranks of the sacred.
21 Zelinsky 1994b.
22 Curtis 1980; Manzo 1983; Sciorra 1989.

13 *Mechanizing the American earth*

1 Trinder 1982.
2 Walton & Shepherd 1979.
3 Goldenberg 1976.
4 U.S. Bureau of the Census 1975, Series Z1–19.
5 Bining 1933, Appendix F.
6 Paskoff 1983.
7 Meyer 1983.
8 Meyer 2003.

9 Temin 1964; Knowles & Healey 2006.
10 Meyer 2003.
11 Raitz 1996a, 1996b.
12 Segal 1961, p. 172.
13 U.S. Bureau of the Census 1975, Series Q321–328.
14 Davis *et al.* 1972, p. 494; Meyer 2003, Table 5.4, p. 158.
15 Pred 1980.
16 Armstrong 1969.
17 Kulik *et al.* 1982.
18 Hunter 1979, vol. 1, pp. 221–227.
19 Stilgoe 1983.
20 Taylor & Neu 1956; U.S. Bureau of the Census 1975, Q284–328.
21 Fishlow 1965, p. 585.
22 Chandler 1977.
23 Davis *et al.* 1972, pp. 433, 447.
24 James 1983.
25 Temin 1964.
26 Mosher 2004; Warren 1973.
27 Clark 1929, vol. 2, p. 514; Warren 2001.
28 Meyer 1988.
29 Perloff *et al.* 1960.
30 Rhode 2001.
31 Cox 1974.
32 Clark 1929, vol. 3, pp. 245–252.
33 Greever 1963; Peterson 1977.
34 Williamson & Daum 1959; Williamson *et al.* 1963.
35 Lewis 2001.
36 Stilgoe 1983, pp. 77–103.
37 Chandler 1977, pp. 240–283.
38 Devine 1983.
39 Dunn 1983; Jones 1938.
40 Dunn 1983.
41 Warren 1973.
42 Coffin 2003.
43 Clark 1929, vol. 3, pp. 157–164; Dunn 1983, vol. 2, pp. 151–152.
44 U.S. Bureau of the Census 1975, Series Q148–162.
45 Muller *et al.* 2002.
46 Kenney 2000.

14 Building American cityscapes

1 For a popular description of the modern American city, see Lockwood & Leinberger 1988, pp. 31–56.
2 Bellah *et al.* 1986, ch. 2; Lemon 1972, Preface and pp. 1–13; Warner 1968, pp. ix–xii.
3 Teaford 1975.

4 Vance 1971, pp. 101–120.
5 Vance 1990a, pp. 251–281; Kornwolf 2002.
6 Reps 1979; Conzen 2006b.
7 Fishman 2000, pp. 11–14.
8 Vance 1990a, pp. 399–422; Muller 1980, pp. 747–755; Shaw 2004.
9 Francaviglia 1996, pp. 17–38; Domosh 1996, pp. 35–64; Fogelsong 2001, pp. 9–43; Barth 1980, pp. 110–147.
10 Goldberger 1981; Domosh 1996, pp. 65–98; Fogelsong 2001, pp. 112–182; Moudry 2005; Ward & Zunz 1992, pp. 129–187.
11 Stilgoe 1983, pp. 30-45.
12 Fogelsong 2001, pp. 218–380; Longstreth 1997.
13 Mollenkopf 1983; Teaford 1990.
14 Jacobs 1961.
15 Gratz 1989, pp. 221–334; Ford 2003, ch. 5.
16 Muller 1981, ch. 4; Garreau 1991; Fogelsong 2001, pp. 381–394.
17 Hayden 2003, pp. 154–180.
18 Muller 1996.
19 Hoover & Vernon 1962, pp. 21–73.
20 Lewis 2004.
21 Burstein 1981, pp. 174–203.
22 Ward 1971; Zunz 1982.
23 Ward 1989.
24 Bodnar *et al.* 1982.
25 Gabaccia 1992.
26 Gottlieb 1987.
27 Spear 1967; Kusmer 1976.
28 Hirsch 1983.
29 Sugrue 1996.
30 Wright 1981, ch. 2.
31 Schuyler 1996.
32 Jackson 1985, pp. 45–137; Doucet & Weaver 1985, pp. 560–587; Warner 1962.
33 Loeb 2001; Nicolaides 2002, Part I.
34 Nicolaides 2002, Part II; Harris 2004, chs 6 & 7.
35 Jackson 1985, pp. 157–282; Muller 1981, chs 2 & 3.
36 Rothman 1971.
37 Teaford 1990; Lubove 1969.
38 Schuyler 1986; Young 2004.
39 Scott 1969; Tunnard & Reed 1956, pp. 136–153; Peterson 2003.
40 Gelfand 1975.
41 Bauman 1987.
42 Wilson 1987; Lukas 1985; Massey & Denton 1993.
43 Melosi 2000, Part III.
44 Lubove 1996.
45 Wissink 1962; Lichtenberger 1970, pp. 45–62; Meller 2001.

15 *Asserting central authority*

1 See Knight 1971; Whittlesey 1935.
2 Craig 1984, p. 163.
3 Stilgoe 1982, pp. 109–111; Noble 1997; Grant & Jones 1998.
4 Johnson 1976.
5 Raitz 1996a, 1996b.
6 Craig 1984, p. 163.
7 Zelinsky 1988.
8 Nash 1970.
9 Rhyne 1979; Military Living Publications 2002.
10 *Ibid.*; Steere 1953–1954a, b, c.
11 Mosse 1979, pp. 7–8; Patterson 1982.
12 Mollenhoff 1983.
13 Patterson 1974, 1982.
14 Federal Writers' Project 1937, pp. 3–4.
15 Fifer 1981; Henrikson 1983, p. 124.
16 Bush 1977, pp. 39–41; Cosgrove 1984, pp. 181–183; Green 1962–1963; Fifer 1981; Gutheim & Washburn 1976; Reps 1967.
17 Reps 1967, p. 21.
18 National Capital Planning Commission 1984.
19 Henrikson 1983, p. 134.
20 Fairman 1927; Feeley 1957; Gowans 1981, pp. 123–124; Hitchcock & Seale 1976, pp. 121–146; Krythe 1968, pp. 140–167; Miller 1966, pp. 40–78; Scully 1984.
21 Hitchcock & Seale 1976, p. 48.
22 *Ibid.*, p. 9.
23 Craig 1984, p. 141; Goodsell 2001.
24 Hitchcock & Seale 1976, p. 187.
25 Harper 1971; Ohman 1985, pp. 67–70; Pare 1978; Seale 2006.
26 Hitchcock & Seale 1976, pp. 172–184.
27 Goodsell 1984; Lebovich 1984.
28 Price 1968.
29 Craig 1984, p. 440.
30 Cutler 1985.
31 Stewart 1953, pp. 13–14.
32 Roberts 1987.
33 Cutler 1985, pp. 133–144.
34 Stone, 1950.
35 Cutler 1985, pp. 116–132.
36 Short & Stanley-Brown 1939; Leighninger 2007.
37 For an eloquent account of the situation in LBJ's Texas Hill Country, see Caro 1983, pp. 502–515.
38 Alexander 1980; Contreras 1983; Larson 1983; Marling 1982; McKinzie 1973.
39 Lowenthal 1977.
40 Stump 1985.
41 Shellito 2006.
42 Zelinsky 1984.

43 Caro 1974.
44 Gilmore 2007.

16 *Creating landscapes of civil society*

1 Alexander 2006, p. 24.
2 Vance 1990b.
3 Tocqueville 1945.
4 Tocqueville 1945, p. 3.
5 Tocqueville 1945, p. 14.
6 Tocqueville 1945, p. 67.
7 Wood 1997a.
8 Tocqueville 1945, p. 180.
9 Tocqueville 1945, p. 59; Alexander 2006, p. 101.
10 Schudson 1998, pp. 93–94, 97.
11 Jackson 1997 pp. 75–77.
12 Chidester & Linenthal 1995.
13 Colten & Skinner 1996.
14 Brookhiser 1996.
15 Schudson 1998, p. 99.
16 Schudson 1998, p. 93.
17 Schudson 1998, p. 100.
18 Schudson 1998, pp. 91–93.
19 Schudson 1998, p.108.
20 Schudson 1998, p.160.
21 Johnson 2001.
22 Wilson 1989, p. 60.
23 Wilson 1989, p. 303.
24 Carnegie 1962.
25 Van Slyck 1998.
26 Orum 1995, pp. 156–163.
27 Wrenn & Mulloy 1976, pp. 28–30.
28 Kammen 1999, p. 161, p. 201.
29 Putnam 1995.
30 Oldenburg 1989.
31 Lemann 1996, p. 25.

17 *Imposing landscapes of private power and wealth*

1 See Domhoff 1967, pp. 7–8; Pessen 1973, pp. 302–303; Zelinsky 1980; Higley 1995.
2 Shi 1985, p. 55.
3 Wecter 1937; Pessen 1973, pp. 31–33; Lewis 1975, pp. 3–4; Zelinsky 1980.
4 Lowell 1902; Wright 1928, vol. 2, pp. 421–442; Clifford 1966; Highstone 1982, pp. 1–10.
5 Humphreys 1914, pp. 74–97.
6 Wecter 1937, pp. 475–480; Baltzell 1962, pp. 252–293; Higley 1995, pp. 25–26.

7 Philadelphia Club founded in 1834; Union Club, New York, founded in 1836.
8 Chicago Club founded in 1869; Bohemian Club, San Francisco, founded in 1872; Wecter 1937, pp. 255–267; Baltzell 1962, pp. 373–403; Pessen 1973, pp. 223–227; Thompson 1981, pp. 191–195; Bushnell 1982; Higley 1995, pp. 23–25.
9 McLachlan 1970; Baird 1977; Waller 1985; Higley 1995, pp. 18–22; Aldrich 1996, pp. 144–158.
10 Boarding schools were established at Lawrenceville in 1883, at Groton in 1884, and at Deerfield in 1903.
11 Baltzell 1962, pp. 363–371; Zelinsky 1980.
12 Wecter 1937, pp. 444–447; Slater 1967; Spears & Swanson 1978, pp. 69–70.
13 Prunty 1963; Bruckheimer 1982.
14 Betts 1974; Spears & Swanson 1978.
15 Betts 1974, p. 10; Raitz 1980, pp. 18–23.
16 Wecter 1937, pp. 448–457; Betts 1974; Spears & Swanson 1978.
17 Robinson 1981.
18 Wecter 1937, pp. 270–276; Betts 1974; Spears & Swanson 1978; Bremer 1981; Adams & Rooney 1997.
19 Betts 1974; Spears & Swanson 1978.
20 Humphreys 1914, pp. 240–251; Tarshis & Waller 1984; Michael 1985.
21 Bent 1929; Wecter 1937, pp. 447–448; Betts 1974.
22 U.S. Polo Association 1996.
23 Cable 1984, p. 150.
24 Higley 1995, pp. 31–47; Aldrich 1996; Conniff 2002.
25 Pessen 1973.
26 Wecter 1937, pp. 272–274; Gowans 1976, pp. 313–314; Roth 1979, pp. 105–107; Cable 1984, p. 31.
27 Louw 1983, pp. 79–80.
28 Sobin 1968, pp. 99–110; Banham 1971, p. 147; Duncan 1973, p. 337; Burns 1980; Cook & Kaplan 1983; Louw 1983.
29 Hugill 1995.
30 Williams 2002.
31 Wecter 1937, pp. 5–9; Domhoff 1967, p. 30; Sobin 1968, pp. 152–156; Jaher 1980, pp. 197–201.
32 Duncan 1973; Hugill 1995; Cable 1984, pp. 148–150.
33 Brooks 2000.
34 Lynes 1955, pp. 8–11, 229–237; Sobin 1968, p. 34; Gowans 1976, pp. 313–314; Zelinsky 1980.
35 Lynes 1955, pp. 240–241; Streatfield 1977, p. 234; Roth 1979, p. 98.
36 Dulles 1965, pp. 202, 359–360; Betts 1974, pp. 156–160; Starr 1984, p. 28.
37 Shi 1985, p. 51.
38 Graham 1999.
39 U.S. Bureau of the Census 2003a.
40 Fong 1994.
41 Baltzell 1962, pp. 206–208; Andrews 1978, pp. 36–38.
42 Lewis 1975, pp. 10–12; Andrews 1978, pp. 22–28.
43 Bridenbaugh 1946; Lawrence 1983.

44 Dulles 1965, p. 64.
45 Lewis 1975; Bonner 1977; Andrews 1978, p. 137.
46 Pessen 1973.
47 Sweetser 1868. pp. 146–147; Baltzell 1962, pp. 223–225; Vance 1972; Andrews 1978, pp. 107–109; O'Brien 1981, pp. 141–145.
48 Sweetser 1868; Dulles 1965; Lawrence 1983.
49 Lynes 1955, pp. 81–89.
50 Wecter 1937, pp. 108–156; Dulles 1965, pp. 232–238; Sobin 1968, pp. 10–11; Jaher 1973; Hammack 1982; Cable 1984.
51 Sobin 1968, pp. 28–32; Burns 1980; O'Brien 1981, pp. 202–206; Higley 1995, pp. 47–96.
52 Sweetser 1868, p. 48.
53 Bachelder 1875; Baedeker 1904; Amory 1952; Kramer 1978.
54 Sprague 1980.
55 Dulles 1965, pp. 360–361; Dunleavy 1981; Allen 1983.
56 Gowans 1976, pp. 715–763; Andrews 1978, pp. 1–31; Roth 1979, pp. 1–52.
57 Whitehill 1968, pp. 22–46; Andrews 1978, pp. 34–54; Baltzell 1979; Shi 1985, pp. 33–34.
58 Andrews 1978, pp. 22–31.
59 Gowans 1976, pp. 164–172.
60 Wecter 1937, pp. 73–74; Whitehill 1968, pp. 47–72; Andrews 1978, pp. 86–96; Roth 1979, pp. 59–68.
61 Gowans 1976, pp. 243–265; Andrews 1978, pp. 56–62.
62 Gowans 1976, pp. 267–284; Roth 1979, pp. 53–100.
63 Gowans 1976, pp. 291–328; Bonner 1977; Andrews 1978, pp. 97–143; Roth 1979, pp. 100–125.
64 Jaher 1973; Gowans 1976, pp. 329–386; Andrews 1978, pp. 144–197; Roth 1979, pp. 126–227; Hammack 1982.
65 Wecter 1937, pp. 142–143; Jaher 1973, pp. 258–259; Cable 1984, p. 28.
66 Lynes 1955, pp. 220–222; Andrews 1978, pp. 222–245; Roth 1979, pp. 192–359; Howett 1982.
67 McWilliams 1946, pp. 77–83; Streatfield 1977, pp. 231–232; Ferrell 1984.
68 Louw 1983, p. 161.
69 Allen 1952, pp. 219–222; Lerner 1957, pp. 481–486.
70 Gowans 1976, pp. 304–305; Roth 1979, p. 92; Hugill 1982b, p. 10.
71 Whitehill 1968, pp. 236–237; Goldstone and Dalrymple 1974; Lewis 2003, pp. 86–90; Findsen 1984.
72 Sobin 1968; Burns 1980; O'Brien 1981, pp. 202–259.
73 Ruhling 1986.
74 Riebsame 1997, pp. 104–120; U.S. Bureau of the Census 2003a, 2003b.
75 *Wall Street Journal* 2005.

18 Paving America for the automobile

1 See Dodds 1961, p. 146.
2 For an historical overview of America's auto industry, see Rubenstein 2001.

3 See Dodds 1961, p. 146.
4 Wik 1972, p. 233.
5 Jackson 1985, p. 161.
6 Rae 1981, p. 57.
7 Jackson 1985, p. 162.
8 Dodds 1961, p. 147.
9 Jackson 1985, p. 163.
10 Flink 1975, p. 55.
11 Jakle & Sculle 2008.
12 Hugill 1982a.
13 Mason 1957.
14 Lincoln Highway Association 1935.
15 Rose 1950, p. 742.
16 Jakle 2000.
17 Miller 1950.
18 Fuessle 1915, p. 26.
19 Jackson 1985, p. 170.
20 Horvath 1974.
21 Davies 1975, p. 42.
22 Warner 1972, p. 41.
23 Jakle & Sculle 2008.
24 Warner 1972, p. 39.
25 Goodman 1971, p. 73.
26 Mumford 1964, p. 234.
27 Goodman 1971, p. 73.
28 Davies 1975, p. 28.
29 Leavitt 1970, p. 13.
30 Davies 1975, p. 36.
31 Guinness & Bradshaw 1985, p. 217.
32 Snow 1967. For an historical overview of America's interstate freeway system, see Lewis 1997.
33 Muller 1981, p. 4.
34 *Ibid.*, p. 51.
35 Jackson 1985, p. 7. Data for 2000 from the U.S. Census Bureau.
36 Lewis 1979, p. 186.
37 Jackson 1985, p. 205.
38 *Ibid.*, p. 239.
39 *Ibid.*, p. 8.
40 Muth 1968, p. 285.
41 Jackson 1985, p. 277.
42 *Ibid.*, p. 250.
43 *Ibid.*, p. 10.
44 Higbee 1976, p. 150.
45 Mumphrey & Seley 1972.
46 For an historical overview of parking in American big-city central business districts, see Jakle & Sculle 2004.

47 Muller 1981, p. 122; Johnston 1982, p. 220.
48 Liebs 1985.
49 Tunnard & Pushkarev 1963, p. 162.
50 Robinson 1971, p. 52.
51 Mumford 1961, p. 486.
52 Priestley 1937, p. 88.
53 Tocqueville 1956, pp. 114, 117.
54 Relph 1981, p. 94.

19 Developing large-scale consumer landscapes

1 Zunz 1990.
2 Vance 1970.
3 Wiebe 1967.
4 Whitehill & Kennedy 2000, p. 96; De Voe 1862.
5 Conzen & Conzen 1975.
6 Pasdermadjian 1954; Schlereth 1991.
7 Harrison 1975, p. 115. A fine historical analysis of the regional and national expansion strategies of American department store, specialty, and discount firms is given in Laulajainen 1987.
8 Kirkwood 1960; Thomas 1997.
9 Greer *et al.* 1986.
10 Longstreth 1997; Horowitz 1985. Country Club Plaza, in Kansas City, Missouri, developed by the J. C. Nichols Companies and opened in 1922, is credited with being the first multi-tenant planned shopping center in America. On the geographical development of commercial strips, see Jakle and Mattson 1981.
11 Hardwick 2004, p. 154. Shopping arcades, developed in the 19th century in Europe and in large eastern U.S. cities, provided a design template for the modern shopping mall; see Geist 1983; Longstreth 2000, p. 102.
12 Cohen 1972; Farrell 2003; Maitland 1985.
13 Goss 1999; Hellmuth *et al.* 1994.
14 Strasser 2005; Barcus 2006. The anti-Wal-Mart position is especially championed by historic preservationists, see Lang 2003, and also Mitchell 2006.
15 Bloom 2004; Goss 1996.
16 Hoge 1988; Emmet & Jeuck 1950; Longstreth 2006.
17 Eaton 1989, pp. 3–17.
18 King 2005.
19 Longstreth 2000, pp. 32–33, 36, 52.
20 Beranek 1962; Kolodin 1966; Longstreth 2000, p. 50.
21 Haines 2003.
22 Jozsa 2003; Bale 1994, pp. 7–8; Raitz 1995, pp. 14–15.
23 Bale 1994, pp. 78–82.
24 Jozsa 2003, pp. 119–123.
25 Raitz 1995, p. 28; Bale 1994, pp. 120–147.
26 Jakle 1985; Sandoval-Strausz 2007; Jakle *et al.* 1996.
27 Jakle *et al.* 1996, pp. 37, 122–149.

28 For a good discussion of sight-seeing and the marketing of tourist experiences, see O'Dell & Billing 2005. For an historical overview of American amusement parks, see Adams 1991. By 1992 the American Automobile Association could list 133 major theme parks across the country
29 Concerning the thematic and visual character of the Disney theme parks, see Dunlop 1996.
30 Fogelsong 2001, pp. 6, 71.
31 Hoelscher 1998; Frenkel *et al.* 2000; Larsen 2004; and Hanna 1996. The general topic of town theming is treated at length in Gottdiener 2001 and Paradis 2003.
32 Venturi *et al.* 1977; Meyer-Arendt & Hartmann 1998; Schwartz 2003.
33 Curtis 2000, p. 1.
34 Storrie 2006, p. 198; www.lvcva.com/2008_vegas_FAQs.pdf
35 Meyer-Arendt & Hartmann 1998.
36 Gatrell 1994, p. 15; Harris et al. 1993.
37 Rogers 2003. See also Zelinsky 1994a.
38 International Council of Museums 1987, article 3, definition of terms, section 1: museum.
39 Danilov 1997, p. 193.
40 Harris 1993; Storrie 2006, pp. 185–197.
41 *The Economist* 2005; Jackson 2009.
42 Twitchell 2004, p. 92; Loveland & Wheeler 2003.
43 Gudis 2004, p. 232.

20 *Designing the American utopia: reflections*

1 See the *Directory of intentional communities: a guide to cooperative living* (Fellowship for Intentional Community 1991).
2 Delano 2004.
3 See Hawthorne's letters of November 27, 1840, and May 3, 1841 (Woodson *et al.* 1984).
4 For the Dunkin' survey, see Janet Adamy in *The Wall Street Journal*, May 2, 2007.
5 Hilgard's words are inscribed across the façade of Hilgard Hall on the Berkeley campus, where he was on the faculty between 1875 and 1904.
6 For more on Eichler, see Adamson 2002.
7 For Martha's Choices, see Joshua Chaffin in the *Financial Times*, March 18, 2006.
8 For Piano, see Peter Aspden in the *Financial Times*, July 8, 2006.
9 The phrase "Absolute Unitary Being" comes from Lewis-Williams & Pearce 2005.
10 For Pitkin County, see Rich Tosches in the *Denver Evening Post*, April 19, 2006.
11 For Mammoth, see Louis Sahagun in the *Los Angeles Times*, October 6, 2005.
12 See the ranch's website at www.clazyu.com.
13 For St. Joe, see Abby Goodnough in the *New York Times*, August 22, 2005.

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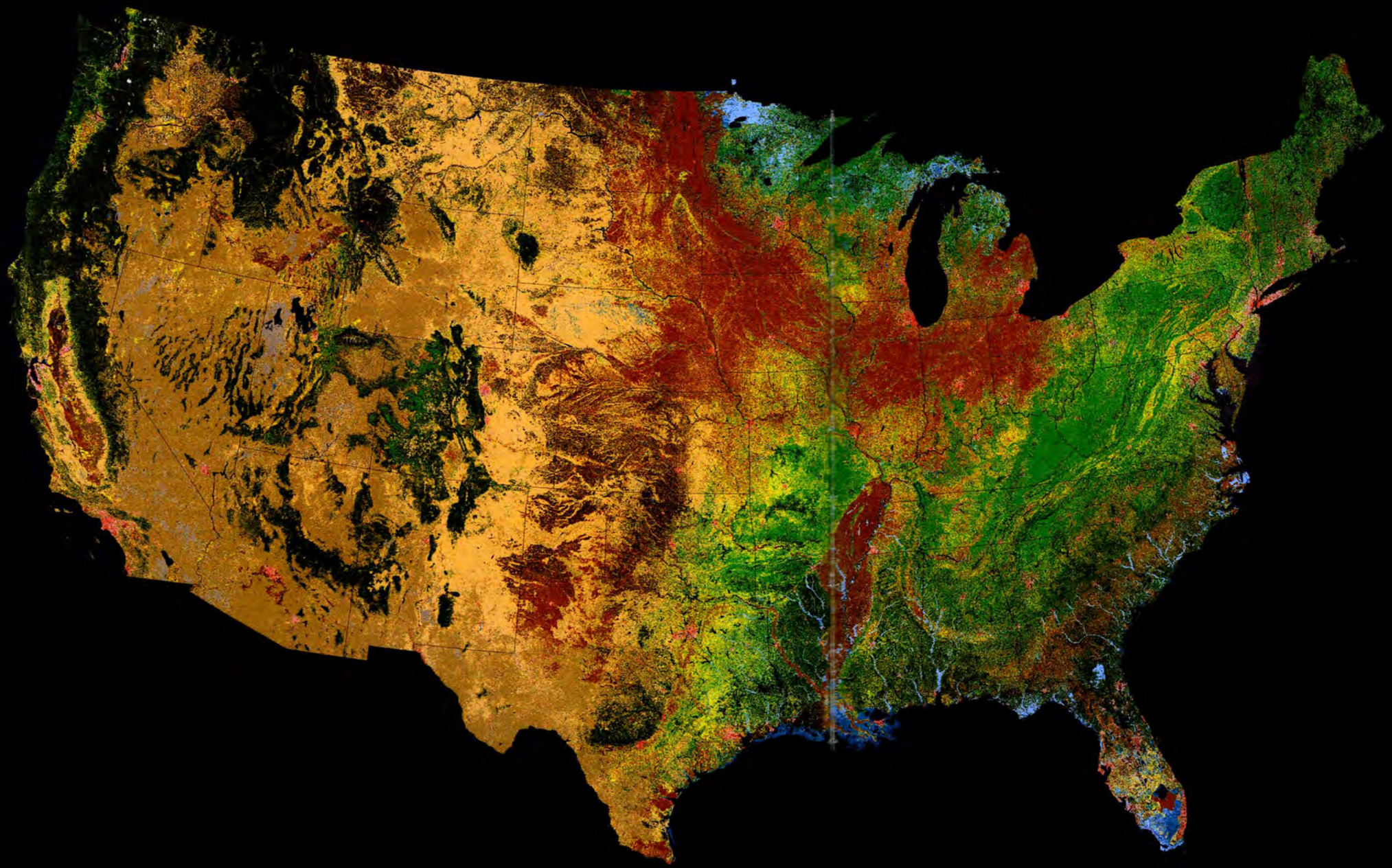
America's cultural landscapes at the continental scale



Land Cover of the Conterminous United States, 1992

- Low-intensity residential
- High-intensity residential
- Commercial industrial / transportation
- Urban / recreational grasses
- Bare rock / sand / clay
- Perennial ice and snow
- Quarries / strip mines / gravel pits
- Woody wetlands
- Emergent herbaceous wetlands
- Water
- Transitional (includes burned or harvested areas)
- Deciduous forest
- Evergreen forest
- Mixed forest
- Shrubland
- Orchards and vineyards
- Row crops
- Small grains
- Fallow
- Pasture / hay
- Grasslands

Turn to the front for a contrasting view of America's natural landscapes

This map shows the main character and use of the land surface as it has evolved and been shaped by humans through history (up to 1992), both lands greatly transformed by cultural action and lands barely occupied and still significantly natural-looking.

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"The skillfully interwoven essays in *The Making of the American Landscape*, Second Edition, paint a broad but penetrating picture of the changing character of the continental United States as seen through the lens of landscape change. The volume is a testament to the importance of work in historical geography and a showcase for what it means to seek understanding of a place through the study of landscape."—Alexander Murphy, *University of Oregon*

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This is the only compact yet comprehensive survey of environmental and cultural forces that have shaped the visual character and geographical diversity of the settled American landscape. The book examines the large-scale historical influences that have molded the varied human adaptation of the continent's physical topography to its needs over more than 500 years. It presents a synoptic view of myriad historical processes working together or in conflict, and illustrates them through their survival in or disappearance from the everyday landscapes of today.

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