



Zhang Guoxiong (Wuyi University, China) standing at the spot in Taishan from which every Chinese worker from Guangdong departed for the journey to the US.

Photo: Shelley Fisher Fishkin

*The Chinese and the Iron Road*

*Journal of Transnational American Studies 10.2 (Winter/Spring 2019–20) Forward*



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A S I A N   A M E R I C A

*A series edited by Gordon H. Chang*



Central Pacific Railroad Line

# The Chinese and the Iron Road

BUILDING THE  
TRANSCONTINENTAL  
RAILROAD

EDITED BY

*Gordon H. Chang and Shelley Fisher Fishkin,  
with Hilton Obenzinger and Roland Hsu*

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## Note on Romanization

It is a challenge to standardize the romanization of Chinese names. We have attempted to use the pinyin system throughout the book. In certain chapters, where appropriate, the names of persons, institutions, and places are romanized in the way that they most frequently appear in historical Western-language documents.



*The Chinese and the Iron Road*



## Introduction

GORDON H. CHANG,  
SHELLEY FISHER FISHKIN,  
AND HILTON OBENZINGER

The Chinese railroad workers who built America's first transcontinental railroad and then went on to help build scores of other railroads in North America have been largely invisible on both sides of the Pacific. In *The Chinese and the Iron Road*, scholars based in North America and Asia who are part of Stanford's Chinese Railroad Workers in North America Project deploy transnational perspectives drawn from a wide range of disciplines to explore the many unanswered questions that we have: Who were these workers? Why did they come? What did they experience? How did they live? What were their spiritual beliefs? What did they do after the railroad was completed? What is their place in cultural memory? *The Chinese and the Iron Road* aims to recover this neglected chapter of the past more fully than ever before.



In 1862 with the passage of the Pacific Railway Act, the Central Pacific Railroad Company (CPRR) was chartered to build the western portion of what became known as the first transcontinental railroad, east from Sacramento. Work began in the fall of 1863. The eastern portion of the line, built by the Union Pacific Railroad Company (UPRR), required laying tracks across vast flat expanses of prairie, but the western portion of the line required cutting through the Sierra Nevada—chipping and blasting deep rock cuts, dumping tons of rocks for fills, carving fifteen separate tunnels through long stretches of solid granite, and constructing trestles across deep canyons. At first, most of the workers on both lines were of European descent, especially Irish. But by

2      *Introduction*

the middle of 1864 white workers on the CPRR were abandoning the back-breaking work of railroad building in droves to seek their fortunes elsewhere, including the silver mines of the Comstock Lode. The Central Pacific's president, Leland Stanford, and his fellow owners—Collis Huntington, Charles Crocker, and Mark Hopkins (they called themselves the "Associates" but are often referred to as the Big Four)—faced a crisis: work had stalled with less than fifty miles of the railroad completed. Many at the time thought that the CPRR would not get through the Sierra Nevada, let alone out of California. The dire manpower shortage jeopardized the entire enterprise.

In early 1864 the Central Pacific had decided to try a few dozen Chinese workers from nearby mining communities. By late 1865 Chinese workers composed the vast majority of the labor force on the Central Pacific and numbered in the thousands. As Leland Stanford reported in a letter to US President Andrew Johnson that year, "Without them it would be impossible to complete the western portion of this great national enterprise, within the time required by the Acts of Congress."<sup>1</sup>

Despite their superlative efficiency, endurance, intelligence, and dependability, the Chinese worked longer hours for less pay than their white peers. Historians estimate that they cost the company between one-half and two-thirds of what white workers cost.<sup>2</sup> The line was completed on May 10, 1869, at Promontory Summit, Utah, when Stanford swung his mallet to drive the famous golden spike, setting off a message on the telegraph that went coast to coast: "DONE." The telegraph message launched festivities in cities throughout the country, making the railroad's completion the first national mass media event.<sup>3</sup>

The labor of Chinese workers, who eventually numbered between ten thousand and fifteen thousand at the highest point (and perhaps up to twenty thousand in total over time) made it possible to cross the country in a matter of days instead of months, paved the way for new waves of settlers to come out west, and provided a much less costly way to transport goods across the continent. Their work helped speed America's entry onto the world scene as a modern nation that connected the Atlantic and Pacific Oceans. Their labor also created vast wealth for the CPRR's four principals, including the fortune with which Leland Stanford would found Stanford University some two decades after the railroad's completion. But despite the importance of their work, the Chinese workers themselves are a shadowy presence in much of the written history of the transcontinental railroad.

That many Chinese workers labored on the rail line across the United States is part of American lore, but other than a sentence or paragraph or two in many accounts, little can be found about their actual experiences in either popular writing or academic scholarship. They are given no personality and are presented largely as interchangeable objects acted upon by forces beyond their control. They are not agents of history. The given interpretation of the construction and completion of the transcontinental line is therefore immensely deficient and one-sided. It is usually told as a story of national triumph and achievement, and as the culmination of “manifest destiny,” linking the two coasts of North America. It is hailed as a great step in healing the divisive wounds of the Civil War. But the contributions of the Chinese railroad workers, if noted at all, tend to be overshadowed by attention to the Big Four, and are often omitted altogether. These lacunae are in large part a result of the long neglect of the historical role of racial minorities in American history. Yet they also reflect the fact that the recovery of the history of Chinese railroad workers is an immense challenge: there is no extant letter, diary, memoir, or even oral history that tells us something about their lived experience from their point of view. To this day, not one piece of textual evidence from them offering even a glimpse into their experiences has been located. With few exceptions, received histories carry not a single name of a Chinese railroad worker. Given historians’ reliance on the written document, it is no wonder that the Chinese railroad workers have remained largely indistinct, a shadowy mass of figures hovering around the edges of our histories but never at the center of the story themselves.<sup>4</sup>

The Chinese Railroad Workers in North America Project at Stanford, from which this book originates, began in 2012 to address this void in historical understanding. It was the first comprehensive effort to recover and interpret the work of the Chinese railroad workers and became the largest effort to study any aspect of nineteenth-century Chinese American history generally. The project’s objective was to try to recover as much as possible the history of the lived experience of the Chinese workers themselves. Eventually, more than one hundred scholars in North America and Asia from a wide variety of disciplines, including American studies, anthropology, archaeology, cultural and literary studies, heritage studies, and history, collaborated to locate and study as much primary material as possible. We hoped to locate new textual evidence, in English, Chinese, and other languages, but we understood early in the project that creative intellectual methodologies would be necessary

to advance our understanding of the lives of these workers. Given that many other able and dedicated researchers had tried and failed for many decades before us to uncover a hidden cache of textual material, we could not assume that mighty efforts and good fortune would lead us to such a trove.

Doing the research has been challenging. Business records, including those from the Central Pacific archives, are incomplete, scattered in different locations, disorganized, and difficult to decipher. The fragmentary payroll sheets that are extant most often list only the “head men,” or labor contractors who provided the actual workers, and not the names of the thousands of workers themselves; and the names that are present are in abbreviated form, not rendered fully or properly. Family oral histories are memories without textual documentation, though some families retain wonderful objects and occasional photographs handed down through the generations from their railroad ancestors.

The lack of textual evidence has been frustrating. Why is there nothing extant? Traditional explanations emphasize the illiteracy of the workers, but we now believe that many were literate, at least at a basic level, that many did send letters and remittances to China, and that many likely kept records and other documentation of their experiences. A writer in *Harper's Bazaar* in 1869 noted that “the Superintendent of the Central Pacific Railroad, after having employed thirteen thousand Chinese, said that he never heard of one who could not read and write in his own language.” And in a letter to the Little Rock, Arkansas, *Morning Republican* in September 1869, another writer asserted, “The large number of Chinamen now in the Pacific states, who all or very nearly all read and write, have sent to China, in private letters, a vast amount of information concerning those states and the United States generally.”<sup>5</sup>

So why do we not have a single letter from one of these workers? Violence and destruction, rather than their lack of schooling, may be better explanations for why we have nothing from them today: the home areas of the workers in China suffered extensive devastation due to social conflict and war in the nineteenth and twentieth centuries, and every Chinese community in America in the mid- to late nineteenth century suffered arson, looting, and other forms of obliteration. These factors are much more likely to be the reason for the lack of documentation. With the absence of reliable and abundant evidence, silence, myth, and lore have become attached to railroad history. The railroad, romanticized and demonized, elicits much emotion and

controversy. We have made an effort to distinguish truth from fiction, even as we honor myth and storytelling as important to understanding the meaning of the Chinese railroad worker experience.

The Chinese Railroad Workers in North America Project has benefited from the digital revolution, which has greatly facilitated our research. An enormous amount of material, including hundreds of newspapers from the nineteenth century, has been digitized, giving us access to an array of sources that previous scholars did not have. Most importantly, the project's interdisciplinary, international, and collaborative approach involving dozens of scholars has produced results far beyond what previous individual efforts were able to yield. The ability to share images, text, comments, and questions electronically greatly facilitated collaboration. The project also benefited from a change in atmosphere: interest in and support for efforts to recover the history of marginalized people have grown significantly.

Archaeologists have over many years collected an enormous amount of material culture that Chinese railroad workers left behind. The Archaeology Network of the Chinese Railroad Workers in North America Project, under the leadership of Stanford archaeologist Barbara Voss, brought scores of scholars together to engage in unprecedented collaboration and in dialogue with scholars from other disciplines. They made fascinating, original contributions that add substantially to what we understand about the daily lives of the workers.

Scholars from other disciplines also made important contributions. Some in the project focused on the literary and cultural production about the workers over the years, visual images and representations, and the stories of workers' descendants in America and China as handed down through families. The project completed almost fifty oral histories with descendants to understand some of the legacies of the railroad workers and what their lives have meant for Chinese Americans. We continue to search for new evidence and materials.

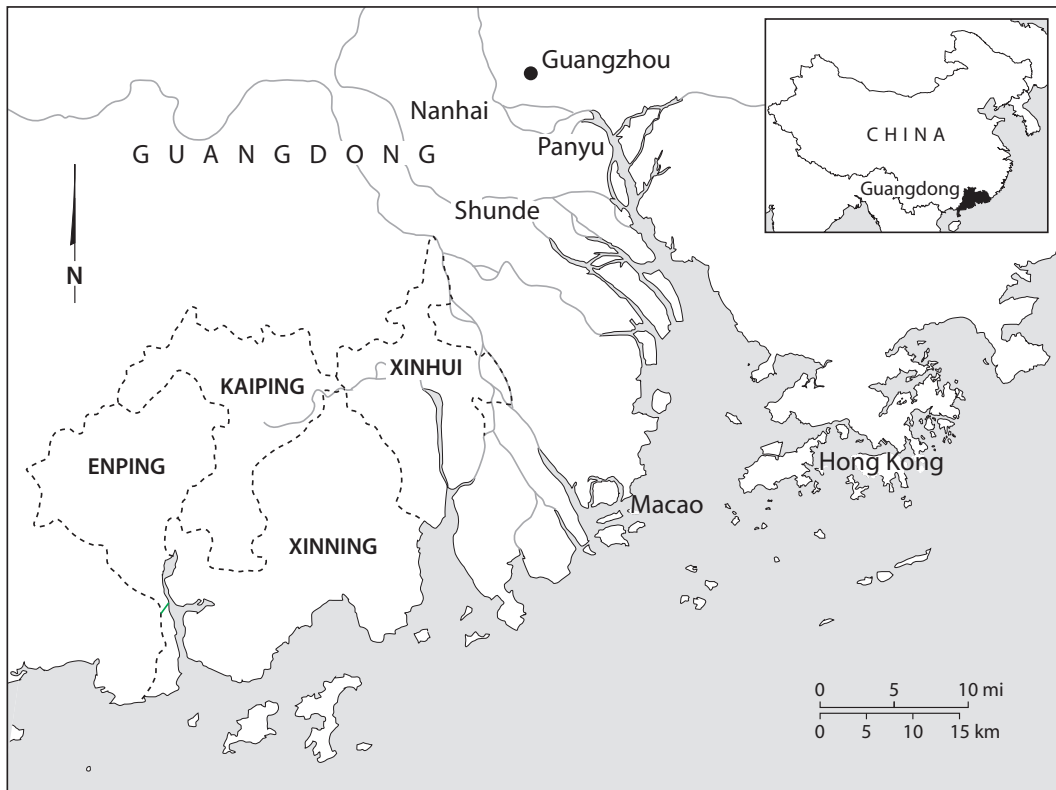
Our effort, however, goes far beyond supplementing the existing narrative, as important as that is. Focusing on the Chinese workers raises basic new scholarly challenges. For one, placing the Chinese in the foreground of the narrative requires us to rethink important contexts and vantage points long dominant in the telling of American history, in particular of the American West. We have stretched the frame of investigation to consider new references, boundaries, and questions. The story of the Chinese railroad workers is necessarily a story of transpacific connections and of the intertwined social,

economic, and political histories of nineteenth-century China and the United States. It is a story of the immense Chinese diaspora and of the overseas Chinese. It is also a story of ethnic America and a foundational experience in Asian American history. These different narratives and interpretive contexts all had to be considered to construct a fuller, richer, and more comprehensive understanding of the history. Consequently, our hope is that the project engages and speaks to many important bodies of knowledge beyond those of “the railroad” alone.

It is important to note that the history of these workers has been neglected not only in American scholarship but in Chinese-language historiography as well. Until recently Chinese scholars have not deeply engaged in what is called in the United States “social history.” Their focus, rather, has been political history. Imperial and official documents form the vast majority of available currently collected archival material in China. The story of “overseas Chinese” occupied a largely marginal position in the national historical narrative. When told, the bitter experience of laborers who ventured overseas was offered mainly as further evidence of the oppression of the Chinese nation during the long “century of humiliation.” Histories of the railroad workers, even those published most recently, draw almost exclusively on American sources used in English-language studies. Our effort has therefore been pioneering in bringing scholars together from the United States, Canada, and Asia to locate new materials and engage in scholarly conversation and collaboration.<sup>6</sup>

The volume in hand is the product of more than six years of concerted individual and collective efforts. Earlier versions of many of the essays included here were first presented in meetings held at Stanford University, Sun Yat-sen University in Guangzhou, and Academia Sinica in Taipei. In addition to this collection of essays, the project is producing digital publications, curricula, exhibitions for the general public, and an open-access digital materials repository hosted by Stanford University Libraries. Although our primary focus is the Chinese workers who built the Central Pacific Railroad, our research expanded to include late nineteenth-century rail lines built in the United States and Canada by the Chinese; in many cases, workers on these later lines were veterans of the Central Pacific.<sup>7</sup>

The following brief narrative of the Chinese railroad workers’ experience is provided to help contextualize this volume’s essays in temporal terms and highlight important issues and controversies in the existing scholarship.



Map of China, Pearl River Delta Region

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Laborers from the Pearl River Delta in the southern part of China began to leave the country in large numbers beginning in the 1830s due to the enormous social dislocation and human suffering caused by war, ethnic conflict, and economic privation. The principal home counties of the migrants were the Siyi, or the counties of Xinning (Taishan), Kaiping, Enping, and Xinhui, located near the city of Guangzhou (Canton). These were largely agricultural areas but with active commercial and urban cultures as well. The migrants who left home for work overseas were almost all males and thought of themselves as workers or fortune seekers who went abroad for temporary work with plans to return to their villages. Few thought of themselves as immigrants transplanting themselves permanently elsewhere. While they were overseas, many sent remittances to support their families, and they did return to a significant degree. Their connections to home were deep and abiding and transformed their home villages, even as their labor helped transform worlds far distant from their origins.

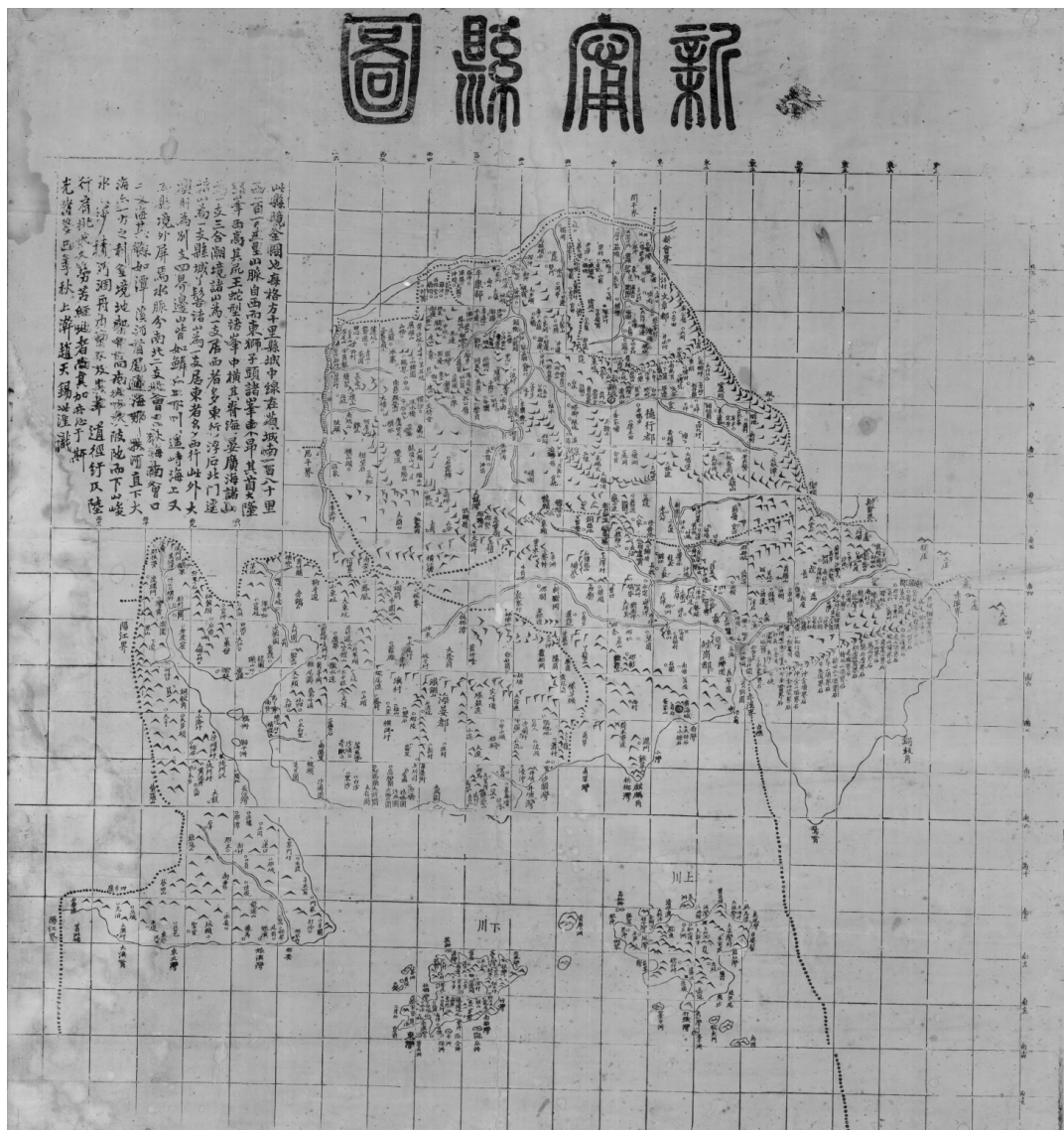


FIGURE 0.1 Map of Xinning (Taishan) region, ca. 1900. U.S. National Archives and Records Administration.

Many of those who traveled to South America and the Caribbean in the 1830s to the 1860s went as indentured labor, as part of the notoriously cruel “coolie trade” characterized by involuntary servitude and mistreatment. Most of those who ventured to North America arrived under different conditions, although they continued to suffer the stigma of being mistakenly seen as “coolies.” California became a key destination for them after the discovery of gold in 1848, and Chinese men arrived by the thousands annually from the 1850s through the 1880s largely as free and independent labor, though often burdened by debt for loans used to pay for their travel. Before 1865 they

labored principally as mine workers, but also as merchants, fishermen, farmers, laundrymen, and domestic workers. Females fared very differently. Though some arrived as independent migrants or as spouses, many were trafficked and enslaved as prostitutes.<sup>8</sup>

Chinese were involved in railroad construction before the first transcontinental railroad in the United States. For example, they worked in railroad construction in Cuba in the late 1840s and in Panama and then elsewhere in South America in the 1850s. They also were employed as railroad labor in California as early as 1858 in the Sacramento area and two years later in San Jose. The railroad also seems to have captured the imaginations of some Chinese early on, as it had for many others: one Chinese resident of the Sacramento area attracted public attention with his construction of a miniature steam locomotive, no more than twenty inches long, with a functioning furnace and pistons, that rode on a miniature track.<sup>9</sup>

The history of the Chinese who worked on building railroads in North America falls roughly into four periods:

#### 1. 1862 TO MID-1865

In 1862 President Abraham Lincoln signed the Pacific Railway Act, authorizing the recently formed Central Pacific Railroad Company to construct the line eastward from Sacramento, California, and chartering the Union Pacific Railroad Company to build westward from Council Bluffs, Iowa, across the Missouri River from Omaha, Nebraska. The Union Pacific relied on European immigrant labor, especially Irish, Civil War veterans, a small number of African Americans, and a contingent of Mormons, as well as others from the eastern part of the country. In subsequent legislation, the federal government provided prodigious financial support to the two companies in the form of subsidies and land grants. Other funds came from personal investments, bonds, and the sale of stock. In January 1863 the president of the CPRR, Leland Stanford, who was also then governor of California, broke ground for the ambitious project at its starting point in Sacramento.

Because of financial, business, and construction problems, the company did not begin work in earnest until October 1863. The CPRR first tried to use Irish immigrants and other white workers, as Charles Crocker later testified to Congress: “[A]ll our people were prejudiced against Chinese labor. . . . [T]here was a disposition not to employ them.” Nonetheless, in January 1864, as payroll

records show, the Central Pacific hired a crew of twenty-one Chinese workers, and more later that year.<sup>10</sup>

In January 1865 James H. Strobridge, the CPRR construction supervisor, placed an advertisement in the *Sacramento Union* and distributed handbills to every post office in the state calling for “5,000 laborers for constant and permanent work; also experienced foremen.”<sup>11</sup> Only a few hundred white workers answered the call, and as Charles Crocker recalled later, the workforce “never went much above 800 white laborers with the shovel and the pick.” In Strobridge’s estimation, the white workers were “unsteady men and unreliable. Some of them would stay a few days, and some would not go to work at all. Some would stay a few days, until pay-day, get a little money, get drunk, and clear out.”<sup>12</sup>

The labor shortage compelled the company to turn to the hiring of Chinese. The idea itself may have come from Charles Crocker’s brother, E. B. Crocker, a California Supreme Court justice and the CPRR’s attorney. James Strobridge initially opposed the idea, believing that Chinese did not have the physical or intellectual capacity to do railroad work. He also feared that whites would not work alongside Chinese. But Crocker convinced him to experiment with a gang of fifty Chinese workers. He later testified, “We tried them on the light work, thinking they would not do for heavy work. Gradually we found that they worked well there, and... put them into the softer cuts, and finally into the rock cuts.”<sup>13</sup> When they proved successful, the company added further numbers, assigning them increasingly difficult tasks. They drew workers first from Auburn and other Sierra Nevada mining towns, as well as from Sacramento and San Francisco. Many had worked and lived in California since the early 1850s. Fifty to sixty thousand Chinese lived in California at that time. In March 1865 the railroad began to arrange with Chinese merchants to recruit workers from China, initiating regular traffic in migrants for the railroad across the Pacific. Handbills from the company circulated around the Pearl River delta advertising the opportunities in California.<sup>14</sup>

By the end of July 1865, new migrants, seeking work on the railroad, began to arrive in San Francisco. The Chinese workforce became the mainstay of the CPRR labor force. As governor of California three years earlier, Leland Stanford had railed against the Chinese as undesirable and degraded, calling them “the dregs” of Asia and vowing to work to prevent their immigration.<sup>15</sup> But Stanford the businessman took a different view. As president of the CPRR he praised them in his report to President Johnson in 1865: “As a class they

are quiet, peaceable, patient, industrious and economical. Ready and apt to learn all the different kinds of work required in railroad building, they soon become as efficient as white laborers. More prudent and economical, they are contented with less wages.” He predicted that the company would soon have fifteen thousand Chinese on its rolls.<sup>16</sup>

Almost the entire CPRR construction workforce was Chinese. They were organized into gangs, led by a “headman” or contractor. Gangs lived together with their own cook and, in many cases, a medical practitioner who attended to illness and injury. Some became specialists in grading, in tunneling, in the use of explosives, in drayage, in masonry, in carpentry, or in track laying. Some brought distinctive labor skills from China; for example, the techniques of masonry they brought from China were used to construct many retaining walls along the railroad route. These structures became famous for their strength and longevity; indeed, many are still standing today. The kind of labor Chinese work crews performed, as well as their ethnic, clan, regional, and political identities, differentiated them.

Sharp ethnic divisions had produced bloody conflict in Guangdong and continued to fester in California. The Punti and Hakka peoples had long histories of animosity toward each other. Guangdong had also been the location of terrible fighting along political lines: some of the Chinese held anti-imperial sentiments, while others were fierce loyalists. But for most non-Chinese, they appeared to be remarkably cohesive and hardworking, ideal laborers for the railroad.<sup>17</sup>

The railroad’s acting chief engineer, Samuel S. Montague, wrote the following in his annual report in 1865 about the Chinese:

Some distrust was at first felt regarding capacity of this class for the service required, but the experiment has proved eminently successful. They are faithful and industrious, and under proper supervision, soon become skillful in the performance of their duties. Many of them are becoming very expert in drilling, blasting, and other departments of rock work.<sup>18</sup>

The Chinese workforce did make remarkable progress in laying the line. They reached Clipper Gap, forty-two miles from Sacramento, on June 10, 1865, and Illinoistown (later known as Colfax), fifty-four miles from Sacramento, on September 4, 1865.<sup>19</sup> In January 1866 Leland Stanford, along with E. H. Miller, the secretary of the CPRR, and Samuel Montague reported to the company’s board of directors on the work of the past year. Although the report

did not mention the Chinese workers by name, it described the enormous role they played and the conditions under which they labored. It must be appreciated, the officers wrote, that the completed work was nothing less than “the most difficult ever yet surmounted by any railroad in the United States, if not in Europe. It has been a herculean task.” “Heavy rock excavations” that should have taken eighteen months to complete had “been pushed through in from four to five months” because of the “great vigor” of the effort.<sup>20</sup>

## 2. MID-1865 TO MID-1867

In the summer of 1865 construction began on a stretch called Cape Horn (named for the treacherous route through the waters around the tip of South America), which took a year to complete. The stretch had to negotiate “a precipitous, rocky bluff” about 1,200 feet high above the American River east of Colfax, California. The roadbed was to be a ledge that snaked around the rock and that required grading, leveling, and clearing of trees, stumps, rocks, and other obstructions along a slope of “about seventy-five degrees, or nearly perpendicular,” as Chief Engineer Samuel Montague described the site.<sup>21</sup>

There are conflicting accounts of how the work was carried out. Some published reports describe Chinese workers hanging over sheer precipices in woven baskets to drill holes in the rock for explosives. Once a worker lit the fuse, he signaled to be drawn up to avoid the blast, knowing that he would lose his life if the basket was not drawn up quickly enough. The powerful image of Chinese laborers perilously hanging off cliffs in baskets to do such hazardous work has captured the imagination of writers and artists ever since.<sup>22</sup> Other sources, however, describe Chinese suspended by ropes tied around a worker’s waist or by the use of bosun’s chairs. Debate has been vigorous. New evidence located by the project supports the claim that Chinese workers used baskets in the construction effort (although not necessarily at Cape Horn).<sup>23</sup>

In the fall of 1865 Chinese workers embarked on the most daunting of all the challenging jobs they faced on the Central Pacific: the building of fifteen tunnels, most of them at high elevations, through the Sierra Nevada. The length of the tunnels totaled 6,213 feet (1,893 meters). The most difficult tunnel was No. 6, the Summit Tunnel, cut through solid granite, 1,695 feet (516 meters) long and 124 feet (38 meters) below the mountain’s surface. Progress was agonizingly slow, with many kegs of black powder used each day. The

recently developed explosive nitroglycerine was tremendously powerful but was highly unstable; too unstable to transport, it was mixed on-site by a chemist—but the risk of accidental explosions always remained high. In order to speed up construction, Chinese work gangs dug a vertical shaft seventy-three feet down into the projected center of the tunnel. Work could then proceed in four directions—at both external faces, and from inside out. Workers were let down into the tunnel and lifted out through the central shaft; debris and rock were hoisted out of the tunnel through the central shaft as well.<sup>24</sup>

The company experimented with workers from different backgrounds. At one point, at Summit Tunnel at Donner Pass, the CPRR tried Cornish miners from England, reportedly the best miners in the world. Crocker set up a competition between them and the Chinese, with the Chinese chipping away at the rock in one direction in the shaft and the Cornish miners working in the opposite direction. The Chinese always won. Crocker reported: “We measured the work every Sunday morning, and the Chinamen without fail always outmeasured the Cornish miners; that is to say, they would cut more rock in a week than the Cornish miners did, and there it was hard work, steady pounding on the rock, bone-labor.”<sup>25</sup>

Work continued on the Summit and other tunnels through two of the worst winters on record. Chinese workers had to help construct miles of snow sheds and retaining walls to protect the line from the fierce winter storms. Snow from raging blizzards blocked tunnel entrances, and avalanches swept away camps of Chinese workers, carrying many to their deaths. Workers lived in caverns hollowed out below the surface in order to continue to work in the tunnels. When weather conditions inhibited construction work, many were furloughed and lived in towns such as Truckee until spring. When they lived along the construction line, they resided in camps and moved along with the work, leaving material evidence of their existence in the wilderness.

How many Chinese died in the construction of the CPRR? This too is a charged controversy, as the numbers estimated by writers range from a low of fifty to perhaps as many as two thousand. Newspapers occasionally ran articles reporting on deaths, but reports during the construction of the line were inconsistent and irregular. Long after the events took place, writers extrapolated the number of deaths by citing reports of the many thousands of pounds of human remains Chinese collected from around the West that were returned to China for final burial. These accounts, and manifests of ships sailing to China, are evidence that thousands, if not tens of thousands,

of Chinese remains made it back to home villages, though the number killed during railroad construction work is impossible to calculate.

The deaths of Chinese railroad workers are most often associated with tragedies during the winter season, when snowslides took many lives. Louis M. Clement, one of the company's main engineers, recalled that "during the winter months there was constant danger from avalanches, and many laborers lost their lives." James Strobridge recounted that the workers had to live and work in tunnels beneath the surface of the immense snowdrifts in the winter. "In many instances," he recalled, "our camps were carried away by snowslides, and men were buried and many of them were not found until the snow melted the next summer." A. P. Partridge, who was on a bridge-building crew, also remembered the treacherous winters, and he too said about the Chinese workers that "a good many were frozen to death" in 1867.<sup>26</sup>

In June 1867 when the company hoped to make rapid progress to make up for lost work during the horrible winter, Chinese workers struck for higher wages and a shorter workday. On June 25 several thousand Chinese in the Sierra Nevada ceased work and stayed in their camps. When they were first hired in 1864, the company paid \$26 a month for a six-day work week, with the Chinese paying for their own food, unlike white workers. Chinese workers were paid less than half the amount white workers were paid. In the spring of 1867, the company raised its wages from \$31 to \$35 a month to try to attract more workers. The striking workers, seeking parity with European American workers, demanded \$40 a month, a work day reduced from eleven to ten hours, and shorter shifts digging in the cramped, dangerous tunnels.<sup>27</sup>

The strikers exhibited remarkable organization and discipline. The workers were spread out over several miles of the line in numerous camps, but they managed to communicate closely with one another and coordinate the work stoppage. It was the largest collective labor action in American history to that point. Over several days, strike discipline held firm. As Crocker would later recall, "If there had been that number of white laborers [on strike] . . . it would have been impossible to control them. But this strike of the Chinese was just like Sunday all along the work. These men stayed in their camps. That is, they would come out and walk around, but not a word was said. No violence was perpetrated along the whole line."<sup>28</sup>

Despite the workers' discipline and nonviolent approach, the strike posed a grave threat to Charles Crocker, Leland Stanford, and the other "Associates" who received government subsidies based on the miles of track laid. "The truth

is they are getting smart,” E. B. Crocker wrote, observing that the Chinese were aware of the scarcity of labor and therefore of their own leverage to bargain. E. B. Crocker and Mark Hopkins considered taking advantage of the newly created Freedmen’s Bureau to hire recently freed slaves as strikebreakers. Hopkins reasoned, “A Negro labor force would tend to keep the Chinese steady, as the Chinese have kept the Irishmen quiet.” The freedmen never arrived on the CPRR line.<sup>29</sup>

Several days into the strike, Charles Crocker cut off food and other supplies. He, Strobridge, the local sheriff, and a contingent of deputized white men confronted leaders of the workers, insisting that there would be no concessions to the strikers and threatening violence to anyone preventing workers from returning to the job. “I stopped the provisions on them,” Crocker later boasted in his testimony to Congress, “stopped the butchers from butchering, and used such coercive measures.” The workers split between those who wanted to continue and those who wanted to end the strike. The strike then ended, and although the company did not concede to the specific demands, they learned that the Chinese could not be taken for granted. Crocker also pledged not to dock the pay of the workers for their action. Work resumed, and pay appears to have improved for many of the Chinese workers over the following months.<sup>30</sup>

The company remained overall dependent on Chinese labor. A California newspaper’s description of them revealed their value to the company and gave a glimpse into their camp life. The Chinese workers were

competent and wonderfully effective because [they are] tireless and unremitting in their industry. . . . They work under the direction of an American foreman. The Chinese board themselves. One of their number is selected in each gang to receive all wages and buy all provisions. They usually pay an American clerk—\$1 a month apiece is usual—to see that each gets all he earned and is charged no more than his share of the living expenses. They are paid from \$30 to \$35 in gold a month, out of which they board themselves. They are credited with having saved about \$20 a month. Their workday is from sunrise to sunset, six days in the week. They spend Sunday washing and mending, gambling and smoking, and frequently, old timers will testify, in shrill-toned quarreling.<sup>31</sup>

Their work ranged from basic unskilled tasks, such as moving earth and snow, to highly skilled tasks, such as blacksmithing, carpentry, and drayage. They were cooks, medical practitioners, masons, and loggers. They cleared the roadbed, laid track, handled explosives, bored tunnels, and constructed

retaining walls. Virtually all work was done by hand, with hand tools. No power tools or power-driven machinery was used in the construction work.

### 3. MID-1867 TO MAY 1869

After breaking through the Summit Tunnel in late 1867, construction pushed east of the Sierra Nevada. On May 1, 1868, the completed line ran from Truckee, California, near Lake Tahoe, to Reno, Nevada; a month later, a remaining gap between Cisco and Truckee was closed, and the line ran continuously from Sacramento to Reno. The first eastbound passenger train from Sacramento arrived in Reno on June 18, 1868.

As construction pressed farther eastward, the need for labor continued to be acute. Workers were still arriving directly from China to join their compatriots, who were pressed to lay track as fast as possible. In the summer of 1868, thousands of men worked in the desert, grading hundreds of miles far ahead of the end of the track. Water and ties had to be hauled by train to the end of the track and then by wagon teams across dry stretches of desert to the advance work gangs. Summer heat could reach 120 degrees Fahrenheit/48.9 degrees Celsius, and many workers collapsed. Water was essential, and out of desperation engineers discovered fresh water from springs inside mountains on the flanks of the railroad line, running pipes and building storage tanks along the route. Charles Crocker authorized a hot-season pay raise for all workers, including the Chinese. The railroad progressed through Nevada so rapidly that large campsites of up to five thousand men would have to move frequently to keep up with the pace of construction.<sup>32</sup>

The railroad ran to Winnemucca, 325 miles from Sacramento, on October 1, 1868, then to Elko on February 8, 1869. Both towns became centers of Chinese life and community in Nevada. In the spring observers could see masses of Chinese workers residing in three sprawling camp cities that together contained 275 tents.<sup>33</sup> As construction neared Promontory Summit, workers laid ten miles and fifty-six feet of track in one day on April 28, 1869. The accomplishment was in response to a \$10,000 wager Charles Crocker made with Thomas Durant of the Union Pacific that his workers were capable of doing what seemed impossible. A squad of eight Irish rail handlers and an army of several thousand Chinese accomplished the feat. In the end 25,800 ties, 3,520 rails (averaging 560 pounds each), 55,080 spikes, 14,050 bolts, and other materials, weighing a total of 4,462,000 pounds, were laid down. The

*San Francisco Bulletin* called the effort “the greatest work in tracklaying ever accomplished or conceived by railroad men.”<sup>34</sup>

On May 10, 1869, the Central Pacific Railroad met the Union Pacific Railroad at Promontory Summit, Utah, completing the Pacific Railway, as it was called, the key element in the first transcontinental railroad across the United States. A joyful ceremony was held with dignitaries from both companies, along with a military unit on its way to the San Francisco Presidio. Only four years earlier the country had been divided by a bloody civil war; the railroad that bound the East Coast to the West was hailed as an emblem of both unity and progress. At the same time, American Indian tribes were decimated, their lands stolen and cultures undermined, particularly during the construction of the Union Pacific Railroad through the Great Plains.

Thousands of Chinese had been central to the construction of the CPRR, but by the time of the ceremony that celebrated this construction accomplishment, almost all of the Chinese and other workers had been either dismissed or moved back west along the line to repair the work, leaving only a few to do the grading, laying of ties, and driving of the last spikes.

In Andrew Russell’s iconic photo of the event at Promontory, *East and West Shaking Hands at Laying Last Rail*, it seems that Chinese do not appear in the crowd (see figure 12.10 in chapter 12). With locomotives from each railroad facing each other, their cowcatchers almost touching, men are lined up on each side to mark the moment as two engineers lean with bottles between the smokestacks for a toast. There may be one or two Chinese in baggy and patched work clothes worn by the workers laying the last track in the scene; yet, oddly, one worker has his back turned to the camera, although no one else stands with his back turned. Next to him there may be another man, similarly dressed, facing the camera, but a white man next to him has his arm extended holding up his hat. People had to hold their poses for a long time to take photos in those days, so it’s odd that this man holds his hat very deliberately to hide the face of the person standing next to him. No one else is the target of a similar gesture or prank. Another photograph by Russell, less famous but most informative, taken minutes before his iconic one shows Chinese workers completing the final work to link the two lines. Eyewitness accounts confirm that it was the Chinese who laid the last rail of the transcontinental railroad.<sup>35</sup>

Although mostly absent from public recognition in 1869, however, Chinese workers were not entirely forgotten. One newspaper reported that, after the ceremonies, Strobridge “invited the Chinese who had been brought over from

Victory [a work camp] for that purpose, to dine at his boarding car. When they entered, all the guests and officers present cheered them as the chosen representatives of the race which have greatly helped to build the road... a tribute they well deserved and which evidently gave them much pleasure." And during the festivities in Sacramento, E. B. Crocker paid tribute specifically to the Chinese in his speech: "I wish to call to your minds that the early completion of this railroad we have built has been in large measure due to that poor, despised class of laborers called the Chinese, to the fidelity and industry they have shown."<sup>36</sup>

#### 4. JUNE 1869 THROUGH 1889

After completion of the Central Pacific, some workers returned to China, where they eventually helped construct railroads there. Others went to work in agriculture, mining, and building levees along the rivers; or they entered domestic service or worked in manufacturing to produce cigars and other products. Some continued to work for the Central Pacific to upgrade the hasty, often makeshift construction, and later to work on maintaining the line. Others went to work on the Union Pacific. Chinese veterans of the Central Pacific, along with additional compatriots newly arrived from China, also helped build scores of other railroads throughout the United States and Canada during this period, a time in which the rail mileage of the country more than tripled. Their work continued well into the twentieth century.<sup>37</sup>

In 1869 the newly founded periodical *Scientific American*, along with dozens of other publications, ran one of the most striking appreciations of the Chinese in an article, "The Chinaman as a Railroad Builder." It reads in part:

It is a significant fact... that at the laying of the last rail on the Pacific Railroad, John Chinaman occupied a prominent position. He it was who commenced, and he it was who finished the great work; and but for his skill and industry, the Central Pacific Railroad might not now have been carried eastward of the Sierras. The experience of this undertaking has proved that the Chinaman is an admirable railroad builder. His labor is cheap, his temper is good, his disposition is docile, his industry is unflagging, his strength and endurance are wonderful, and his mechanical skill is remarkable.

The Chinaman is a born railroad builder, and as such he is destined to be most useful to California, and indeed, to the whole Pacific slope.<sup>38</sup>

After the completion of the line and the noise of the celebrations quieted, however, the erasure of the recognition of the Chinese work on the line in historical understanding began. Judge Nathaniel Bennett, the key speaker at the celebration in San Francisco, at great and ebullient length hailed the “Californians” who built the railroad. They were “composed of the right materials, [and] derived from proper origins,” he said. “In the veins of our people flows the commingled blood of the four greatest nationalities of modern days. The impetuous daring and dash of the French, the philosophical and sturdy spirit of the German, the unflinching solidity of the English, and the light-hearted impetuosity of the Irish, have all contributed each its appropriate share.”<sup>39</sup> The Irish, who composed the bulk of the workers of the UPRR and about 10 percent of those on the CPRR, managed to be part of this blend, but Chinese blood had not commingled in those metaphoric veins.

Journalist Samuel Bowles observed in 1869 in his book *Our New West* that although not all Americans might see the transcontinental railroad’s “rails, or ride in its trains, they will feel its influence, and be more content and richer in their lives. It puts the great sections of the Nation into sympathy and unity; it marries the Atlantic and the Pacific; it destroys disunion. . . . It determines the future of America, as the first nation of the world, in commerce, in government, in intellectual and moral supremacy.” Praising the vision, capital, and engineering skills of the leaders who “built” the transcontinental railroad, Bowles averred that the railroad was a distinctively American achievement, one that was “daring in conception” and “bold in execution beyond any other nation.” Calling the transcontinental railroad “a triumph of the American people,” Bowles declared that “no other people than ours” could have done it.<sup>40</sup>

While many had praised the Chinese for their work ethic and contributions to the country, others attacked the Chinese as racial inferiors and a competitive threat to white working people. Long stigmatized and persecuted in the American West, the Chinese faced even more threats after the completion of the line. A violent, virulent campaign arose to expel them from the country and culminated in 1882 with the passage of the first of many Chinese restriction, and then exclusion, acts that aimed to deny them the possibility of citizenship and even entry into the country. They were deemed social and political undesirables and suffered extreme racist violence, and they were pushed to the margins of public memory and historical scholarship.

On May 10, 1969, US Transportation Secretary John Volpe delivered the

major oration at the centennial commemoration of the joining of the Central Pacific and the Union Pacific at the Golden Spike ceremony at Promontory Summit. In tones that echoed the comments of Judge Bennett and Samuel Bowles a hundred years earlier, he omitted any mention of the Chinese. As a *San Francisco Chronicle* reporter wrote:

Secretary Volpe, the principal orator, succeeded in infuriating the Chinese delegation from San Francisco by wholly ignoring the 12,000 Chinese who helped build the Central Pacific over the Sierra to Promontory.

“Who else but Americans could drill ten tunnels in mountains 30 feet deep in snow?,” asked Volpe, speaking in a flat, nasal Bostonian accent.

“Who else but Americans could chisel through miles of solid granite? Who else but Americans could have laid ten miles of track in 12 hours?”

Sitting in angry silence at the rear of the bunting-draped platform were Philip P. Choy, chairman of the Chinese Historical Society of America, and his colleague from San Francisco, Thomas W. Chinn, founder and executive director of the society, . . . [who] were well aware that none of the Chinese railroad workers were Americans. In fact, foreign-born Chinese were barred for years from becoming Americans.<sup>41</sup>

*The Chinese and the Iron Road* seeks to ensure that the Chinese role in building the transcontinental railroad is never again forgotten or diminished but understood as a major episode in the history of the modern world.<sup>42</sup>

### *Essays in This Volume*

The chapters that compose this volume of scholarship are the product of several years of collaboration, including conferences where preliminary versions were presented. They address many, but certainly not all, major questions and controversies in the history of Chinese railroad workers in North America, especially on the first transcontinental line, that have confronted scholars and the interested public for many years. They reflect the project’s early recognition that recovering this history required taking international and multidisciplinary methodological approaches. We believe that the chapters taken as a collection reveal the rich potential of collaborative and innovative research that goes beyond traditional disciplinary boundaries. We also acknowledge that much more work needs to be done and that important questions about the Chinese workers, such as their relationship with the Irish, the business and

economic implications of their work, their social organization and work systems, and the legacies of their experiences on the line, remain to be addressed more fully.

The volume begins in part 1 with chapter 1 from Gordon H. Chang and chapter 2 from Evelyn Hu-Dehart that place Chinese railroad workers' history in global and transnational perspectives. The workers' experiences were never bounded by nation but were inextricably linked to the histories of a score of countries and regions. Moreover, the significance of these experiences goes far beyond what is usually included in a national narrative, whether it be that of the United States or China. The railroad workers were part and parcel of an immense diasporic movement out of southern China, and their experience is intimately linked to questions of ancestral homeland, social identity, and international systems of labor migration. A comparative, transnational approach also helps address the basic and elusive challenge of identifying those who came to work on the railroad and their social backgrounds.

In part 2 we explore the social, cultural, family, and economic ties that bound the workers closely to their ancestral villages and shaped their behavior in a myriad of ways. Through their return migration and remittances, the workers also dramatically influenced the physical and social realities of their villages in profound and lasting ways. The southern China villages from which the workers came are still known today as "railroad villages." Essays by scholars from China—chapter 3 by Zhang Guoxiong, chapter 4 by Yuan Ding, and chapter 5 by Liu Jin—examine the cultural and economic dimensions of these home village ties. Working with a far from robust evidentiary base, each scholar creatively examines rare evidence to identify specific features of these ties and considers their significance from regional and national perspectives. Few Chinese females were among the railroad workers in North America, but the women's strong familial and spousal ties to the men who traveled overseas are an integral part of the story, as these chapters demonstrate.

The study of the material culture, and even physical remains, of the railroad workers has provided substantial insights into the workers' lived experience and is the subject of part 3. Although we have no texts from their own hands, the railroad workers left behind tens of thousands of objects that are invaluable sources of information. Barbara Voss, the director of the Archaeology Network of the project, explicates the methodologies of archaeology in the context of our project and the meanings archaeologists are gleaning from the found material. Until now, historical accounts of the railroad workers have not

considered the evidence located and interpreted by archaeologists.<sup>43</sup> Chapters 6 and 7 by Voss, chapter 8 by Kelly J. Dixon, and chapter 9 by J. Ryan Kennedy, Sarah Heffner, Virginia Popper, Ryan P. Harrod, and John J. Crandall provide fascinating insight into the lives of the workers as actually lived based on the material culture that has been assembled from their work sites and camps along railroad lines in North America. These chapters help us understand their relationship to their physical environments, the textures and patterns of daily existence, their foodways and health maintenance, their leisure activities, their death and burial customs, and more.

Kathryn Gin Lum in chapter 10 and Hsinya Huang in chapter 11 consider other important dimensions of lived experience. Lum studies the religious, or spiritual, dimension that occupied a preeminent place in Chinese life, as well as how non-Chinese in America viewed Chinese practices. The Chinese held closely to their traditional beliefs, being far from home in a fraught environment. The Chinese also encountered Native Americans, groups often linked to them in the minds of many Americans as similar nonwhite, heathen others. Huang explores actual connections between the Chinese and the Native peoples they encountered, an important social interaction that earlier scholarship also neglected.

Denise Khor in chapter 12 and Greg Robinson in chapter 13 explore contemporaneous representations of railroad workers in photography and travelogue in fresh ways. Khor studies the rich yet elusive history of photographic imagery of the railroad and the Chinese both in and out of the frame. She deepens our understanding of these images and what they can say, but also what they omit. Though the Chinese were never the principal subjects of any of the photography, the images nevertheless provide intriguing visual perspective on the people under study and their work environment. Robinson examines previously ignored European eyewitness descriptions of the Pacific Railway and Chinese work on the line. From a vantage point uninflected by American historical and racial sensibilities, these visitors sometimes saw the Chinese in ways that were surprisingly different from those of the whites here. Robinson opens new avenues for future investigation into European sources on the railroad.

In part 4, chapter 14 by William Gow, chapter 15 by Yuan Shu, and chapter 16 by Pin-chia Feng examine writings beyond traditional railroad accounts to consider the ways that important reading audiences have interpreted the experience of the Chinese railroad worker. Gow studies the ways this history

has been presented in American history school textbooks and reveals that the telling of the history has been inextricably connected to key issues in American history beyond the railroad itself. The Chinese railroad worker as historical figure was never stable. Shu's study of the Chinese railroad workers in Chinese histories and literatures also reveals that the history has been equally unstable, or even more unstable, in China since the Chinese Revolution in 1949. What has distinguished accounts published in China has not been the evidentiary base—Chinese writers have relied almost entirely on English-language sources—but rather the interpretive framework and conclusions, which have shifted through different political contexts. Pin-chia Feng highlights the perspectives on the railroad workers that emerge in the work of two prominent Chinese American writers, Laurence Yep and Frank Chin, who, along with Maxine Hong Kingston, have helped make the history of Chinese railroad workers known to the general public, characterizing them as central to Chinese American cultural and social identity.<sup>44</sup>

In part 5, chapter 17 by Shelley Fisher Fishkin, chapter 18 by Zhongping Chen, chapter 19 by Sue Fawn Chung, and chapter 20 by Beth Lew-Williams move the focus beyond the work on the first transcontinental railroad. Promontory Summit was in many ways just the beginning of the story for many of the railroad workers and other Chinese associated with them. Thousands of them continued to work on rail lines throughout the United States during the two decades that followed. The existence of these workers has been largely ignored in other historical accounts. Fishkin's richly documented essay opens up a new dimension of the Chinese contribution to building America's infrastructure as well as their lived experiences far beyond the West. Many of the workers also went north to labor on the Canadian transcontinental railroad—the Chinese experience there being better known and honored by Canadians than that in the United States. Chen's detailed account of the construction experience in Canada provides a valuable comparative perspective on labor organization, politics, and community life, and points the way for similar studies of Chinese communities in the United States.

Chung studies two important but long overlooked Chinese communities in Nevada, Winnemucca and Elko, and Lew-Williams presents a thoughtful treatment of Chin Gee Hee, a onetime railroad worker in the Pacific Northwest and one of the most famous nineteenth-century Chinese Americans. These two accounts expand our understanding of the world of Chinese railroad workers temporally as well as spatially. For some Chinese, railroad work

remained their life's activity, while for others, it was a moment in time, but indelible. Chung's study of Chinese railroad workers and their Nevada communities shows them as deeply embedded in the landscape of the American West. Lew-Williams's essay on Chin provides a view of the lived experience of one of the few Chinese of the nineteenth century whose life we can document with some detail.

Gordon H. Chang's concluding chapter 21 provides a double frame, so to speak, to end the book: the fraught relationship of the Chinese to Leland Stanford, president of the CPRR, is a telling dimension of railroad history but is also emblematic of the place of the Chinese in nineteenth-century American history more broadly.