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The Last Days of the Rainbelt

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DAVID J. WISHART

The Last Days of the Rainbelt



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Introduction

A Ruined Land

In 1899, at the end of a decade blighted by severe drought and economic hardship, J. E. Payne, superintendent of the Agricultural Experiment Station at Cheyenne Wells, made a fact-finding tour of the surrounding plains of eastern Colorado. Payne, a recent graduate of Kansas Agricultural College in Manhattan, drove his spring wagon across thirteen hundred dusty miles of Kit Carson County and what was then Arapahoe County, and is now Yuma and Washington Counties. He interviewed settlers, located the few orchards that had survived the drought, noted the small-scale well and ditch irrigation, and assessed agricultural prospects. Everywhere he traveled, he saw the ruins of towns and an emptied-out countryside.¹

The semiarid shortgrass plains of eastern Colorado and adjacent southwestern Nebraska and western Kansas, which had been used as open range by cattlemen and sheepherders for decades and as hunting grounds by Native Americans for thousands of years, was rapidly and thickly settled by American farmers, speculators, and town builders from 1885 to 1889. This was (and is), at best, marginal farming land, with annual precipitation totaling less than fifteen inches, and in many years much less than that. It is an austere country of flat uplands reaching to distant horizons, with few trees, and streams that run dry for most of the year, a country of climatic extremes, from smothering blizzards to desiccating summers.

But the settlers were not deterred: for decades they had been assured by scholars, railroad companies, agricultural journals, and state immigration boards that rainfall would increase as farmers planted trees, which would still the hot winds and reduce evaporation, while at the same time returning moisture to the atmosphere through transpiration, causing saturation, and more rain. More plausibly, but still to a degree a fantasy, plowing up the dense prairie sod would allow rainfall to penetrate deeply, so avoiding rapid run-off and evaporation. The stored moisture would be available for the settlers' crops of wheat and corn and would again be slowly returned to the atmosphere, causing more rain. It was only a matter of time, it was reasoned—and widely believed—before the semiarid western plains would be fully farmed without any need for irrigation.² The fact that this was the only remaining free, or cheap, land on the central Great Plains only made the apocryphal theories more enticing.

In accordance with this theory, in the second half of the 1880s the plains of eastern Colorado and nearby Kansas and southwestern Nebraska became known as the Rainbelt. This was not in the sense of a natural surplus of rain, the way that Cornbelt denotes a surplus of corn, but in the sense of a deficit just waiting to be corrected. The expectation was that rainfall would be increased through the farmers' own efforts and the land would yield crops as abundantly as the more humid plains to the east. "If we don't have a continuous deluge," the Denver-based agricultural journal *Field and Farm* gushed in 1886, "we will at least have enough rain to get along comfortably."³

The settlers trickled into the Rainbelt before the railroads were in place, and flooded in thereafter. The plains of western Kansas and southwestern Nebraska were fully settled by 1886, leaving new arrivals—the "Rainbelters"—to push into eastern Colorado during the last three years of the decade. Because the cattlemen, anticipating the land rush and the end of the open range, had already secured the valleys, the homesteaders were left with the vast uplands, and the dream that rainfall would come to them through their own actions.

The settlers hardly had time to get established before drought and eco-

conomic turmoil descended and, lacking roots and resources, they blew away like tumbleweeds. An entire layer of settlement was peeled off the land. Many counties lost more than one-third of their population from 1890 to 1900; some lost as much as two-thirds. The 1890 U.S. census population density map had shown continuous settlement across the central Great Plains from the Missouri River to the Rocky Mountains; the 1900 census map showed extensive areas of eastern Colorado designated once again as “unsettled.”⁴

The evidence of abandonment was written on the landscape. Payne recalled that eastern Colorado towns like Lansing, Cope, Arikaree City, Thurman, Linden, and Harrisburg had “all aspired to be large cities, county seats, and railroad centers.” But without a surrounding farm population to sustain their banks, businesses, and schools, by 1899 they had been reduced to virtual ghost towns. Payne observed that Lansing had “only four cellars to mark its site.” Idalia had done a little better, retaining “two stores, two blacksmith shops, a school house, and a few dwellings.” At Friend, only one building, a school, was still standing. Cope had kept a store, a school, and a couple of houses. At Arikaree City, the one surviving building was home to a family of four. All that remained of Linden were “a few heaps of earth and a few holes in the ground.” There was still a family living at Harrisburg, and also at Thurman, a town that only recently had been the site of two banks and had attracted the interest of two railroads. Payne drove eighteen miles between Cope and Linden, on the divide between the North Fork of the Republican and the Arikaree Rivers, without seeing a single home.⁵ Over vast areas, the country was reverting to open range, and the evidence of homesteading was being effaced.

At about the same time that Payne was making his reconnaissance, Willard Johnson, a topographer and geologist with the U.S. Geological Survey, was mapping his way across the High Plains of Kansas and Colorado, clarifying the details of the subsurface reservoir of water that another field geologist, Nelson Horatio Darton, had just named the Ogallala Aquifer. Johnson was also an astute observer of the human landscape and, like Payne, he saw that the area had been the scene of a disaster, an “al-

most complete depopulation.” Johnson concluded that it had been “an agricultural experiment on a vast scale,” and it had ended in “total failure.”⁶

The drama of the settlement failure was widely recognized. Frederick Jackson Turner, the preeminent western historian of the time (as it would turn out), called it the “first defeat” of the American farmer. Later, geographer Harlan Barrows embellished this epitaph, describing the settlement collapse as the “first great crushing defeat of the American farmer.”⁷ Coming as it did just after the U.S. Bureau of the Census had officially (and prematurely) declared the frontier closed — “the unsettled area has been so broken into by isolated bodies of settlement that there can hardly be said to be a frontier line” — the failure on the western High Plains in the 1890s had national, not just regional, implications. It was part of a wider “frontier anxiety,” the uneasy perception that the era of free land was at an end, and with it everything that had made the United States exceptional, from democracy to social stability. And, of course, it was Turner who codified all this in his famous 1893 paper, “The Significance of the Frontier in American History,” a celebration of the frontier as the “crucible” of Americanization, and a lament for its passing.⁸

Yet the drought and associated settlement failure of the 1890s have been overshadowed by the scale, impact, and notoriety of the Dust Bowl of the 1930s, which confirmed the reputation of the Great Plains as America’s problem region. In the 1890s there was no Farm Security Administration to sponsor notable photographers to record the misery, as they did so vividly in the 1930s. There was no defining novel like John Steinbeck’s *Grapes of Wrath* (1939), or film like Pare Lorentz’s *The Plow That Broke the Plains* (1936), to give the drought of the 1890s a mythical dimension. There were no panels of experts like the Great Plains Committee (1936) to study the conditions and recommend future actions. And there was no federal aid, no Works Progress Administration (WPA) to put people to work, no emergency cattle purchases, no payments to list the soil against the prevailing winds, or to retire land from production.⁹ State aid and charity notwithstanding, settlers in the 1890s were mainly left to sink or swim by themselves. It’s easy to see how it could all be forgotten.

This book is an attempt to bring this period of American settlement and failure on the western Great Plains more fully into historical memory.¹⁰ The first chapter covers the distinctive geography of “frontier zones” and takes American settlement from the Missouri River in 1854 to the western High Plains of Colorado, Kansas, and Nebraska in the mid-1880s. This chapter provides a backdrop to what followed in the late 1880s and 1890s, serving to introduce aspects of the settlement process, such as migration patterns, demography, land laws, speculation, farming adjustments, and persistent delusions that spurred on the westward movement. It also serves to show that continuity rather than change characterized the American settlement of the central Great Plains during the second half of the nineteenth century, even as the physical environment transitioned from almost humid to semiarid.

The focus then falls, more locally and more personally, on the conditions of pioneering in eastern Colorado and adjacent Kansas and Nebraska from the height of the boom in the second half of the 1880s through the depths of the drought and depression of the mid-1890s. This focus is made possible by the existence of a singular historical source. From November of 1933 through the early months of 1934, the short-lived New Deal program, the Civil Works Administration (CWA), operating through the Colorado Historical Society, hired local people to conduct interviews with hundreds of elderly residents of eastern Colorado who recalled their experiences as settlers during the last decades of the nineteenth century. Eight counties on the High Plains of eastern Colorado—Yuma, Prowers, Baca, Morgan, Kit Carson, Sedgwick, Logan, and Phillips—were included in the project. These interviews, which are much more comprehensive than the later WPA interviews and only seem to have been conducted in Colorado, tell the stories of these settlers, revealing who they were, where they came from, how they lived and shaped their landscapes, and how they viewed the entire experience in retrospect.¹¹

The format of the interviews varied from one county to another. B. B. Guthrie’s interviews in Kit Carson County, for example, seem to have had a template, because the responses covered similar themes, such as the

last buffalo, the search for water, the availability of reading material, and the establishment of schools and churches. Velma Hargrove, on the other hand, who conducted the interviews in Sedgwick County, and T. T. Kearns in Yuma County, allowed the old-timers to tell their stories in their own way and wrote them up more as narratives. For all the counties, to varying degrees, newspaper accounts, written reminiscences, biographical accounts, and local census data are interspersed among the interviews. The interviews have yet another advantage as a historical source because the thousands of pages of record include the voices of almost as many women as men.

Memory can be an unreliable source of historical evidence, because it is, by definition, in the present, always on the tip of the tongue, and it comes with the knowledge of outcomes. The past it evokes is far behind, its image dimmed by the passage of time, and sometimes romanticized into something entirely new.¹² Moreover, in this case specifically, the elderly men and women who were interviewed in 1933–34 were not a representative sample of the settlers. They persisted through the hard times of the 1890s, whereas many settlers, maybe most, gave up and left, their stories gone forever. But in combination, the *cwa* interviews constitute a collective memory of overlapping recollections. Together with other primary sources—land office records, federal and state census returns, the exceptional (though biased) Kansas State Board of Agriculture reports, settlers' journals (especially that of the southwestern Nebraska settler George Washington Franklin), newspapers, accounts of such contemporaries as J. E. Payne and Willard Johnson, historical atlases and photographs, and much more—they help to vivify the past and make it possible to imagine what life was like during the last days of the Rainbelt on the western High Plains in the late nineteenth century.

The Last Days of the Rainbelt



I

The Approach from the East, 1854–1885

The word *frontier* has fallen into disuse, and for good reason. As used by Turner and other early western historians (and as widely accepted by the general public), frontier connoted a triumphant and ordained American advance into an unimproved wilderness, whereas, to give an example, the Great Plains had been occupied and altered by Indians for at least twelve thousand years. Moreover, those millennia had seen countless Indian frontiers of settlement, as when the Lakotas (or Sioux) expanded westward into the northern Great Plains after 1770, eventually displacing the resident Indians, the Crows, Cheyennes, and Pawnees. Frontier also stood for progress in American minds, a necessary social evolution of (to use Turner's words) "civilization over savagery." To some, it even accomplished the completion of the Creation by making "wilderness" productive and capable of supporting much larger populations than it had in the past. To the United States, this all justified expansion into an already settled land.¹

But if you shed what historians have called the "wrongheaded baggage" of Turner's provocative thesis—its nationalism, racism, and unsubstantiated theories (all a product of the age)—the idea of the frontier as a place and time, a zone of distinctive geography at the outer edge of American expansion, remains evocative and worthwhile.²

Frontier Zones

Here, Great Plains frontier zones are identified as those areas of American (and European) settlement that had recently reached a population density of two persons per square mile. There's nothing original about this: the measurement was also used by the U.S. Bureau of the Census on its colorful maps, and by Turner himself, to locate areas undergoing frontier development. Two persons per square mile (or section) indicated the beginnings of a farming population, of towns that provided them with goods and services, and railroads that connected them to markets. It meant too that counties were officially organized and administered from a county seat (though their boundaries might be subject to adjustment), and that perhaps as much as 5 percent of the land was "improved" by cultivation. Beyond, generally to the west, cattlemen occupied the open range, and rapidly diminishing numbers of Indians struggled to hold on to their invaded homelands and beleaguered lives.³

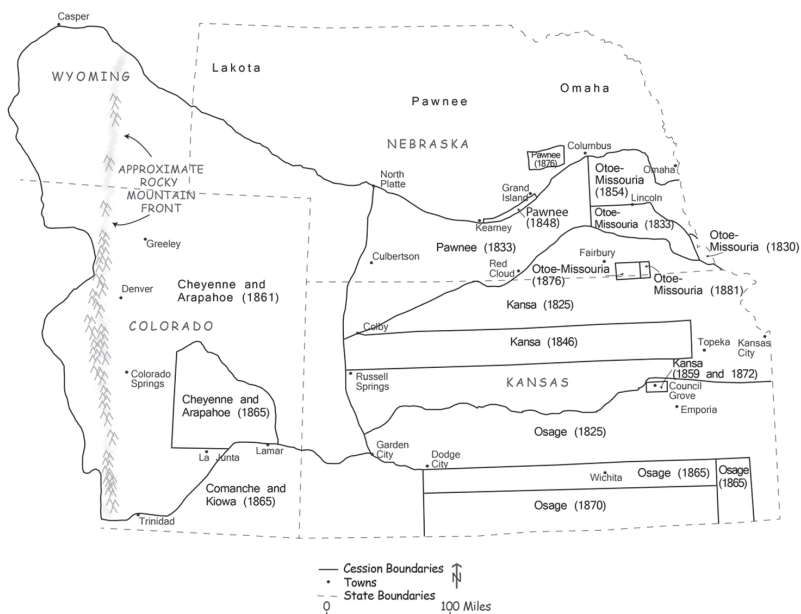
In these frontier zones, landscapes were initially distinctive because they were not yet squared-off by roads, or fenced to any degree, but open country crisscrossed by paths connecting farms to each other and to towns. There was little land under cultivation and, especially on the western Plains, a shortage of wood and water. Again, especially on the western Plains, there was tension between farmers and cattlemen, the latter objecting to the fencing of the range that they had previously used for free. The first, rudimentary generation of homes in the frontier zones were made of local materials, logs and sod, or just dug out of a hillside. The majority of settlers were poor, and many had no farming experience. Most of them were male, though not in great excess, and few were elderly. There was heavy county debt, because counties borrowed lavishly to put in schools, roads, and courthouses, yet they had little revenue — land (as opposed to personal property) was not taxable until the provisions of the land laws had been met and titles, or patents, issued to owners. There were far too many towns, each competing for the farmers' trade, or for a railroad, a land office, or county seat status. Most of the towns were destined to fail. Speculation on rural lands and in the towns was rampant.

Most settlers were only on hand to make money on rising land values, which some did, and moved on. Others failed and moved on to try again somewhere else. These frontier zones were in constant motion, places of chronic impermanence.

The frontier zones could not be occupied by Americans until the land was obtained from its owners, the Indians. Indian dispossession — long ago, way ahead of his time, geographer Carl O. Sauer called this the “dark obverse” of the glorified frontier — was, in effect, the first stage of the American settlement process. That history, which is filled with tragedy, but also with the eventual triumph of survival, is not the focus of this account. Despite the conflicts, Indian resistance hardly slowed the American advance into the central Great Plains. The prevailing American philosophy was bluntly expressed by the Commissioner of Indian Affairs, Francis Walker, in his annual report in 1872: “The westward course of population is neither to be denied or delayed for the sake of all the Indians that ever called this country home. They must yield or perish.”⁴ They did both, and by the time settlers reached the Rainbelt in the late 1880s, Indians were as scarce as the bison they had depended upon.

The Louisiana Purchase of 1803 had established American sovereignty over the Great Plains, and the Kansas-Nebraska Act of 1854 brought much of the vast area into the American territorial system. Plains Indians were legally recognized as the original occupants of the land, holding it by “Indian title” until negotiated away through treaties.⁵ This was accomplished quickly on the central Great Plains.

By 1860 the farming Indians of southern Nebraska (Pawnees and Otoe-Missourias) and eastern Kansas (Kansa and Osages) had sold the bulk of their ancestral lands and were restricted to small reservations (fig. 1). They were forced by their dire circumstances to sell. The previous half century of dislocation, famine, and recurring epidemic disease, all brought about by contact with Americans, had reduced their populations by more than one-half, leaving their lands as their only asset. The loss of entire generations of young people, who were vulnerable to smallpox because they had not gained immunity from surviving earlier epidemics,



1. Indian land cessions.

was an inestimable tragedy. The loss of old people, because of deteriorating living conditions, left holes in the cultural memory, ceremonies no longer performed, knowledge no longer held. It was not a physical genocide—the United States inoculated Indian children, beginning in the 1830s—but it was a horror, and it lasted a long time.⁶

When the eastern Nebraska and eastern Kansas reservations became encircled and coveted by settlers in the 1860s and 1870s, the village Indians were excised from their homes, and their place-based histories, and relocated south to Indian Territory (later Oklahoma). The Osages went first (1870), followed by the Kansa (1871), the once-mighty Pawnees (1873–75), and finally the Otoe-Missourias (1876 and 1881). Their former reservations were immediately taken by settlers, and even more so by speculators. The deep-rooted Indian presence in eastern Kansas and Nebraska never proved more than a temporary hindrance to the advancing waves of American settlement.⁷

To the west, the Cheyennes and Arapahoes, who dominated the High

Plains between the Platte and Arkansas Rivers, and, to the southwest and northwest, respectively, the powerful Comanches and Lakotas, mounted a more serious resistance to their impending dispossession. As decentralized bison hunters, living most of the year in small bands, they had been afflicted less by contagious disease than the village Indians in their crowded earth lodge settlements. Their horses (the Comanches had five to ten per capita by 1850) gave them mobility, the bison herds — still substantial in the 1860s — gave them sustenance, and their relative isolation from the advancing body of American settlement allowed them a twilight of independence.⁸

But when the railroads breached that isolation, starting in the late 1860s, and the bison herds were reduced to scattered bones whitening the prairie, the Indians' future was foreclosed. The U.S. military, operating out of posts like Fort Dodge (1865), Fort Wallace (1865), and Fort Kearney (1863), which guarded first the overland trails, then the railroads, began to wage total war, attacking Indians in their winter camps when they were immobilized by women, children, and weakened horses. There were massacres, such as at Sand Creek, in southeastern Colorado on November 29, 1864, when Colonel John M. Chivington and his Colorado Third Volunteer Regiment attacked Black Kettle's band of Southern Cheyennes and Arapahoes, leaving more than two hundred Indians, mostly women and children, dead. The clearing of the western Plains through warfare and forced removals to make room for another group of people fits exactly the definition of what is now known as ethnic cleansing.⁹

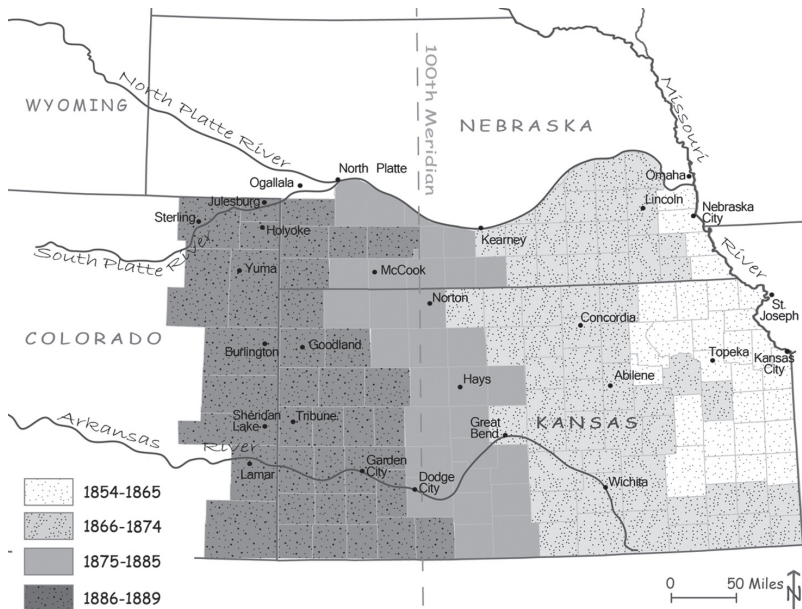
The area that would by the late 1880s be known as the Rainbelt was officially ceded from the Comanches, Cheyennes, and Arapahoes through a series of treaties in 1861 and 1865 (fig. 1). The Indians were settled on poorly defined, parched reservations in western Indian Territory. This was the prelude to the most serious Indian reprisal against Americans on the central Plains, which took place in Kansas in the fall of 1878, and briefly slowed the westward surge of settlers.

The Northern Cheyennes had been duped and coerced into leaving their homeland in Montana and settling with their estranged relatives,

the Southern Cheyennes and Arapahoes, on their reservation in Indian Territory. There were no bison left to hunt there, and the Indians lived on inadequate government rations in a state of near starvation. They were homesick, and malaria and other diseases ran rampant. By August 1878, two thousand of the reservation's five thousand people were ill, and there was only one doctor, and no quinine, on hand. In response, Dull Knife and three hundred followers headed north through western Kansas on their way back home to Montana. As described later (1880) in a Senate report, "their flight was . . . converted into a running fight," leaving more than forty American men, women, and children dead, and more women raped. While condemning these "atrocities," the Senate Report pointed to a failed American Indian policy as the ultimate cause of the conflict.¹⁰

The frontier was temporarily turned back, as settlers retraced their footsteps down the river valleys. But they quickly returned in even greater numbers. The clearing of the Indians through warfare, treaties, and disease was absolute. According to the 1885 state census, there wasn't a single Indian remaining in western Kansas (nor a single Chinese, because the two peoples, equally disdained, were counted together as one group in the census).¹¹ The central Great Plains between the Platte and Arkansas Rivers — the spearhead of the American frontier — was completely open for resettlement.

The vacated land was quickly filled with American and European settlers. This rush into the central Plains contradicts Walter Prescott Webb's thesis, presented in his classic study, *The Great Plains*, in 1931. Webb argued that settlers, used to wooded and well-watered environments, lacked the knowledge and means to handle the semiarid, largely treeless, High Plains to the west of the 98th meridian. In Webb's interpretation, the frontier stalled for "the greater part of half a century" after the Civil War at this "institutional fault." Once adjustments were made — Webb stressed such innovations as barbed wire, windmills, and new laws for land and water — settlers were able to move across the 98th meridian and out onto the gently tilted tableland of the High Plains. Webb's thesis, like Turner's, had staying power: in 1954, sociologist Carl Kraenzel, in his



2. Frontier zones.

Great Plains in Transition, made the same case for a cultural fault line and a stationary frontier.¹²

But settlers did not halt, perplexed, at the 98th meridian on the central Great Plains. Instead, they rapidly advanced westward during years of ample precipitation and prosperous economy, only to fall back or else scatter elsewhere when the rains stopped falling and the nation descended into economic chaos. It was a pulsation, or more accurately, an arrhythmia, marked by sudden rapid movements and periods of hiatus. In this cycle of boom and bust it was not unusual for areas to be settled by three or more waves of homesteaders before successful farming took root.

Using the criterion of county population densities of two persons per square mile, four periods and zones of frontier settlement can be identified on the central Great Plains (fig. 2).¹³ In the first period, from 1854 to 1865, settlement was slowed by the Civil War and its violent prelude, the struggle between pro-slavery and anti-slavery forces in “Bleeding Kansas.” Also, with few miles of railroad in place, and with no navigable riv-

ers extending west into the Plains, settlers were tied to the Missouri River, their only connection to markets and supplies.

The pace of settlement accelerated after 1865 in years of good rainfall and rapid railroad construction. Settlers followed the river valleys and the railroads out beyond Webb's iconic 98th meridian. This was down the rainfall gradient, past the twenty-inch isohyet; but no matter, because settlers were assured by scholars and boosters that precipitation would increase as they planted trees and turned over the soil. The boom came to an abrupt halt in 1873–74 with drought, locust infestations, and financial crisis.

The advance continued after 1874, as years of high rainfall washed away the memories of hard times. There was the promise again of a verdant garden to the west where settlers would produce their own climate. "It was almost miraculous," wrote agricultural historian Gilbert Fite, "how a few good rains could change the attitude and outlook of a people in an entire region."¹⁴ Settlers accompanied the proliferating railroads out beyond the 100th meridian, until by 1885 only a band of counties in western Kansas and Nebraska and in eastern Colorado had population densities of less than two persons per square mile (fig. 2).

These counties were deluged by settlers in the final nineteenth-century boom from 1886–89. Settlers located on the uplands, confident that wheat would flourish in the ameliorating climate of the Rainbelt. They endured severe droughts in 1887 and 1890, then again from 1893–96, which also coincided with a deep regional, national, and international economic depression. The settlers kept planting, even after their crops withered in the fields, hoping to recoup their losses in one bountiful harvest. Then they, and the towns dependent on them, failed, leaving the haunted landscapes that Payne and Johnson encountered on their surveys in the late nineteenth century.

Midwest Extended, 1854–1865

The settlers who filtered into Kansas and Nebraska Territories after May 30, 1854, (and a good number who had crossed the Missouri River be-

forehand and squatted on Indian lands) were drawn mainly from a wide belt in the midsection of the United States, reaching from New York and Pennsylvania to Iowa and Missouri. Ohio was the main state of origin for both territories. It was essentially a latitudinal migration, an orientation that would not change even as settlers moved four hundred miles west across the Plains during the following three decades, though western parts of the belt, such as Iowa and eastern Nebraska and Kansas, would become relatively more important source areas.¹⁵

In 1860 foreign-born immigrants comprised 22 percent of Nebraska's total population of 28,826 and 12 percent of Kansas' total of 107,204. In both areas, the foreign-born component was drawn mainly from Germany, Ireland, and England. Again, this was a pattern repeated in the Rain-belt thirty years later, both in terms of percent of total population and in their origins (though there was a lot of local variation). The early foreign-born population tended to concentrate in the burgeoning cities of the Missouri Valley (Omaha and Kansas City, Missouri, were both stamped by their Irish and German presence), or else they migrated to the western edge of the frontier, where they often settled in ethnic blocks.¹⁶

The settlers came into Kansas and Nebraska by water, either by steamboat from St. Louis or St. Joseph (which had the immense advantage, after 1859, of being linked to the east by the Hannibal and St. Joseph Railroad, the first line to reach the Missouri Valley), or by ferry across the river from Iowa and Missouri. As railroads approached from the east after the Civil War, settlers increasingly bypassed the Missouri River route and traveled overland from the railheads to throng the ferries. The ferries in turn would be supplanted in the late 1860s and early 1870s by the first bridges across the Missouri River.

Some of the settlers kept going west from Omaha and Nebraska City on rutted wagon roads that paralleled the Platte on the flat terraces above the river. Others moved up the Big Blue River valley from Kansas to strike the Platte and the main overland trail at Fort Kearney. In the spring of 1856, for example, one Nebraska reporter marveled at the "line of emigrant wagons" that at any time could be seen "winding over the

hills to the west,” slicing through the Pawnees’ homeland, heading to Oregon or California.¹⁷

Those who came to stay in Kansas and Nebraska (at least for a while, because most would soon move on) settled mainly in the aspiring and competing towns along the Missouri. It was initially unclear which town, or towns, would capture the trade of the Great Plains and prosper, and which would be bypassed and condemned to stagnation. The competitors in Kansas and adjacent Missouri were Kansas City, Missouri (with a population of 4,418 in 1860), Independence (3,164), Atchison (2,616), Leavenworth (7,499), and the railhead of St. Joseph (8,932). In Nebraska, Omaha (1,881) and Nebraska City (1,923) vied for control, and for a few years Council Bluffs, Iowa, (2,011) was also a contender.¹⁸

The selection of Omaha/Council Bluffs and Kansas City, Kansas, as the eastern termini of the Union Pacific Railroad in 1862, the accumulating convergence at these points of connecting rail lines to the east, the commandeering of bridge construction across the Missouri River (completed at Kansas City in 1869 and Omaha in 1872), and the money and politics that lay behind all the above ensured that these two “Gateway Cities” would emerge as the main portals to the central Plains. By 1870 with burgeoning trade, manufacturing, and population growth, Kansas City, Missouri (32,260), and Omaha (16,083) had left their erstwhile rivals behind.¹⁹

The letters of Joseph Barker Jr., a young Englishman who represented his family’s considerable real estate interests in Omaha in the 1860s and 1870s, provide a glimpse of what life was like in these bustling river towns. By 1859 the Barkers had purchased hundreds of city lots, eighty-four of them located in what would become Omaha’s central business district, as well as a 720-acre farm on the outskirts of town. They bought much of this land using discounted military land warrants. These were certificates issued to veterans of various wars that could be exchanged for 160 acres of land. After 1852 the certificates were transferable, and they could be sold at one-third to one-half of their value and used by speculators like the Barkers to amass large acreages.²⁰

The Barkers also ran an import business, shipping knives and cloth from Sheffield, England, where the family was based. Always on the alert for potential profit, Joseph had his finger on the fast-beating pulse of Omaha, and his letters home are filled with ideas for enrichment in the fluid frontier economy.

From its beginnings, following the platting of the site by the Council Bluffs and Nebraska Ferry Company in 1854, Omaha lived on long-distance trade. Joseph Barker characterized the city as “a major wholesale place for the Western Territories.” There was substantial business outfitting emigrants who were heading west along the Platte corridor, including miners striking out for Colorado, gold having been discovered at Pikes Peak in 1858. Supplying the Montana mines via the Missouri became a lucrative enterprise after 1862, although that trade was captured by Sioux City, Iowa, in 1868, when the Sioux City and Pacific Railroad forged a more direct link to Chicago, increasingly the main control point for western development. (Barker understood this and took out a subscription to the *Chicago Tribune*.) Outfitting the military for its mounting campaigns against the Lakotas also enriched Omaha, as did supplying reservation Indians with treaty goods such as food and clothing. Serving as the home base for the construction of the Union Pacific was a boost to Omaha’s economy in many ways: by 1868 the Union Pacific employed five thousand workers at its shops.²¹

Omaha’s wharf—the “very heart” of the city, according to Barker—bustled with activity. Piles of telegraph wire and iron rails and heaps of coal and grain lined the dock, where at any one time four or five steamboats were loading or unloading goods and passengers. Opportunities abounded: Barker claimed that “everyone he knew” had prospered from freighting, government contracts, and “war speculation.”²²

As was typical of the entire Great Plains frontier, there was always a large transient population of young men looking for work. The mobility of the population was frenetic: “People do not stay,” Barker wrote, “but they do come, keep the Hotells all crowded, spend money, and travel on.” In Sioux City, eighty miles to the north, only 36 percent of the men who

were there in 1860 remained in 1870. Turnover amongst laborers and poor people was especially high, whereas teachers, doctors, and others with an investment in the town tended to stay.²³

Omaha's landscape expressed its frontier condition. The streets were mired in mud in the spring. Most buildings were made of wood, and fires frequently consumed parts of the town. By the mid-1860s some brick buildings were under construction, but the expense of laying the foundations delayed the transition. The cost of living was high, whether for food, fuel, servants, or rent. There was a serious shortage of housing throughout the 1860s, brought about by speculators like Joseph Barker who were holding onto their underdeveloped properties until their values had climbed. Capitalizing on rising land values was a key component of the frontier process across the entire central Plains. It certainly worked for the Barkers, who became one of the richest families in Omaha.

Beyond the Missouri River valley, with its competing towns, settlers extended westward along the Platte and Kansas River corridors. They located at the junction of the wooded river valleys and the open prairies, with timber, shelter, and water below, and pasture above. They avoided wetlands, with their over-enriched soils and association with malaria. They grew corn, as their fathers had done in Iowa or Ohio, and they marketed livestock "on the hoof," driven to the river towns.²⁴

There were also thin extensions of rural settlement along all the small tributaries of the Missouri, but only in their lower reaches, because proximity to the river was essential for supplies and markets. This was explained by a certain Charles Robinson in a letter written to a Lawrence, Kansas, paper in 1859. Robinson pointed out that the corn he grew near Lawrence was worth nothing forty miles away at the Missouri River because the transportation costs consumed all the potential profit.²⁵ Shortage of timber, absence of bridges across small, deeply incised creeks, as well as opportunities to work in the river towns also kept settlers tied to the Missouri River valley.

This was not an unfamiliar environment to settlers who had originated in the Midwest. Rainfall, at about thirty inches a year, was lower than to

the east, and droughts were more frequent, as settlers found out in the dry years of 1857 and 1859–60. But the drought hazard was far less than on the western Plains, and in most years crops flourished in the ample rainfall of the growing season and in soils that were rich in organic matter.

This was verdant tallgrass prairie country, with big bluestem on the lower slopes as high as a horse's back, little bluestem farther up, and everywhere, from spring to fall, a profusion of flowering plants. Settlers would have recognized the valley trees too—cottonwood, bur oak, hickory, willow, walnut, box elder, and many more—though the stands thinned to the west, leaving eventually only straggling cottonwoods and willows lining the rivers out onto the High Plains.²⁶

The prairie persisted for some time. It was arduous work to turn over the prairie sod, which was densely matted with rhizomes and roots, and land was only slowly put under crops. The woodlands, however, were quickly taken out. As soon as a vicinity had settlers, it also had a water-driven sawmill, and demand for wood for buildings, fences, furniture, and fuel was constant.²⁷ Obtaining wood remained a problem until the railroads and lumber corporations brought the Great Lakes forests within reach, and even then there was the problem of cost. But, there again, this had been a problem in the Midwest too.

Settlers had five options for staking a claim to a piece of land, options that were still available in the Rainbelt in 1890. The first option was cash, buying already-improved land at market price, which averaged about five dollars an acre around Omaha in 1860. Not many settlers had the wherewithal for this.

Before January 1, 1863, when the Homestead Act went into effect, most settlers filed their claims under the Preemption Act of 1841. This act specified that heads of families (by definition male, unless the man was infirm or deceased) and single men and women over the age of twenty-one who were citizens, or on their way to becoming citizens, were entitled to 160 acres of the public domain at the cost of \$1.25 an acre. Settlers were required to live on the land and improve it for twelve months, before swearing that they had followed the letter of the law, paying the

two hundred dollars, and receiving a patent. Settlers could expedite the process by “commuting” the claim after six months, paying the two hundred dollars, and obtaining the title. The attraction of this was that once they owned the land, they could use it as collateral and take out loans to invest in machinery and other possessions. Many settlers filed preemption claims by prior arrangement with speculators, with the idea that they would sell them back as soon as they were commuted, or if they were “relinquished” at any time before final proof. In this manner, speculators amassed large acreages to sell at a profit at a later date. The Preemption Act was so riddled by speculation opportunities that it was repealed in 1891.²⁸

The other common method of obtaining land before 1863 was through military bounty land warrants, those discounted and transferable certificates that Joseph Barker used to build his real estate empire in Omaha. Like preemptions—even more so, in fact—military bounty land warrants facilitated speculation rather than genuine settlement. They had no occupancy provision and they quickly passed into the hands of wealthy people like Barker, making them even richer.

The Homestead Act introduced the era of virtually free (there was a small filing fee) land for settlers. It gave each qualified adult (the stipulations were similar to those of the Preemption Act) 160 acres, with the condition that the land should be lived on and improved for five years. At that point, settlers filed for “final proof” at the local Land Office, witnesses attested that the land had indeed been occupied and improved, the application was announced in a neighborhood newspaper for anyone to contest, and, after all this, if the application was approved, settlers received their quarter-sections at no cost. As with the Preemption Act, there was ample opportunity for petty speculation. Residency requirements were not taken seriously, and homesteads could also be commuted for two hundred dollars after six months, or relinquished by prior arrangement with a speculator waiting in the wings. Still, the Homestead Act was less subject to abuse than preemptions and military bounty land warrants, and many were gratefully taken by aspiring farmers.²⁹

The year 1863 also saw the passage, on June 2, of the Morrill Act, which gave every state thirty thousand acres for each senator and representative they sent to Congress. The sale of these lands would finance the establishment of land grant colleges. States could either receive the actual land, or “agricultural college scrip,” which like military warrants were certificates that could be sold on the open market. Again, speculators collected the scrip, paying about fifty cents an acre, and used it to accumulate real estate. In 1868, for example, Joseph Barker acquired a thousand acres along the lower Elkhorn River, just to the west of Omaha, by using purchased agricultural college scrip. As he coyly wrote to his brother in Sheffield, “It cannot be a bad speculation.”³⁰

Just as Barker’s letters provide insights into urban life on this early Plains frontier, so the reminiscences of Even Jefferson Jenkins shed light on living conditions in the rural areas.³¹ Jenkins was a lawyer who, in the absence of such work, was reduced to cutting wood for steamboats in Doniphan County, in extreme northeastern Kansas, in the 1860s. Jenkins’s account, written a decade later during slack times in his work as a land office agent, evokes “rare scenes of rural loveliness,” a lush environment cloaked with valley woodlands and teeming with small game — wild turkeys, pheasants, quail, ducks, geese, and grouse — though the sawmills quickly devoured the trees, and the game was rapidly depleted by hunting. Jenkins also made note of the early evidence of human failure: at least fifteen townsites stood deserted along the Missouri River in Doniphan County, speculations gone wrong, or, in Jenkins’s words, “relics of lost opportunities for greatness.” The surviving “embryo cities” competed for the trade of the incoming settlers.

These settlers, as Jenkins described them, had been landless in their former states of Illinois, Missouri, Ohio, Wisconsin, and Michigan, and they were attracted by the free or cheap land in Kansas. They pushed west in covered wagons across the northern tier of Kansas counties from Doniphan to Marshall. Each wagon brimmed with furniture, bedding, and children. Typically, a dilapidated chicken coop was attached to the back of the wagon, with the heads of poultry comically protruding. Be-

hind the wagons trailed cows and calves, with a “house dog” bringing up the rear. When a family found a suitable place, they laid a foundation of four logs as a base for a cabin (and proof that the land was taken), then headed to the land office to file a claim. The families slept in their wagons and prepared their meals over an open fire until a rudimentary first home, perhaps no more than a dugout, could be built.

Jenkins characterized the settlers as poor, idealistic, and optimistic, and the same could be said about the Rainbelt settlers a generation later. “Their vision of a new country,” he wrote, “was magnified by imaginary guideposts to the future.” They were motivated by the prospect of a home and land “unencumbered with debt and mortgage,” and they believed that this could be achieved with little labor. They soon found, however, that it took three yoke of oxen pulling a heavy iron plow to break the matted sod, and once the game was gone, meat became a luxury. Jenkins described how a single piece of pork would be rotated around a community to give each family a little flavor to their beans. Though perhaps romanticized, Jenkins maintained that everyone was equal and “mutually dependent” in this frontier setting. The “latch-strings of the cabin door hung on the outside,” he wrote, an open invitation to visit. Frederick Jackson Turner would have appreciated this confirmation of the leveling, democratizing effect of the frontier.

Jenkins had his own “imaginary guideposts to the future.” Like many of his contemporaries, he assumed that climate would improve as a result of settlement: “The hot winds and droughts that were observed before settlement are things of the past,” he claimed, adding, “settlement and cultivation, with tree planting, have removed the cause.” Turning over the soil, he explained, allowed rainfall to penetrate deeply, escape evaporation, and gradually replenish streams and springs. More dubiously, Jenkins assumed that the cultivation of trees “contributes materially to the increase in rainfall.” Theories linking tree-planting to increased rainfall (and the opposite, linking deforestation to aridity) had held currency since ancient Greece.³² But on the western Great Plains in the late nineteenth century, almost as a matter of necessity, they hardened into convic-

tions and persisted until eventually disproven in the 1890s by drought and widespread failure.

The First Boom, 1866–1874

With the railroads at hand, and beginning to extend west, and with the Civil War ended, settlers flowed into Nebraska and Kansas after 1865. In June of 1866, from his vantage point in Omaha, James Barker watched settlers “going out all along the Rail Road [Union Pacific] onto the tributaries of the Platt, Elk Horn, and other streams,” selecting their homesteads and preemptions wherever there was woodland. Barker was particularly impressed by the “large numbers of Germans from Wisconsin with their sheep and goats” heading to the next free and cheap land. He explained that the market had now come to the settlers: “They now can sell all they raise out west, in the new towns along the tracks and to emigrants passing through.”³³

The Union Pacific followed the Platte River to its fork, then extended due west into Wyoming in 1867, heading toward Utah and the golden spike that connected the first transcontinental railroad two years later. On its way it spawned a succession of “Hell on Wheels” towns at the railhead. These railhead towns briefly flared, until the tracks moved on to another site. North Platte was such a town.

North Platte was laid out in 1866, just in time for the arrival of the Union Pacific construction crews. Within a month, three hundred ramshackle sod, log, and plank buildings, interspersed with many tents, had risen from the prairie, and five thousand people were on hand. Some were Omaha merchants who sold their goods and services to a captive market at successive railhead towns in a rolling economic bonanza. Most were railroad workers (graders, masons, surveyors, and track crew) and the gamblers, prostitutes, and other opportunists who fed off them. There were no churches, no schools, no fire department, and no city government. It was a situation repeated along all the main lines in Kansas and Nebraska in the late 1860s and 1870s.³⁴

But by June 1867, the tracks had been laid to Julesburg, Colorado, and

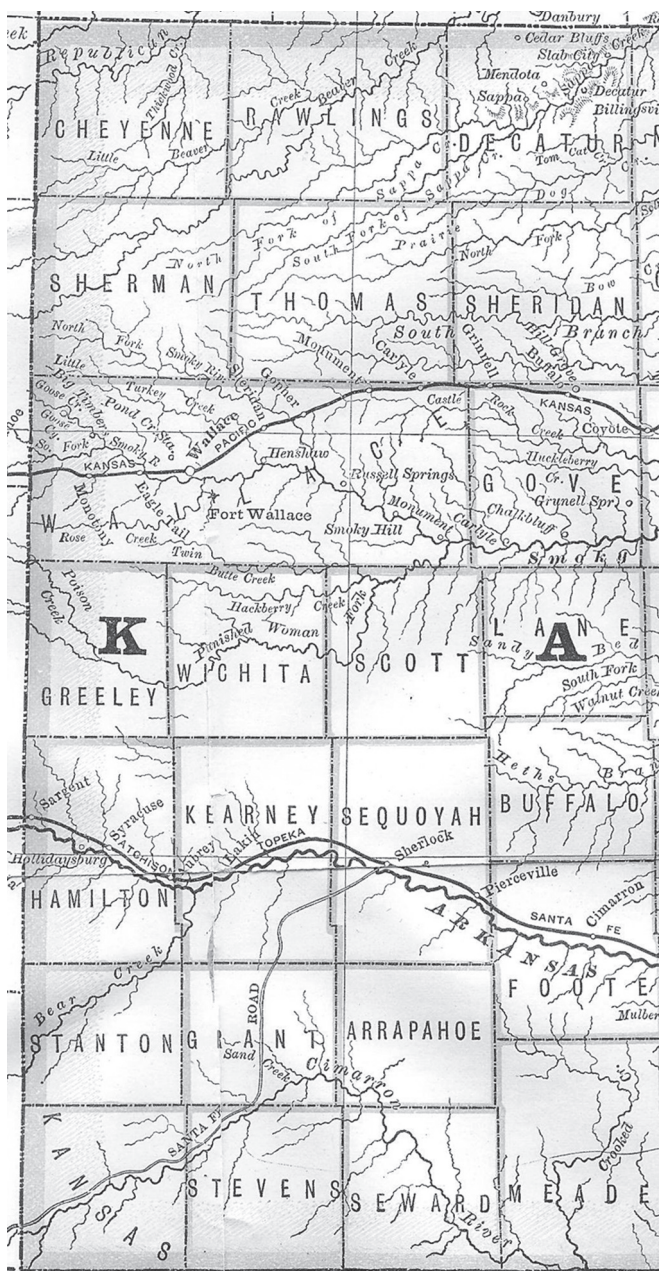
nearly all the people, most of the buildings, and the local newspaper, aptly named *Pioneer on Wheels*, had moved on west. Under the more placid control of the “better element,” North Platte began to build a stable economic base and a solid social foundation of schools, churches, and fraternal organizations.

To the south, the Kansas branch of the Union Pacific (after 1869, called the Kansas Pacific) traced the Kansas River to Ellsworth, then angled southwest to reach the Colorado line in 1869, and Denver the following year. The Atchison, Topeka, and Santa Fe got a later start (1868), but quickly extended beyond the settled area, following the Arkansas River into Colorado in 1872, then on to California (fig. 3).

The rail network thickened in the east, with the Burlington and Missouri connecting Plattsmouth to Kearney in 1872, the same year that the St. Joseph and Denver Railroad linked St. Joseph to Grand Island, both bringing south-central Nebraska within reach of homesteaders. The railroads sped up the pace of settlement and allowed settlers to come more easily from afar. They bridged the distances across the Plains, opening up the region to commercial farming, and connecting it more tightly to the outside world, via the Missouri Valley gateway cities.

The railroads also channeled investment directly to the frontier from the Missouri Valley towns. Omaha’s reach westward along the Union Pacific, for example, was extensive. In 1868, Barker and other Omaha business leaders hosted “leading men” from St. Louis, Chicago, and New York on a “Special Train” to the Union Pacific railhead west of Cheyenne, Wyoming, the objective being to show off the country and its resources. Barker characterized Cheyenne as a “little Town,” located in a “poor dry barren place,” and completely “run” by Omaha.”³⁵

All the railroads received construction subsidies from the federal government in the form of land grants, which gave settlers and speculators another option to acquire land. The details, though not the substance, of land disposal within the grants varied from one railroad to another. The Atchison, Topeka, and Santa Fe, for example, was given a belt of ten miles on either side of the tracks, about 3 million acres in all. The Union



3. Postal map of Kansas, 1876 (detail). Source: *Fifth Annual Report of the Kansas State Board of Agriculture, 1876* (frontispiece).

Pacific's land grant was twenty miles on either side of tracks, amounting to 7 million acres. The Union Pacific and Kansas Pacific land grants extended all the way across Kansas and Nebraska and into Colorado and Wyoming respectively. The Atchison, Topeka, and Santa Fe land grant stopped at the Colorado line.³⁶

Within each land grant, the railroads were given the odd-numbered (square mile) sections. The railroads would supposedly pay back their government loans by selling these sections at prices that averaged about five dollars an acre (though, according to historian Paul Wallace Gates, the loans were never repaid in full). The railroads would also benefit, of course, from the increased trade that would ensue as the land was settled. Even-numbered sections in the land grants were subject to entry under the Preemption and Homestead Acts, but only in eighty-acre parcels, and at the cost of \$2.50 an acre if preempted (or commuted). Settlers received less land and paid more in order to have access to transportation and connection to markets.³⁷

In order to fill their land grants and their boxcars, the railroads became active recruiting agencies, dispatching representatives throughout the Midwest, the eastern United States, and western Europe. The Atchison, Topeka, and Santa Fe was particularly energetic, establishing a land office in 1872 and hiring five hundred agents. Potential settlers could purchase discounted tickets to check out the railroad lands, and if they agreed to buy, the ticket price was deducted from the cost. It was clearly in the interest of the railroads, as well as the states, to broadcast a bucolic image of western Nebraska and Kansas and eastern Colorado, and to stress that agricultural settlement led to climatic amelioration.³⁸

The belief that (as Jenkins had argued) rainfall increased with settlement was widely held by the early 1870s. The commissioner of the General Land Office, in his 1868 report, urged the planting of trees on the Great Plains as a means of increasing rainfall. This had already happened in eastern Kansas, the commissioner explained, and there was no reason to believe that it would not also occur on the western Plains. In the absence of reliable climate records (the first widespread systematic measure-

ments of rainfall and temperature were not made until the late 1880s), this theory seemed reasonable.³⁹ It was also a seductive proposition, a convenient recruiting device for the railroads, a common self-congratulatory theme in each state's agricultural journals, a career-building cause for various experts, and a handy delusion for settlers, who desperately wanted to believe that it was true.

Samuel Aughey, Lutheran minister and professor of biology at the University of Nebraska, was particularly tireless in spreading the good news. In 1873, in an address to the Nebraska State Legislature, Aughey proclaimed: "As civilization extends westward the fall of rain increases from year to year." Aughey explained that the plow was the trigger of change, the cultivated earth serving as a sponge that absorbed the moisture, then released it slowly. Planting trees was also instrumental in the annual increase in Nebraska's rainfall over the previous twenty years, according to Aughey. Aughey's influence was pervasive: he influenced the state's leading agricultural journal, *Nebraska Farmer*, to the extent that hardly an issue from 1878 to 1893 failed to refer to the imagined increasing rainfall.⁴⁰

In Kansas, Richard Smith Elliott, industrial agent for the Kansas Pacific, was every bit as enthusiastic as Aughey. In the 1870s Elliott, who had previously been a farmer, inventor, newspaper editor, and Indian agent, energetically promoted the theory of increasing rainfall to justify railroad expansion. As historian David Emmons put it, in Elliott's thinking "the railroads attracted the people, the people brought the rain, the rain attracted more people." In his *Industrial Resources of Western Kansas and Eastern Colorado* (1871), Elliott expressed his confidence that a "permanent and beneficial change of climate" was moving west with settlement as the land was plowed and shaded by newly planted trees. This would reduce wind speed and evaporation, while at the same time accelerating the return of moisture to the atmosphere. Elliott maintained that bluegrasses of the tallgrass prairie were colonizing westward into the shortgrass prairie. This "substitution of grasses," he went on, was a result of increased rainfall brought about by the planting of trees. The tall grass-

es in turn would add to the amelioration by diffusing the sun's heat and reducing summer temperatures. Tree-planting was Elliott's main argument, but he was ecumenical in embracing all possible causes: perhaps the increased rainfall was caused by the new iron rails and the "friction of metallic surfaces," sending waves up into the atmosphere as the trains went through.⁴¹

In his proselytizing, Elliott did his best to dispel the image of the Great American Desert, which clung to Kansas, especially, like a film of dust. Scholars have long argued that this unfavorable image of the Great Plains (a product of Zebulon Pike's expedition in 1806 and Stephen Long's in 1820) was not widely believed in the West, but held mainly by educated classes in the East, who read the newspapers and geography textbooks that had adopted it.⁴² But the degree to which the desert image was contested in the promotional literature suggests that it was a real handicap to overcome. Elliott said as much, that the "idea of a desert character of the whole western region held its place in the public mind with a singular tenacity." But by 1873, through the settlers' own deeds, the Great American Desert had been shown to be, in Elliott's words, a "geographical delusion."⁴³

Reassured by the prospect of increasing rainfall, settlers moved west along the Platte valley in Nebraska, which had been the main avenue of American expansion since the days of the Rocky Mountain fur trade in the 1820s and 1830s. By the early 1870s, settlers were also advancing up the Republican River valley, even without the presence of a railroad and despite periodic clashes with Cheyennes and Lakotas. The divide between the Platte and Republican remained in the hands of the cattlemen, and therefore sparsely populated. Frontier County, for example, had only two homesteaders in 1872, and no towns.

To the south in Kansas, the frontier line slanted from northwest to southeast, from the 100th meridian at the Nebraska line, to east of the 98th meridian at the boundary with Indian Territory (fig. 2). This orientation reflected the grain of the land, with the Solomon and Republican Rivers being particularly attractive routes of expansion. Settlement was

slowed in southern Kansas by the large Osage Reservation, which wasn't opened until after 1870, though squatters were there beforehand.

The homesteaders planted corn as the sod crop as they would do two decades later in the Rainbelt. They cut the prairie with an axe, then folded the turf back over. They also grew spring wheat and potatoes; kept oxen, horses, and mules to pull their plows and binders; raised a few hogs and cattle; and planted orchards. As soon as they owned their land, they borrowed against it and bought the latest machinery. Labor was in short supply on the frontier; hence the need for labor-saving machines. As an unnamed writer in the *Nation* explained in 1868, the farmer borrowed because it was “immensely profitable” for him to do so; it was the way to expand the acreage under crops, the way to grow. But when the crops failed, or market prices plunged, the farmer was left only with his debt, and interest rates of 10 or 12 percent.⁴⁴

Settlers in the central Nebraska and Kansas frontier zone in the early 1870s had one asset that the next generation to the west would not possess, namely the bison. Men went out west in hunting parties from November to April, when the frozen meat could be transported home. They could procure enough meat in a day to last a winter, and also make money selling bison bones (to be used as fertilizer) and hides (which were made into machine belts for industrial production). Much attention has been paid to the causes of the destruction of the great bison herds, from the effects of the long-established robe trade, to competition for forage with horses and cattle, to the spread of bovine diseases, to the so-called hunters on railroad excursions who shot the bison as they stood motionless on the prairie. But the tens of thousands of settlers on the central Plains hunting for their daily food must have had a decisive impact as well.⁴⁵

The destruction was rapid. In Norton County in northwestern Kansas, for example, there were still large herds of bison along the Solomon in 1873. They “remained plentiful” until 1875. By 1876, according to the Kansas State Board of Agriculture, they had “entirely disappeared.”⁴⁶

Beyond the valleys, on the extensive uplands, cattlemen used the open range at will. By the early 1870s Texas cattle filled the range. Yearlings

and two-year-old steers were driven north each year after 1865 to railhead towns like Abilene and Ellsworth on the Kansas Pacific; Dodge City on the Atchison, Topeka, and Santa Fe; and Ogallala on the Union Pacific. The cattle were either shipped directly to stockyards in Chicago, St. Louis, and Kansas City, or else fattened on the range before being dispatched east as three- or four-year-olds.⁴⁷

Wherever cattlemen and homesteaders came into contact, there was trouble. Counties where homesteaders were in the majority voted for herd laws, obliging cattlemen to keep their stock out of the crops. “It was the only practical thing to do,” reported a correspondent from Phillips County, Kansas, because homesteaders lacked the timber to fence their fields. This land-use conflict was repeated to the west in the next few decades, but there was no doubt who would prevail. All the weight of the government’s land laws favored the many homesteaders over the few cattlemen, who reluctantly withdrew to the west to avoid paying the taxes of organized farm country and to dispense with the need to confine their cattle.⁴⁸

Just as had been the case in eastern Nebraska and Kansas in the previous decade, the new frontier zone was a ferment of speculation and mobility. Innumerable towns were founded as speculative ventures ahead of the rural settlement that would be needed to sustain them. They vied for choice locations, for railroad connections, for a land office, or county seat status. Far too many towns were established; most eventually failed, with the “inland towns” — those that never secured a railroad — going under first.

The passage of the Timber Culture Act in 1873 gave settlers the opportunity for an extra free quarter-section and opened up new prospects for speculation. The purposes of the act were to get much-needed construction timber on the Plains, and also, following the prevailing theories, to enhance the climate. The act required settlers to plant and nurture forty acres of trees (later, in a concession to reality, reduced to ten) over a period of ten (later reduced to eight) years, before being eligible for title to 160 acres of free land. The settler could then wait another three years before applying for a patent. There was no residency requirement

and no problem if the settler already held a preemption claim, a homestead claim, or both.

The act was an open invitation for speculators. Barely a quarter of the timber culture claims in Kansas and Nebraska were carried through to final patent. Settlers could use the 160 acres without paying taxes or rent, or being liable for debt on the land, for up to thirteen years, then relinquish it. It was not uncommon for a timber claim to be taken up and relinquished five or six times before the land was legally owned. This meant that extensive areas in newly settled counties lay unoccupied and uncultivated for many years. Like the Preemption Act, the Timber Culture Act was repealed in 1891 because of its manifest abuses, but for two decades timber claims were the preferred way of holding land without cost on the edge of the frontier.⁴⁹

Mobility, both geographical and occupational, remained a way of life on the outskirts of American settlement. The Kansas historian James Malin, who studied the Great Plains frontier in greater detail, and with deeper insights, than anyone, found that only 43 percent of the farmers in the central Kansas counties of Dickinson and Saline in 1865 were still there in 1870. Whether because of speculative intent, failure, or, indeed, success (they proved up, sold out, and moved on), few homesteaders stayed put. Malin's studies led him to believe that settlers who intended to invest a lifetime in a place were "virtually non-existent."⁵⁰ This was only a small exaggeration.

Even Jefferson Jenkins, the woodcutting lawyer from Doniphan County, observed this frontier process from the inside. In 1870 he became the receiver at a new land office at Concordia, Kansas, a three-cabin town on the Republican River in Cloud County. This was the headquarters for the Republican Land District, which had jurisdiction all the way to the Colorado line.

Jenkins found himself in the middle of a land rush. Thousands of settlers, mainly from the Midwest and predominantly men, were moving up the Solomon and Republican River valleys, ahead of the railroads, but no doubt in anticipation of them. It was difficult country to cross. Jen-

kings himself, on his way to his new post, had to lead his horses one by one across a plank over an incised creek, then disassemble his wagon and carry the pieces to the other side for reconstruction.

The land office opened for business on January 16, 1871. Settlers thronged outside; one particularly determined man had sat with his hand on the doorknob all night long. Lawyers and land agents worked the crowd, selling previous relinquishments or setting up schemes for new ones. Jenkins recorded 180 homesteads and 180 preemptions on his first day on the job.

When the initial rush subsided, Jenkins had time to ruminate about the myth of the Great American Desert. He recalled that in his school days, the Great Plains had been “laid down on the map as a desert waste.” But now, he proposed, with the land filling up with settlers who were making their own climate, the Great American Desert had been exposed as a fraud. “It was a mystery to all,” Jenkins wrote, “how anyone could have believed in it.”⁵¹

Then, in 1874, the Great American Desert staged a comeback, bringing to an end the first Great Plains boom. The climate reversals began with the hard winter of 1871–72, which was the worst on record for Kansas and Nebraska. The winter of 1873–74 was not much better. Texas cattle, left to fend for themselves on the snow-covered range, died in immense numbers, adding a new layer of bleaching bones to the prairie. This coincided with a deep national (and international) depression brought on in the United States by speculative railroad building, various economic reversals, and the collapse of Jay Cooke and Company, a major banking establishment. Land values and crop prices plummeted. Settlers on the frontier, with nothing to fall back on, were hit particularly hard.⁵²

The drought struck in July of 1874, following a warm, wet spring that had promised much for the crops. There was no rain for the rest of the very hot summer. Then, beginning in the middle of July, grasshoppers came down (to use the words of the Kansas State Board of Agriculture) “in numbers so immense as to hide the sun.”⁵³

The grasshoppers, or, more accurately, Rocky Mountain locusts, came

in from the northwest, riding the hot winds. The destruction was most severe in the far-western counties that had received their first settlers after 1870. Just as the settlers' corn was coming into ear, the hosts of grasshoppers descended and within minutes reduced the green fields to "stumpy stalks." In Norton County, Kansas, for example, the crops were "entirely destroyed," and three-quarters of the 750 settlers were declared "destitute." To the south in Osborne County, corn, garden vegetables, fruit, hedges, and trees were eaten, and one-quarter of the settlers gave up and headed back to the "older states." The abjectly poor stayed because they did not have the means to leave. Corn was also a "total failure" in Phillips County where, in the absence of feed, settlers were shooting their hogs. Reports from other western counties in Kansas and Nebraska repeated the same story of destruction, destitution, and out-migration. The degree of destruction decreased to the east, in part because the harvests there were substantially completed by the time the grasshoppers arrived in late August.

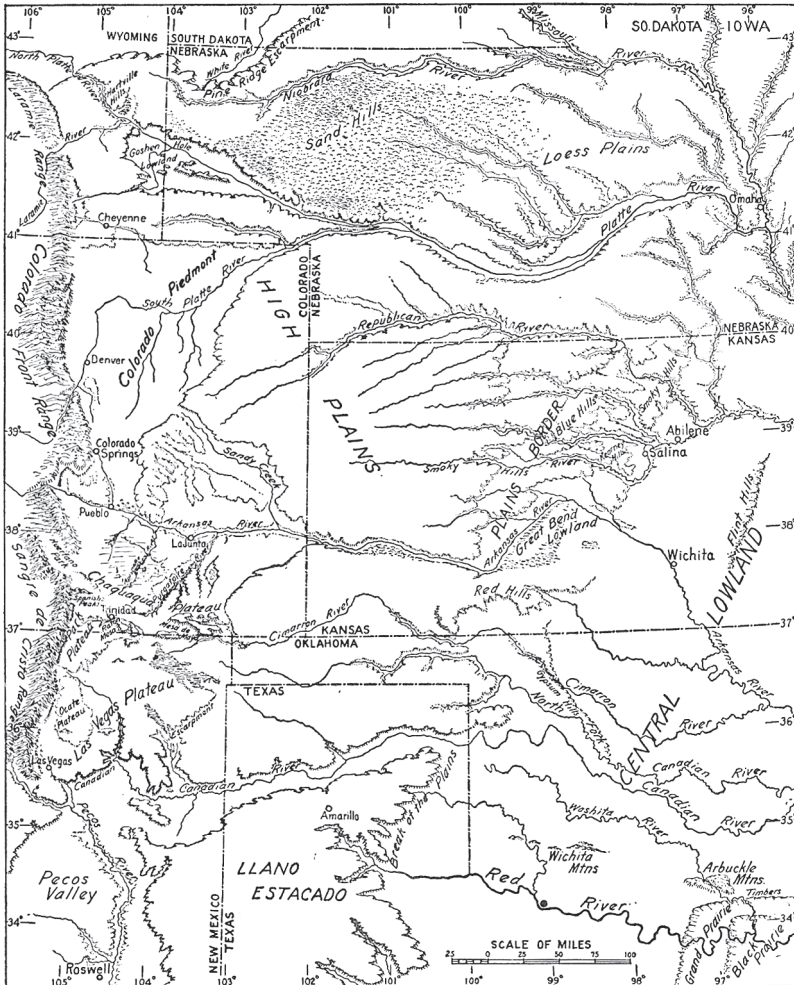
Altogether, in twenty-four counties in western Kansas, 12,029 settlers were classified by the state as destitute (from a total of 66,104). The State of Kansas raised seventy-three thousand dollars in bonds to provide wheat to see the settlers through the following winter and seed to get them started again in spring. But each county was left alone to approve additional bonds to aid the destitute, and almost all of them refused to do so because they were unwilling to tax themselves. "Few are able to pay their present taxes," wrote the editor of the *Jewell County Diamond*. He added, "For the county to provide for the needy will put such a burden on it that many of our best citizens will leave rather than bear it." The needy fell back on charity, swallowing their pride as they accepted U.S. Army surplus uniforms and gathered at railroad stations to receive the corn, flour, potatoes, coal, and clothing that were shipped in from the East.

The Rocky Mountain locusts returned in 1875 and 1876 (and multiplied in place from the overwintering eggs and nymphs) but in decreasing numbers. They would come back in subsequent dry years like Biblical plagues, until their extinction in about 1902.⁵⁴ The rains returned too,

and by 1875 agricultural expansion and frontier population growth had resumed. Quickly, the disasters of 1874 were cast as an aberration, rather than a character trait. In a report to the State Board of Agriculture, J. A. Anderson, president of the Kansas State Agricultural College at Manhattan, argued that it was the lack of a climate record that had made settlers overreact to the 1874 drought, because they assumed that this was the rule rather than a rare exception. On the contrary, he continued, the line of agriculture and increasing rainfall was extending west, and (again, these familiar words) the “Great American Desert Theory” was getting “very thin.”⁵⁵ With optimism on the rebound, and with railroad construction recommencing as the economy improved in 1877, the stage was set for the next advance.

Onto the High Plains, 1875–1885

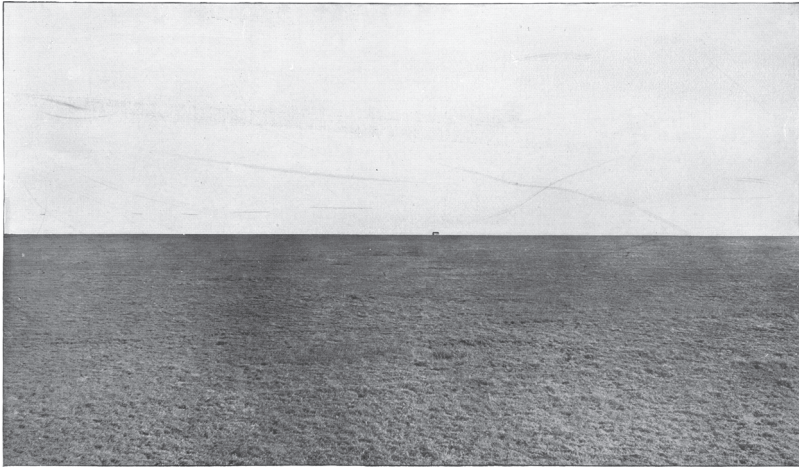
In this new boom, settlers moved west along the rivers and railroads, through the dissected country of the Plains border, and out onto the sprawling grasslands of the High Plains (fig. 4). The High Plains, reaching from about the 100th meridian in Kansas and Nebraska into eastern Colorado (and north to South Dakota and south into the Texas Panhandle), are the remnant of a depositional surface that once extended from the Rocky Mountains to the Missouri River. This wide apron of sand, gravel, silt, and clay was laid down over millions of years by streams carrying eroded material from the Rockies. The surface of the High Plains — geologist Nevin Fenneman, in his influential *Physiography of the Western United States* (1931), called it “a vast area of phenomenal flatness” — was resistant to erosion because of its thick carpet of tightly woven sod and the presence of a hard deposit of calcium carbonate called caprock, which lies between ten and thirty feet of the surface. Sustained erosion could only take place at the eastern and western edges of this plateau, as rivers lengthened headward, cutting into the exposed sides. Beneath the surface, at varying depths, sits the reservoir of the Ogallala Aquifer, its water moving slowly to the east through the open sands and gravels, and emerging as springs along the sides of valleys where it encounters hard layers of



4. The High Plains. Source: Fenneman, *Physiography of the Western United States*, 6.

rock or impervious deposits of clay. These springs also produce erosion and dissection sapping back into the valley walls.⁵⁶

This is very different country from relatively humid and verdant eastern Nebraska and Kansas. Rainfall decreases to about twenty inches a year at the 100th meridian, and to a scant fifteen inches annually at the Colorado state line. Departures of more than 50 percent from average



5. The flat uplands. Source: Johnson, *The High Plains and Their Utilization*, 610.

can be expected in any year; droughts are more frequent and more severe. Moreover, rainfall is localized, often delivered in torrential thunderstorms, so that one farmer's good fortune is another farmer's failure. On the flat interfluves, surface water is absent except for numerous shallow depressions, which hold only ephemeral water after a snowmelt or downpour. Creeks run dry in the summer, or, at least, run silently beneath their sandy beds. Beyond the main river valleys, the country encountered by the settlers was treeless, a level shortgrass prairie upland extending to the distant rim of the horizon, hanging low in the sky (fig.5).

The Kansas State Board of Agriculture, ever an unabashed booster for the state, claimed in its 1886 report that the drought of that year was the first serious one since 1874. The report characterized the period from 1875 to 1880 as an "uninterrupted success," and while it conceded that the 1881 harvest was "a little below expectations," overall the years from 1880 to 1885 were deemed to be an age of "general prosperity."⁵⁷ But, in truth, in the west at least, the rainfall over the decade was less reliable than reported, and settlement ebbed and flowed accordingly.

The second half of the 1870s was a time of at least adequate precipitation. In 1876, there was a "large and well-distributed rainfall which resulted in immense crops of wheat and corn" in all parts of Kansas. And

the 1878 growing season was “almost ideal,” with “record crops.” The introduction into Marion County in 1874 (by Mennonites from southern Russia) of a winter-hardy and drought-withstanding winter wheat called Turkey Red, and its subsequent diffusion from farmer to farmer, was a successful adaptation of farming to the central Great Plains. An impressive showing at Philadelphia’s Centennial Exposition in 1876—according to reports, the Kansas Building, brimming with the agricultural bounty of the state, was the “best and largest” of all the displays—also drew favorable attention, and dispelled any lingering misapprehensions that this was the Great American Desert.⁵⁸

Many counties in the new frontier zone of western Kansas and southwestern Nebraska (fig. 2) experienced their first substantial burst of settlement in the wet and productive years of 1877 and 1878 (although some had been briefly settled in the early 1870s, before the reversals of 1873–74). James Malin, writing about Edwards County (where he had been raised), noted that the first wave of settlers moved into the sandy country south of the Arkansas River in 1877. Trego County, to the northwest, was settled in a rush in 1877–78 that took all the available public lands. To the northwest again, Hitchcock County, in southwestern Nebraska, was also the scene of a settlers’ land rush that drove the cattlemen from the area.⁵⁹

Then, beginning in September of 1879, the rains stopped, and the entire frontier zone experienced a “drouth of unparalleled duration.” Much of Edwards County reverted to open range. In Trego County, crops were a “total failure” in 1880. The county seat, Wakeeney, which had been “jammed with people” in the spring of 1879, began emptying out, and was still “going downhill” in 1883. Hitchcock County was stripped of settlers in 1880 and 1881. The cattlemen came back, leaving one settler to ponder “whether or not the raising of grain will ever pay the settlers of the county.”⁶⁰

The situation reversed again in 1883–85, which were the wettest years on the short record. A new wave of settlers—in some places, by this time, the third—swept into the frontier zone. By 1885 only the western tiers of counties in Kansas and Nebraska and the counties of eastern Colora-

do remained unorganized and had population densities of less than two persons a square mile (fig.2).

The map of county population densities, however, hides the linearity of the settlement geography. In the far north, the Platte River valley was the axis of expansion, and North Platte, with a population of 2,540 in 1882, was the largest town in the entire frontier zone. Its numerous frame and brick buildings, and a courthouse that cost twenty-five thousand dollars, proclaimed success. Four hundred workers were employed in its massive railroad repair shops and spectacular forty-stall roundhouse. The town remained an important supply and shipment point for cattlemen and sheep herders who still ranged over the extensive unclaimed uplands to the north and south. And as the land office for Nebraska's western land district, North Platte was also a mandatory stopover to register a homestead or buy a city lot and the last outfitting center for settlers fanning out into the surrounding countryside.⁶¹

South of the Platte, the land climbs over steep eroded bluffs to a rolling divide that extends for fifty to one hundred miles, before dropping in a series of terraces to the lush Republican River valley. Until 1883 this shortgrass prairie—prime grazing land because the buffalo and grama grasses cured as they dried and preserved their nutritional value over the winter—remained in the hands of the cattlemen and therefore thinly settled. Frontier County, in southwestern Nebraska, had only one town, Stockville, a crude assemblage of shacks, a single store, and about sixty people. Stockville served as a focal point for the cattlemen and a place to keep the county records (in a room at the back of the store). Gosper, the county to the east, had no towns at all, just a few isolated country stores and post offices. Supplies had to be hauled from distant Plum Creek on the Union Pacific.⁶²

The area's geography was transformed from 1879 to 1882 as the Burlington and Missouri Railroad was built along the north bank of the Republican. Beginning in Bloomington in December 1879, the tracks were extended through Alma, Arapahoe, and Indianola in 1880; Culbertson in the fall of 1881; Benkelman in the spring of 1882; then on into Akron,

Colorado, and eventually Denver. The completion of the line not only connected places to the Missouri valley gateway towns (specifically Plattsmouth, the eastern terminus), but also opened up the Denver market for Republican valley farmers.

The settlers kept pace with the railroad as it advanced, creating an unfurling landscape of farms and competing towns. After 1883 settlers moved up the north bank tributaries of the Republican, spilling out onto the uplands and forcing the cattlemen to seek more remote refuges to the west. Speculation by settlers and cattlemen alike, aimed at securing the water sources (and therefore the range between), was rife and evidenced by the preponderance of timber claims that were used to hold the land temporarily, until relinquished and reentered as preemptions or homesteads. According to the General Land Office, one small creek running into the Republican near McCook was monopolized by a single cattle company from its source to its mouth. The company, whose owners were merchants in Culbertson, had paid its employees to enter claims all along the creek.⁶³

Town-building ventures proliferated along the Burlington and Missouri tracks. The railroad designated a place for a town, then its affiliated Lincoln Land Company bought the site and sold the railroad a hundred-foot-wide right-of-way through the prospective town for one dollar. The land company set about selling the business and residential lots, mainly to native-born Americans, who were preferred for the towns as opposed to Europeans, who were actively sought as rural settlers because, as John Hudson wrote, “They would work harder, complain less, and produce more than anyone else.” Townsites in the center of a county were particularly valued because that location increased the chances of being selected as the county seat, a near-guarantee of long-term success. County seat rivalries often simmered for decades, as in Furnas County, where Beaver City and Arapahoe engaged in a competition that began in 1873 and was not decided (in Beaver City’s favor) until 1888.⁶⁴

The railroad towns of the Republican River valley, as elsewhere on the Great Plains, were spaced regularly along the tracks, about ten miles

apart, each controlling the trade of a section of the countryside. The form of the railroad towns (again, as elsewhere on the Plains) varied from the symmetrical, where the railroad bisected the town and divided the main street along its entire length (for example, Republican City, Harlan County), to the orthogonal, where the tracks crossed the town's streets at an angle, so that there was only one crossing of main street (Arapahoe, Furnas County), to the final iteration, the T-town, where the tracks were at the edge of the site, along with the standardized depot, grain elevator, and lumberyard, and the main street formed the stem of the T (as at Indianola and McCook in Red Willow County). Whatever the specific morphology, the main streets, with their false storefronts looking like stage sets from a western, were crammed with businesses, general stores for sure, but also specialty shops, from boot makers to milliners. In 1883, for example, Indianola, with a population of 350, had fifty diverse businesses providing goods and services to its own piece of the countryside.⁶⁵

Settlers also moved south from the Republican valley into northern Kansas. The nearest railroad to the south was the Kansas Pacific, sixty to eighty miles distant over a flat prairie that was cut into at intervals by broken land along the barely wooded creeks. The tracks of the Missouri Pacific were laid along the Solomon River to Lenora, Norton County, in 1882, but the company ran out of money and that's as far as they got. In 1885, as in 1872, only the Kansas Pacific and the Atchison, Topeka, and Santa Fe crossed all the way into Colorado. All of southwestern Kansas below the Arkansas valley and far-northwestern Kansas above the Kansas Pacific, as well as much of the flat country in-between, was without a railroad, and, therefore, still in the hands of the cattlemen.

The population origins in the northern two tiers of counties in western Kansas reflect the proximity to Nebraska. For the most part, settlers there had not been born in Nebraska, but, for many, Nebraska had been their last place of residence. Decatur County, for example, was settled mainly by Americans who had been born in Iowa and Illinois, as well as elsewhere in Kansas. But Nebraska was second only to Iowa as their previous place of residence. The situation was similar in Sheridan County,

just to the south. But in counties three tiers down from the Nebraska line, the Nebraska contingent was much smaller. These counties were within reach of the Kansas Pacific, which channeled settlers west from Iowa, Illinois, Ohio, New York, and Pennsylvania, as well as eastern Kansas. South again to the Arkansas valley and the Atchison, Topeka, and Santa Fe, and the isolated country beyond, and the Iowa and Nebraska components of the population dwindled to insignificance, to be replaced by settlers who had been born in, or who had migrated from, Missouri and other parts of the upland South. These latitudinal alignments were extended after 1885 into the Rainbelt. African Americans, “exodusters” seeking a new Canaan, also moved out of the South after 1877, most famously to the town of Nicodemus in Graham County.⁶⁶

The foreign-born segment of the population was patchy in its distribution, but it was generally less than 10 or 15 percent of the total in most western Kansas counties. Only in a few cases, such as Ellis County, where 1,213 settlers had come directly from Russia by 1885, did foreign-born settlers make up more than one-quarter of the total. At a local scale, however, in some townships along the Kansas Pacific, which actively recruited Europeans for its land grant, more than one-half of the population was foreign-born. It has traditionally been held that foreign-born settlers were less mobile than native-born Americans, that, to use James Malin’s words, they “loved the soil for its own sake.” But one detailed study of three immigrant groups in central Kansas found no significant difference in population turnover.⁶⁷

The settlers moving into far-western Kansas and Nebraska after 1880 continued to be encouraged by the persistent mythology, kept alive by diverse experts and railroad and state boosters, that they were changing the climate for the better. Although, as the climate record grew, there was an opposing school of thought that settlers should adapt to the semiarid environment, by growing drought-resistant sorghum, for example, the prevailing theory was still that environment was adapting to the settlers.⁶⁸

Samuel Aughey remained an apostle of beneficial, human-induced climate change, writing in 1880 that “as pioneers take up government

lands and encroach on the Plains, the line of abundant rainfall also moves west.” It was only a matter of time, Aughey reasoned, before the “sufficiently and increasingly moist region will encroach on the dry region until it is entirely crowded out of the state.” Aughey now downplayed the role of tree planting, noting that rainfall increases had occurred before many trees had been planted. The agency was clearly, in Aughey’s mind, “the great increase in the absorptive power of the soil, wrought by cultivation.” Instead of running off the impervious prairie sod into creeks and rivers and away, rain penetrated the exposed cultivated soil, then slowly returned moisture to the atmosphere until, saturated, it yielded more rain. “Anyone can see,” Aughey insisted, “that this must make an enormous difference in the moisture of the atmosphere and on rainfall.”⁶⁹

Meanwhile, in Kansas, the other early evangelist of “Rainfall Follows the Plow,” Richard Elliott, had been fired by the Kansas Pacific when the 1873–74 drought cast serious doubt on the credibility of his theories. But in both Kansas and Nebraska, railroad companies, agricultural publications, university professors, and local newspapers continued to promote the seductive theory. And always the Great American Desert was the blighted image to be countered. In 1883, for example, the *Nebraska State Gazetteer and Business Directory* triumphantly reported that Nebraska had “changed its ancient character — under which it figured so long — of the Great American Desert.”⁷⁰

Yet some commentaries in the Kansas State Board of Agriculture reports in the 1880s were becoming more reserved and reasoned than they had been previously, probably due to the irrefutable record of recent droughts, as in 1873–74 and 1879–80. In the 1885–86 report, for example, state meteorologist J. T. Lovewell referred to the “general impression” that Kansas was becoming wetter. But he cautioned that rainfall records had only recently been kept, and were “as yet inadequate to a complete answer.” Lovewell agreed that cultivated soil retained moisture better than unturned prairie, and he offered as evidence formerly dry streambeds that now ran with water. What Lovewell was advocating was a more sustained use of the stored water in the soil; he made no claims of

an actual increase in the total amount. He also doubted that trees were contributing to increased rainfall, though he did acknowledge their local effects on microclimate.⁷¹

Although the beguiling theories of increasing rainfall were not dealt a serious blow until the drought of the 1890s, Lovewell's report at least subjected them to scrutiny and emphasized fact rather than fancy. The tree-planting version was becoming less persuasive, in part because so few trees were sprouting on speculative timber claims. And the plow theory was slowly being refined from the myth of increased rainfall to practical implications of preserving moisture in the soil, a transition that would produce the more rational, but still overblown, dryland farming campaign of Hardy Webster Campbell after 1900.

Still, geologist Willard Johnson, working through the Rainbelt in the late 1890s and talking with farmers who had managed to persist, was convinced that settlers did indeed believe that "extensive and persistent cultivation alone, by regulating evaporation, would bring them an equable and humid climate." To believe this was almost a matter of necessity for poor people with few options in life: "The hope had its origin," Johnson wrote, "in the pressing need for another ample expansion of the agricultural area." In Johnson's opinion, advertisement and promotion by railroad companies, town building companies, and agricultural organizations "prolonged and swelled" the boom, but its main cause was the "exceptionally heavy rains" from 1883–85, which seemed to confirm that rainfall was indeed increasing. Moreover, the fertile appearance of the land, which was covered with a "universal green" in spring, suggested a fine soil for wheat. From the start, Johnson wrote, the success of the "agricultural experiment" in the Rainbelt was "taken to be assured."⁷² It would take a decade of adversity to persuade the settlers that they had been mistaken.