

The Joining of the Rails: The Transcontinental Railroad

The Origins of the Transcontinental Railroad

by Richard White

The completion in 1869 of the first transcontinental railroad—the Pacific Railway, as the combination of the Central Pacific and the Union Pacific was called—created two of the most iconic symbols in American history. The first is a photograph in which two locomotives—the Central Pacific’s *Jupiter* (at left) and the Union Pacific’s *119*—meet nose to nose at Promontory Summit, Utah. The second is the gold spike used at the Golden Spike Ceremony that commemorated the completion. Such symbols can be complicated.



“East and West Shaking Hands at Laying Last Rail,”
by Andrew Russell, May 10, 1869. (Gilder Lehrman Collection)

The photograph by Andrew Russell—“East and West Shaking Hands at Laying Last Rail”—is the last of many taken during the ceremony on May 10, 1869, and it captures some things while concealing others. The diminutive locomotives, nearly invisible beneath the workers who clamber over them, reveal the limits of steam technology at the time. Except for the chief engineers who supervised the building of the road, the dignitaries have largely disappeared in this photograph. The engineers—Grenville M. Dodge of Union Pacific and Samuel S. Montague of Central Pacific—shake hands, unenthusiastically, at the center of the photograph. We can see some of the workers. Two hoist bottles; another tips his hat, but most just hold their pose for the camera. The Union Pacific Railroad, which was built from the east, employed a mix of Union veterans, Irish immigrants, Mormons, and others. The Central Pacific Railroad, built from the west, employed largely Chinese immigrants. The Chinese laborers were at Promontory Summit, but we do not see them in this most famous picture. As far as the commemoration goes, they have become invisible. A photograph is usually not worth the proverbial thousand words; more often it demands a thousand words to explain how it is framed and what is, purposefully or not, left out. [1]

The spike is misleading in a different way. There were actually four ceremonial spikes—two gold, one silver, and one gold and silver.[2] One gold spike was provided by David Hewes, a San Francisco contractor and brother-in-law of Leland Stanford, one of the owners of the Central Pacific. That spike—misdated May 8, 1869, because the Union Pacific party ended up being delayed—memorializes what Americans imagined the Pacific Railway had achieved:

HIDE FULL ESSAY ▲

May God continue the unity of our country
as this Railroad unites the two great oceans of the world.
Presented by David Hewes,
San Francisco

Those few engraved words were truer to the hopes for the railroad than to the history of its building. The Pacific Railway did not literally unite the two great oceans. Strictly speaking, the railroad did not originally reach the Pacific—it stopped at Sacramento, California. Nor did it come anywhere near the Atlantic—the

Union Pacific's terminus was in Omaha, Nebraska. Nor did the railroad continue the unity of the country. Keeping California in the Union and securing the trade of Asia had been the goals for the transcontinental when Congress agreed to charter and subsidize it in the Pacific Railway Acts of 1862 and 1864 in the midst of the Civil War. The country, however, was already unified when serious building began, and the construction of the Pacific Railway unfortunately coincided with the construction of the Suez Canal. The trade of Asia went through the canal to Europe, not across North America.[3]

Critics had contended that the railroad was premature and unnecessary. It needed subsidies because no one who knew anything about building railroads was willing to touch it. Why, as Congressman F. A. Pike of Maine asked, build a railroad through "1800 miles of . . . uninhabited country?"[4] The country was inhabited, but not by freight-shipping, train-riding American citizens. There were plenty of citizens in California, but until the end of the century it was cheaper, and often quicker, to ship goods south by steamship and then by railroad across the Isthmus of Panama. California's major exports and imports traveled by sea and would largely continue to do so into the 1890s. The men who undertook to build the railroad hoped to grow rich not so much by operating it as from granting themselves insider contracts to build it and by selling its stocks and bonds. And this, by and large, they did.

But enriching the promoters of the Union Pacific and the Big Four—Collis P. Huntington, Mark Hopkins, Leland Stanford, and Charles Crocker—who dominated the Central Pacific was not a reason for Congress to subsidize the Pacific Railway. And as crews built east and west toward Promontory, supporters of the railroad developed new rationales. Building the railroad across lands still occupied by Indians prompted Indian wars, and those wars became less a problem than a solution. The railroads, or so promoters declared, were critical to ending the very wars they provoked. In 1867 General William Tecumseh Sherman proclaimed the Pacific Railway "the solution of the Indian question." Railroad officials soon formed a hallelujah chorus. As Grenville Dodge of the Union Pacific later wrote, "Experience proves the Railroad line through Indian Territory a Fortress as well as a highway."[5]

The railroads did help defeat Indians, and defeating Indians meant traffic—hauling supplies to troops garrisoning the West. But this was hardly enough traffic to generate the revenue the companies needed to pay off their loans, for they had built on borrowed money. The railroads needed settlers to buy their lands and to ship goods along their tracks. The ability of the railroads to speed up the settlement of the West was yet another rationale for subsidizing them. Successful settlement would, supposedly, pay the government back for land it had given to the railroads.

To understand how this was supposed to work, imagine a railroad line as the crease in a black and red checkerboard. Each of the squares in the checkerboard corresponds to a section of public land a mile square. The government gave the black squares to the railroad company while each of the red squares remained part of the public domain and available to settlers. For the original Pacific Railway from Omaha to Sacramento this checkerboard extended ten miles on each side of the tracks. Land grants to other railroads stretched even farther out from the tracks. The government, however, doubled the price on the checkerboard's red squares from \$1.25—the base rate—to \$2.50 per acre. On paper, the government had lost nothing through subsidies to the railroad; the country had gained railroads, and the railroads, by quickly selling off the checkerboard's black squares, as required in the acts, simultaneously promoted settlement and raised money to pay back the loans necessary to build the road. Even as formidable a critic of the railroads as Henry George of California, eventually the most famous reformer in the nation, initially regarded the logic behind the land grants as "plausible and ably urged." [6]

Congress was so taken with this system, and railroad promoters seeking subsidies provided pliant congressmen with such a profusion of stocks, bonds, and other favors, that between 1862 and 1872

railroads received grants the size of small and medium states. The federal grant to the Union Pacific roughly equaled the acreage of New Hampshire and New Jersey combined. The main line of the Central Pacific got slightly more land than there was in Maryland. The Kansas Pacific, one of the branches connecting with the Union Pacific trunk, had to settle for the equivalent of Vermont and Rhode Island. The Northern Pacific received the equivalent of New England. In all, the land-grant railroads east and west of the Mississippi received 131,230,358 acres from the United States. If all these federal land grants had been concentrated into a single state, call it "Railroadiana," it would have ranked third, behind Alaska and Texas, in size. The railroads also received state land grants totaling 44,224,175 acres, or an area roughly the size of Missouri, with 33 million acres alone coming from Texas, whose lands were not part of the federal public domain. Finally, cities and towns gave the railroads valuable lands for depots and yards, as well as other subsidies. In addition, the government loaned the Union Pacific and Central Pacific much of the money necessary to build the Pacific Railway.

Did it work? To answer this we need to be specific because the transcontinentals, like Caesar's Gaul, were divided into three parts. Chicago and St. Louis anchored the railroads of the Middle Border—the lands between the Mississippi and the 100th meridian. Among these were the eastern sections of the transcontinentals. Here the wheat, corn, and cattle of the fat lands of America provided plenty of traffic. San Francisco, and later Tacoma and Seattle in Washington, anchored the western ends of the transcontinentals. The Central Pacific and Southern Pacific poured the wheat of the Central Valley into the ports of San Francisco Bay. These systems were the usually profitable bookends of the transcontinentals. The long trunk lines between the 100th meridian and the Sierra and Cascade Mountains linked the two ends. These sections of the transcontinentals were starved for traffic.

On the Middle Border and the Pacific Coast, subsidies certainly promoted railroad building, but paradoxically the subsidies were probably unnecessary there. It was like intravenously feeding people already gorging on Big Macs. The land grants were an unneeded bonus, one that the railroads in these two areas sold fairly quickly and at reasonable prices. They mortgaged most of the rest, using it as security for land bonds, which the courts ruled was the equivalent of sale and satisfied the legal requirements that the railroads dispose of their grants.

Subsidies were necessary for the long trunk lines through the Great Plains, Rocky Mountains, and Great Basin, because there was not enough local or east/west traffic to and from the Pacific Coast to sustain them. But this raises a second question: was it necessary to build these lines at all? An argument might be made for building one to carry mail or passengers, but did the country need the Northern Pacific, Central Pacific, Southern Pacific, Texas & Pacific, Atlantic & Pacific, Union Pacific, Great Northern, and Atchison, Topeka and Santa Fe?

Commercially, until late in the century the answer was probably no. The transcontinentals were redundant. Goods from the Pacific Coast went by sailing ship to Europe, by steamship to Asia, or east across Panama to American ports. Ships transported goods much more cheaply and nearly as fast as the railroads. The transcontinentals would be unable to compete with them until the end of the century.[7] Socially, the answer was also probably no. The railroads prompted settlement that often proved unsustainable in both the long run and the short run. Much of this region lost population in droughts and panics in the nineteenth century and has slowly leaked population in the twentieth and twenty-first centuries. Economically, most of the transcontinentals went bankrupt at least once in the nineteenth century and sometimes more often. Those that did not survive because the government, one of their major creditors, extended their loans. Not until the 1890s were most of the transcontinentals viable economic enterprises.

Governments, of course, can justifiably subsidize enterprises to secure a larger social good, but it is very much an open question whether the transcontinentals achieved this social good. The development of spatial history websites such as “Railroads and the Making of Modern America” at the University of Nebraska, Lincoln, and “Shaping the West” at Stanford University devoted, in part, to the railroads allows students to see visualizations of the spread and activities of the transcontinentals and other railroads. They can formulate their own questions about the influence and impact of the railroads.

[1] Glenn Willumson, *Iron Muse: Photographing the Transcontinental Railroad* (Berkeley: University of California Press, 2013), 52–63.

[2] “Four Special Spikes,” Golden Spike National Historic Site, National Park Service, <http://www.nps.gov/gosp/historyculture/upload/Spikes.pdf>.

[3] Most of the material in this article is from Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: Norton, 2011). The best two books on the building of the railroad are David Bain, *Empire Express: Building the First Transcontinental Railroad* (New York: Viking, 1999) and Maury Klein, *Union Pacific* (New York: Doubleday, 1989).

[4] Frederick A. Pike, (Maine), Remarks on the Pacific Railroad Bill, *Congressional Globe*, Second Session, Thirty-Seventh Congress, April 17, 1862, 1707.

[5] William T. Sherman to Grenville M. Dodge, January 16, 1867, in Grenville Mellen Dodge, *Personal Recollections of President Abraham Lincoln, General Ulysses S. Grant and General William T. Sherman* (Glendale, CA: Arthur H. Clark, 1914), 195; Grenville Dodge to T. Scott, January 12, 1874, Letterbooks, Texas Pacific Railroad, Box 160, Grenville M. Dodge Papers, MS 98, State Historical Society of Iowa, 72–73, 77.

[6] Henry George, *Our Land and Land Policy: The Complete Works of Henry George* (New York: Doubleday, Page and Company, 1904, original edition 1871), 8: 24.

[7] White, *Railroaded: The Transcontinentals and the Making of Modern America*, 162–169.

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