

The First Transcontinental Railroad – made in America

by Chinese immigrants who conquered the Sierras!

BEFORE TRAINS WERE INVENTED . . .



BACKGROUND OF THE FIRST TCRR

Steam powered locomotives were invented by an Englishman Richard Trevithick in 1804 and the first railroads and routes were built in Europe. In the 1850-60s, railroad lines were built on the East Coast to support the Civil War, mainly completed by the US Army.

Our Transcontinental Railroad (TCRR), built from 1863 - 1869 was the greatest infrastructure project in the 19th Century. Some historians and scientist have equated this project to putting a man on the moon in the 20th Century. The TCRR was the first transcontinental RR in the world. This western leg of the TCRR was 1,907 miles across connecting Sacramento, California to Council Bluffs, Iowa.

WHO BUILT THE TCRR?

The laborers for this huge project involved 15,000 laborers, included Chinese, Blacks, Whites (Mormons, Irishmen) and Mexicans. Approximately 80% (12,000) were Chinese immigrants.



WHAT DID THE CHINESE DO FOR THE TCRR?

Who would have thought those Chinese male immigrants, most very young, physically smaller than “Americans”, with ZERO experience building railroads, could be strong enough, or durable enough, or trainable for the very demanding state of the art RR construction work? They did not speak, or understand, English. How could they be trained? The doubters were all wrong. Before any Chinese were hired, a sample group was trained and they were competed against an “American group” in laying railroad track. The results shocked everyone. The Chinese team proved to be equal or better than the competition. And so, the Chinese were hired and trained to build the greatest infrastructure project on the 19th Century.

CONQUERING THE SIERRAS . . .

The most difficult portion of the TCRR was tunneling the granite composition of the Sierra Nevada Mountains. No rail system had ever been built posing the challenge of these gargantuan obstacles. Manual labor (picks and shovels) and black powder punctured only inches per day. Dangerous nitroglycerine had to be used to increase tunneling to 2 feet per day. On regular dawn to dusk shifts, the TCRR would have taken too much time. That Chinese had to work 24 hour days, 6 day weeks for 5 straight years. No one else had to work that hard or work such long days. They proved their strength and durability. The TCRR was completed on May 10, 1869, ahead of the projected 1875 scheduled date. One more important fact. The fund bucket was dry so the entire project could have stalled indefinitely.

SIGNIFICANCE OF THE TCRR

The completion of the TCRR had an enormous impact on American/World history. It was the greatest infrastructure project for America, because it “united” the United States. At the end of the Civil War in 1865, there were only 30 states in the Union. Then, it was the Montana territory, Arizona territory, New Mexico territory etc. Moving people and goods across the nation was reduced from 6-8 months to 6-8 days. Trains moved tons of goods over great distances in drastically reduced time frames. After the TCRR was completed, America’s economy grew at a sustained high rate and became the greatest economy in the world in the 20th Century. The contribution of the Chinese laborers were a critical and essential part of that success. These Chinese laborers were real heroes - **Chinese American heroes**.

The story of the TCRR and the contribution of the Chinese laborers is found only in our government archives. There is ZERO information from interviews or diaries/notes from any of the Chinese workers. **Chinese American Heroes** had conducted our own research and we are publishing a series of four (4) reports to factually and accurately reflect this missing piece of American history. For the past year, our Chief Researcher and Editor, **Philip Chin** has reviewed available documentation, drafted his report, and coordinated his drafts with the Stanford University’s Chinese RR Workers of North America. We received and incorporated their comments and suggestions, and now have our finished reports to share with our readers.

Part 1. Chinese Americans and the Transcontinental Railroad is below, and parts 2 – 4 are now available under our new TCRR tab.

Chinese Americans and the Transcontinental Railroad Part 1 - Starting the Transcontinental Railroad 1861-1865

By Philip Chin

On May 9, 2014, in recognition of the 145th Anniversary of the Golden Spike Ceremony that marked the completion of the First Transcontinental Railroad on May 10, 1869, the United States Department of Labor enshrined the Chinese railroad workers in their Hall of Heroes. It was the first time the Department of Labor had honored any Chinese since the Hall of Heroes had been established in 1988. Deputy Labor Secretary Chris Lu said in an interview before the ceremony, "These were immigrants who came to this country seeking a better life, and they had the chance to work on something really extraordinary. And then you had a nation that not only did not appreciate their efforts, but then led to exclusion after that." The ceremony helped to make up for a previous occasion of insensitivity on the part of the United States Government. At the 100th Anniversary celebration in 1969, then Secretary of Transportation John Volpe omitted mentioning the Chinese workers entirely and rhetorically asked, "Who else but Americans could drill ten tunnels in mountains 30 feet deep in snow?"

<http://webapps.dol.gov/DOLEvents/Event/View/288/US-Department-Labor-Induction-of-Chinese-Railroad-Workers-Into-Labor-Hall-of-Honor>

<http://www.npr.org/blogs/codeswitch/2014/05/10/311157404/descendants-of-chinese-laborers-reclaim-railroads-history>

<http://www.voanews.com/content/chinese-railway-workers-inducted-in-labor-departments-hall-of-honor/1912478.html>

<http://www.forbes.com/sites/forbesasia/2014/05/12/the-chinese-helped-build-america/>

The Need for a Transcontinental Railroad

The need for the Transcontinental Railroad had been self-evident for many years before the Civil War. Transportation from the East Coast to the West Coast of the United States up until the railroad had been handled in either of three ways. The first and best known was by wagon train, oftentimes originating from St. Louis, Missouri or other points along the Mississippi River. This slow and dangerous form of travel was expensive (keeping in mind that all forms of travel in the 19th Century were expensive when compared to today)

both in terms of money and in terms of human lives. The trails West were marked by numberless graves along the route and oftentimes buried directly under the route, dead from disease, starvation, Native American attack, bandits, wild animal attacks, deadly weather, or simply from the inexperience and bad luck of the travelers. The journey by wagon train could take up to a year depending on chance, weather conditions, and the skill of the travelers.

The second way to travel, and the way most heavy machinery was shipped from the East Coast to the West Coast, was by a journey all the way around the tip of South America at Cape Horn. Cape Horn saw some of the most perilous storms and dangerous sea currents in the world so any voyage could be adventurous and fatal. This journey took four months using the extremely fast clipper ships used only for high value perishable cargo and rich passengers, or about seven months on average for ordinary cargo ships.

The third and most expensive way to travel, because shippers charged a premium for the faster journey, was to take a ship from an East Coast port and sail to the isthmus of Panama. The journey from the Atlantic to the Pacific was then made on horseback or mule, and later by railway (the Panama Canal which allowed uninterrupted travel by ship was only completed and first used in 1914). Another long sea voyage then took the traveler from Panama to the West Coast. The total journey took about forty days. Traveling through disease ridden tropical areas where unacclimated people were prone to suffering fatal sunstrokes helped cement the reputation of the tropics as a white man's graveyard in the 19th Century. Among the victims was Theodore Judah, first Chief Engineer of the Central Pacific Railroad, who contracted either typhoid or yellow fever and died in New York in 1863 after passage through Panama.

The start of the Civil War made the need for a Transcontinental Railway even more acute. The Union badly needed the gold and silver dug from the soil of Western states and territories to finance the war. Paper money issued by the United States Treasury had to be backed by a gold reserve to be accepted by the population and by international markets in those days. Quite forgotten today is the fact that California had a large number of settlers from the South that formed an active secession movement to bring California over to the Confederacy. Although in the end this didn't amount to much of a movement the need to send troop reinforcements from the East Coast to the West Coast just in case such a succession movement broke out in actual armed rebellion was much talked about. There was also the strategic imperative of protecting the recently conquered Western territories such as California taken from Mexico from other foreign countries. France had launched her own expeditionary force to conquer Mexico while the United States was distracted by the Civil War. The intentions of Great Britain too were suspect as it hungrily gobbled up lands across the globe and the boundaries of the Canadian border remained unsettled. There was also the interest the United States had in increasing trade with Asia and also defending that trade from the predatory European powers. The sooner fast communications could be established between the Eastern and Western United States the more secure the country would be both financially and militarily.

<http://www.pbs.org/wgbh/americanexperience/features/transcript/tcrr-transcript/>

Politics

A transcontinental railroad had first been officially proposed in Congress in 1856 but had foundered over regional enmities, part of the growing national animosity that would lead to the Civil War. Southern congressmen wanted the railroad to take a southern route to the West Coast. Northerners of course wanted a northern route. Neither side was willing to compromise and give economic and political advantages to the other side. The creation

of the Confederate States of America in 1860-1861 and the start of the Civil War instantly removed any consideration of the southern route as Southern politicians almost universally sided with their home states and either resigned or were expelled from the United States Congress. The removal of Southern Democrats left Northern Republicans with an overwhelming majority in Congress and gave them the opportunity to pass two pieces of related legislation that had been stalled for years.

The first legislation passed was the Pacific Railway Act, signed by President Lincoln in 1862, and then modified with new acts in 1863, 1864, 1865, and 1866. The Union Pacific Corporation was founded by the 1861 act to build the railroad from the Missouri River to California. For the first time federal land grants would be given directly to corporations instead of states. This was designed to enable the railroad to be built in one continuous line from existing networks on the East Coast through the Midwest to the Pacific Coast rather than be broken up over innumerable separately owned parcels of land. The 1864 Pacific Railway Act granted the Central Pacific Railroad of California the right to build the Western half of the railway from Sacramento, California to meet with the work of the Union Pacific. As an incentive, and to defray the costs of construction, each mile of railroad built would also earn the railroad financial bonuses and also alternating grants of land along the route including lumber and mineral rights that they could then keep or sell for a profit. These land incentives eventually totaled more land than the State of Texas.

The second piece of legislation was the Homestead Act of 1862 which Southerners had previously blocked because they wanted the extension of slavery guaranteed by law to any newly settled lands. This kind of provision was anathema to the anti-slavery Republicans. The idea was that settlers could hold a piece of public land, 160 acres under the law, develop it for five years, then file claim on the land. Obviously from a prospective farmer's standpoint the public lands closest to a railway station with easy access to markets were the most desirable. The grant of alternating blocks of land to the railroads in the Pacific Railway Act with public lands in between open to homesteaders were designed to facilitate this goal. In practice, although the law helped many farmers and ordinary Americans own their own 160 acres and became romanticized by books, movies, and TV shows, many claims to the most valuable stands of timber and water sources in the American West were made by large companies acting through fictitious settlers facilitated by bribed local and federal officials.

http://www.sacramentohistory.org/admin/photo/773_1558.pdf

Key Problems of the Transcontinental Railroad

The key problems of building the railroad were in financing, engineering, and manpower. The federal law provided incentives and financial support for the chosen railroads to be paid with \$100 million in government guaranteed bonds sold at 6% interest with a 30 year maturity. The higher rate reflected the risk that building a railroad through sparsely settled areas wouldn't pay off as an ongoing private concern. Every mile of track laid was incentivized by government payments under three different categories, flatlands paid \$16,000 per mile, foothills at \$32,000 per mile, and mountains at \$48,000 per mile. This led to the amazing discovery that the foothills of the Sierra Nevada Mountains extended further into the flatlands of the Sacramento River Delta, according to the Central Pacific Railroad, than any geologist had previously recognized. In such small and major ways the railroads maximized their profits, oftentimes perfectly legally if unethically according to the laws of the 19th Century.

Under the law all federally owned and privately owned land would be given over for use

along actual railway routes, exempting only existing towns or river crossings which remained federal or municipal property. This mix of land and government incentives proved to be a gold mine of opportunity for unscrupulous speculators and fraudsters. Chief among them was the Vice-President of the Union Pacific Railroad who effectively ran the entire operation, Dr. Thomas C. Durant, notable for a lifetime of completely amoral devotion to personal enrichment. During the Civil War he'd gained classified information from Grenville Dodge, later appointed Chief Engineer of the Union Pacific Railroad by Durant, that enabled Durant to evade the Union blockade to sell smuggled cotton from the Confederacy. Dodge was a Union Army general at the time. Durant had also manipulated the stocks that he owned in the Missouri & Mississippi Railroad, announcing that he planned to connect the Union Pacific line to it and then selling the inflated stock. He then announced that the Union Pacific would connect with the rival Cedar Rapids & Missouri line causing M&M stock to plunge. He then bought M&M stock back for a cut rate price and pocketed \$5 million in profit. By 1868, Dodge would condemn his erstwhile partner in crime saying Durant was a man "...who has not an honest drop of Blood in his veins, who is connected with the Co. for the sole purpose of bleeding it and who the Co. say they cannot discharge for fear he will Black Mail it."

<http://www.pbs.org/wgbh/americanexperience/features/biography/tcrr-durant/>

The most obvious way for Durant to manipulate the system because of the lack of government oversight was that railroad tracks were built unnecessarily for the incentive payments. "Railroad tracks to nowhere" were analogous to the "bridges to nowhere" that are standard features of 20th and 21st Century pork barrel construction projects. Officials and friends of the railroad could also use their inside knowledge of which routes the railroad would be using, buy up land in advance, and then sell it for a profit once the route was made public. Such insider deals were perfectly legal at the time. The railroad would then take the land given to them by the federal government under the incentive scheme of the Pacific Railway Act, then resell that land to settlers or businesses, thereby profiting those connected with the railroad even more.

Most profitably of all the Union Pacific formed its own railroad building arm, ostensibly an independent company but sharing the same select group of major stockholders and managing directors as the Union Pacific in secret. The Crédit Mobilier of America was named, probably not coincidentally, after a respected French banking group that financed railroad projects across Europe, North Africa, and the Middle East on behalf of the French government. Crédit Mobilier of America would build the Union Pacific lines, submit highly inflated construction bills to the railroad, which would then charge the US Government for payment. Peter Dey, the Chief Engineer of the Union Pacific, finally resigned in disgust after an extra line to nowhere was added to his surveyed route in Omaha despite his protests that paid an extra \$500,000 into the Union Pacific coffers which President Durant regarded as his personal property.

Corrupt members of Congress and in the presidential cabinet received discounted railroad stocks and stocks in Crédit Mobilier to look the other way and positions on corporate boards. They were also bribed to write favorable legislation in 1864 that doubled the bonus land awarded, enabled the railroads to borrow money in advance of a line being built, and granted rights to coal, iron and precious minerals found on granted land that would otherwise have been publicly controlled. In effect, the Union Pacific and Central Pacific could borrow money based upon land they didn't actually own yet but said they might take for the railroad. Crédit Mobilier was unique in also being one of the first limited liability corporations. Until that time if a firm went bankrupt the personal assets of the investors were at risk of being confiscated to pay off the debts of the bankrupt firm. If a limited liability corporation went bankrupt then the investor only lost their

investment. How this worked was that Union Pacific stock was given as payment to Crédit Mobilier which by the terms of its charter was immune from liability if the company whose stock they owned went bankrupt. Since the major stockholders of Crédit Mobilier were secretly the same as the stockholders of the Union Pacific it insulated the investors from losing their personal property if the Union Pacific went bankrupt. It was because of their preoccupation with such profitable manipulations of land, stock, and mineral rights that the Union Pacific failed to lay a single line of track from 1861 until mid-1865 when serious talk about ending the gravy train and taking the contract away from them forced them to begin building. By the end of 1865 the Union Pacific had frantically constructed 40 miles of track, the original amount required by the 1861 law, and twice the amount required under the revised law of 1864. This was among the many provisions Durant had bribed Congressmen to change.

Stocks were hyped and sold at extremely inflated prices similar to how Internet stocks were sold in the frenzied speculation of the late 1990s just before the market crashed. Grenville Dodge purchased 100 shares of stock in Crédit Mobilier in his wife's name. The value of that stock increased 341% in just 18 months. Dodge would later claim unconvincingly that his wife had bought the stock independently out of household money and would flee to avoid Congressional investigators. The collapse and investigation of Crédit Mobilier in 1872 would mire the second presidential administration of Ulysses S. Grant, lead to the indictment and conviction of government officials and members of Congress, and contributed to the start of a financial panic and then a prolonged worldwide economic depression starting in 1873. This would eventually lead to major calls for government reforms and to new laws dealing with stock fraud and other financial crimes. It would also help lead to the Chinese Exclusion Act of 1882, ostensibly to prevent Chinese laborers from competing with whites for jobs.

<http://www.pbs.org/wgbh/americanexperience/features/transcript/tcrr-transcript/>
<http://www.pbs.org/wgbh/americanexperience/features/biography/tcrr-dodge/>

While the West Coast had long been roiled by racial strife over the issue of Chinese labor the 1870 importation of Chinese workers to North Adams, Massachusetts along the newly built Transcontinental Railroad to break a union strike by white workers at a shoe factory brought the issue to boiling point on the East Coast. The workers had been demanding increased pay and shorter working hours but accepted a 10% wage cut in the face of the Chinese strikebreakers, setting a precedent that every newspaper across the nation noticed. This event, the importation of more Chinese workers to the East Coast, as well as continued threats by factory bosses to bring even more Chinese to break unions and counter higher wage demands, galvanized racist opposition among white working class Americans. Tragically the unions would not allow Chinese to become union members or cooperate with them in demanding equal pay and equal treatment because of their oftentimes loudly proclaimed belief that they existed solely to protect the jobs and rights of white men only. Politicians across the political spectrum increasingly pandered to this sentiment. The 1882 Chinese Exclusion Act not only banned the immigration of Chinese laborers but took away their right to ever naturalize as American citizens and vote. The Transcontinental Railroad that was built would prove to be a positive good for the United States, but much of the background for how it was financed and built, as well as the racial dimensions of the labor strife it would inadvertently helped create, would give railroads a dubious reputation and poison racial relations and immigration policies for many decades afterwards.

<http://www.massmoments.org/moment.cfm?mid=191>

The Civil War pretty much brought railroad building in the West to a standstill. So many vital supplies, railroad engines, and men were needed to supply the war effort on the East

Coast that few industrial resources were available at a bearable cost to be shipped to the West around Cape Horn. Ships also faced the risk of attack by the Confederate Navy so heavy insurance policies had to be taken out on all shipments, a 10% war premium according to Leland Stanford in 1865. Equipment took an average of ten months to be loaded on the East Coast and then delivered to Sacramento because of the many problems the war caused.

http://www.sacramentohistory.org/admin/photo/773_1558.pdf

The Civil War did have positive effects that were felt later though. Union and Confederate soldiers and military engineers were called on to rapidly build and repair many railways and bridges throughout the war to supply frontline troops. This wartime experience would stand railroad projects in good stead once the war was over but this was mostly an East Coast phenomenon as almost all veterans of the Civil War lived and fought on the East Coast. The Union Pacific started on their frenzy of construction to justify their federal funding from Omaha, Nebraska in July 1865, just months after the Civil War ended. Dr. Durant chose Omaha to start the line despite the 1861 law specifying that the start location should be on the east bank of the Missouri River in Council Bluffs, Iowa. Durant owned property in Omaha and wanted to save on the cost and time needed to build a bridge. Freshly manned with discharged veterans who knew how to build railroads already and Irish immigrants the Union Pacific was well set to build quickly. The Central Pacific Railway meanwhile faced serious labor shortages.

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