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Falling from favor: The demise of electric trolleys in Los Angeles

Beth Lorraine Tillitson

FALLING FROM FAVOR

THE DEMISE OF ELECTRIC TROLLEYS IN LOS ANGELES

A Thesis

Presented to the

Faculty of

California State University,

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In Partial Fulfillment

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in

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ABSTRACT

Once a vibrant symbol of the Los Angeles region, the Pacific Electric Railway is popularly believed to have been the victim of a conspiracy of automobile related industries intent upon destroying all sources of competition. Examination of the history of the region's electric trolley system, however, exposes this theory as a myth. The author argues that the streetcars disappeared because area residents consistently demonstrated a preference for private automobiles and the regulatory agency governing the trolleys repeatedly made decisions which created an environment in which rail-based mass transit could not compete.

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INTRODUCTION

The Pacific Electric (PE), also known as the "Red Cars" for its distinctive red and orange color scheme, was an important element of the Los Angeles Basin's transportation system during the first half of the twentieth century. It was not the first trolley system to serve Los Angeles, but it was the most successful and enduring. Just as cable cars are used to symbolize San Francisco, across the country the appearance of the Red Cars in the background of a movie or photograph immediately set the scene in Los Angeles. At its height, the trolley's lines stretched from Santa Monica to Redlands and from San Fernando to Orange County. The Pacific Electric was a simple part of Southern California life for sixty years, but as most things do, it gradually lost its utility over the years as area residents abandoned the trolley in favor of the comfort and convenience of their personal automobiles.

This paper will explore the history of the Pacific Electric and, to a lesser extent, the Los Angeles Railway (LARY) and will explain their roles and operations through the first half of the century. The author will show how the Pacific Electric grew from a tool to promote real estate development to an extensive railway system offering passenger and freight services to the entire Los Angeles Basin, and how it came to be a nationally recognized symbol of the region. Also explained will be the trolleys' struggles to

survive against competition from automobiles and how public policy decisions favoring increased access for automobiles negatively affected trolley efficiency. Also addressed will be the impact on the streetcar companies of the development of multiple business districts in the communities surrounding Los Angeles as well the disastrous effects of decisions made by the California Public Utilities Commission (CPUC) to reject repeated requests for fare increases.

The popular idea that General Motors masterminded the destruction of Los Angeles' streetcar system will be examined and rejected. Instead, the author will show throughout the study that decisions made locally by governing agencies and private citizens were the fundamental cause of the system's failure. Finally, we will see how rapid rail transit has returned to Los Angeles, note some of the differences between the old and new systems, and explain why the current system may have a better chance at long-term success.

THE RED CARS

The Creation of the Pacific Electric

In 1901, Henry Edwards Huntington left an executive position at the Southern Pacific in San Francisco to head the newly incorporated Pacific Electric Railway. Huntington was the nephew and part heir to Collis P. Huntington, the railroad magnate who, along with Leland Stanford, Charles Crocker and Mark Hopkins, headed up the Central Pacific Railroad and built the western portion of the transcontinental railroad in the 1860s. The Central Pacific later reorganized itself and several of its other railroads under the Southern Pacific Railroad moniker in 1884 and Collis became its president in 1890. Henry E. Huntington arrived in California in 1892 to serve as his uncle's personal assistant, and by 1899 he had become a vice-president of the railroad. After the death of his uncle in 1900, Henry left the Southern Pacific and moved to Southern California to oversee his personal business concerns.

Huntington purchased the Los Angeles Railway (LARY), an intraurban electric trolley line, a couple of years before the creation of the Pacific Electric, but the idea of developing an entirely new, potentially profitable system from the ground up "appealed to the builder in Huntington."[1] He envisioned an ambitious and prosperous future for his new enterprise.

Huntington realized that his new railway system would

be extremely expensive both to construct and to operate and decided that there was quicker gain in developing and selling the land close to the newly laid tracks. With this in mind, he organized the Huntington Land and Improvement Company soon after arriving in Los Angeles. While the owners of preceding streetcar companies had recognized the potential of developing land parcels adjoining their tracks, Huntington's personal wealth made him unusually qualified to take advantage of the opportunity.[2] As he could provide the capital necessary to construct the railway, he was able to orchestrate the construction of the lines to coincide with the releases of his properties to the market. In the highly competitive real estate market of the period, the availability of transportation in and out of the city gave Huntington's developments an edge over his competitors. Furthermore, because he directed where the lines would go, he could purchase inexpensively land which had been deemed undesirable because of its distance from the city center, subdivide it, provide it with water and power from his own utility companies, construct a Pacific Electric line to service it, and then sell the greatly improved properties for a nice profit.[3] His buyers benefitted from having homes in quiet communities far removed from the city but conveniently connected to it by the Red Cars.

When compared to other interurbans the Pacific Electric was also unique in that Huntington's immediate objective in

building the railway was not to make a profit from the streetcar itself, but to use it to make his real estate developments attractive and accessible to potential buyers. In other words, the Pacific Electric was not built with the specific intent to connect existing communities with an efficient method of transportation; its initial purpose was to promote real estate sales.[4] Only after it had served that end was it expected to generate profit through its operations. Interurbans in eastern cities, on the other hand, were constructed to connect existing communities with an efficient transportation system. They were built with the explicit intent to transport people between two or more communities.

The Los Angeles Railway, also owned by Huntington, had a different function than the PE. LARY served those already in the city as an intraurban transportation system providing Los Angeles residents with a convenient method of traveling about the city. Its cars traveled on tracks running down the center of downtown streets, loading and unloading passengers at stops in the middle of the street. Commuters arrived in the city from newly developed Huntington properties on the interurban Pacific Electric lines and transferred onto LARY lines to get even closer to their final destinations.

Trolley systems became popular nationwide because in addition to providing a simple means of moving people, they

permitted a city to expand geographically as they allowed a greater number of people to travel comfortably a longer distance within the "accessibility radius" (the distance one could travel within a thirty to forty-five minute period) of the city than they could when transportation was limited to foot or horse.[5] In Southern California, the interurban had an even greater impact on the region's development because the population settled where its routes led.[6]

The Pacific Electric had a deep, long-lasting effect on the Los Angeles Basin. It allowed average, working-class people to move into the suburbs and was instrumental in the development of the Southland's distinctive, and early, sprawling nature (what Crump calls the "City of Southern California"[7] in which there is no dominant central business district and communities blend into each other until one cannot tell where one city begins and the other ends).

Huntington was so consistently successful in his real estate projects that whenever he became involved in a development deal his actions were closely monitored by resourceful entrepreneurs. In July 1905, for example, Huntington announced the purchase of the Redondo Improvement Company which owned 90% of the land in Redondo Beach as well as the Los Angeles and Redondo Railway. This immediately triggered a small land boom in which a piece of property would change hands several times in a single day, each time being sold at a higher price. The boom only lasted about two weeks but

during that time, Huntington netted approximately three million dollars.[8]

Huntington's methods met with repeated success. Wherever the Pacific Electric went, communities expanded and thrived. The population growth of several cities during the period of the Pacific Electric's arrival is shown in Table 1. Note how Burbank's population more than tripled between 1900 and 1910 as the Pacific Electric arrived and expanded its services between 1904 and 1911. Alhambra, which didn't even exist in 1900, grew to more than 5,000 residents by 1910 after the Red Cars arrived in 1902. Compare this rapid growth in Alhambra to the steady increase in San Fernando where the PE did not arrive until 1911. The Pacific Electric did not account for all the growth in all of the cities, but it did make these communities more accessible and attractive to potential residents.

When he began constructing the Pacific Electric, Huntington allowed for future growth whenever possible. Perhaps because of his experience with the Southern Pacific, he decided to build the PE using standard gauge for the tracks (4' 8½" across), although most other trolley systems used a narrow gauge (3' 6"). By so doing, the Pacific Electric had the ability to increase its profitability by utilizing standard freight cars to engage in the freight trade.[9] Entering the freight market, however, would mean that the Pacific Electric would become an even greater competitive

TABLE 1

Effect of the Pacific Electric's Arrival
on Population in Selected Cities

Towns/Area	1890	1900	1910	PE Arrives
Alhambra	--	--	5,021	1902
Azusa	--	863	1,477	1907
Burbank Township	2,996	3,048	12,255	1904-11
Glendale	--	--	2,746	1904
Huntington Beach	--	--	815	1904
Long Beach . . .	564	2,252	17,809	1902
Monrovia	907	1,205	3,576	1903
Newport Beach . .	--	--	445	1905
Pomona	3,634	5,526	10,207	1909-12
Redondo Beach . .	603	855	2,935	1903[a]
San Fernando Township	1,110	1,326	2,134	1911
San Gabriel Township	1,713	2,501	8,550	1902
Santa Ana	3,628	4,933	8,429	1905
Santa Monica . .	1,580	3,057	7,847	circa 1896[a]
Whittier	585	1,590	4,550	1903

[a]Dates mark the arrival of a streetcar line but not the PE.

Source: Glenn Dumke, "The Growth of the Pacific Electric and Its Influence upon the Development of Southern California to 1911" (M.A. thesis, Occidental College, 1939), p. 121, in Henry E. Huntington and the Creation of Southern California, William B. Friedricks, (Columbus: Ohio State University Press, 1992), 154.

threat to steam railroads such as the Southern Pacific:[10]

> The advent of the electric interurban, which made every car a train, created a dangerous challenge to the steam railroads. Trolleys could run frequently and economically stop at the smallest communities. In an era when competition from busses and automobiles was not a reality electric interurban systems were bringing reduced patronage to the steam railroads they paralleled elsewhere in the nation.[11]

The Pacific Electric's first major interurban route ran from Los Angeles to Long Beach and was built on a private right-of-way. Huntington preferred to construct private routes even though they were more costly than running tracks down the center of existing roadways. The private right-of-ways allowed PE cars to travel swiftly with minimal interference from cross traffic. They also had the added benefit of being able to accommodate freight trains at odd hours of the night with minimal disturbance of local residents. Whenever practical, Huntington also constructed double tracks so that the trolleys could travel efficiently and unopposed at all hours of the day.[12] Even when the immediate expected volume of traffic on a particular line did not require double-tracking, Huntington usually graded for it during the initial construction phase so that the second set of tracks could be easily laid as traffic did become heavy enough.

Huntington's plans to expand the Pacific Electric's freight business were never fully realized during the time he controlled the company. Edward H. Harriman of the South-

ern Pacific (SP) was aware of the competitive threat posed by Huntington and the Pacific Electric to the operations of his own company. He watched as Huntington expanded the Pacific Electric's territory and goals, but as long as Huntington focused on real estate development and the PE's activities did not unnecessarily interfere with Southern Pacific business, Harriman chose not to challenge Huntington. However, when the Pacific Electric's operations began to encroach on the Southern Pacific's passenger service area and to expand its freight service, Harriman responded to the challenge.

In 1903 Harriman secured a fifty percent interest in the PE and a forty-five percent interest in LARY on behalf of the Southern Pacific[13] by purchasing shares from Huntington's business partners who had begun to object to Huntington's insistence on putting LARY's and the PE's profits back into the business instead of paying dividends. They had invested in the railways to earn a profit, but although the companies were doing well, they were not paying well.[14] Although Harriman did not obtain an actual controlling interest in either of the companies, he was effectively able to block most of Huntington's efforts to expand the PE's freight business.

Huntington entertained hopes of expanding the Pacific Electric's service all the way to San Diego, but Harriman maneuvered to prevent him from going forward with those

plans. Thwarted at each attempt to branch out, Huntington eventually realized that Harriman and the Southern Pacific were not going to allow him to expand the Pacific Electric's operations in any way that could negatively affect the Southern Pacific's business. He soon began negotiations with the SP to separate the ownership of LARY and the Pacific Electric so that an agreement could be reached in which the Southern Pacific would obtain full interest in the PE and Huntington would gain full interest in LARY.[15] Negotiations were temporarily halted when Harriman died in 1909 but the deal was finally settled in November 1910.

Although LARY had a much smaller area of operation, Huntington did not lose in the deal because LARY was actually more profitable than the PE and required less of Huntington's personal attention to run. Ready to retire from the railroad business, he now shifted his attention toward more pleasurable pursuits. He began in earnest to amass a collection of artwork and books which would eventually become the basis of the Huntington Library on his estate in San Marino, California.

With the Red Cars now under its control, the Southern Pacific began to capitalize on Huntington's foresight by using the PE routes and standard gauge trackage to augment its own freight business. The business was so successful that in 1911, the first year under Southern Pacific's control, the Pacific Electric's freight revenue was $512,226,

and in 1912 the amount more than doubled to reach $1,203,956.[16] The Southern Pacific continued to expand passenger services on the system as well. By 1926 the Pacific Electric had lines running as far east as Redlands, Riverside, and Corona and stretched south to Santa Ana, Orange, and Balboa and north to San Fernando.

In addition to transportation for commuters, the Pacific Electric offered special excursion trips. Pleasure seekers who regularly ventured to their favorite beach picnic areas in Santa Monica, Newport Beach, or Balboa could ride the Red Cars to the shore. There was an "Orange Empire Trolley Trip" which involved a full day's excursion from Los Angeles to Riverside for lunch and a tour of the Mission Inn and then a ride up to San Bernardino and Redlands before returning to Los Angeles. The most popular tour, however, was the scenic ride up Mount Lowe north of Pasadena.

Developed by Professor Thaddeus Lowe, the Pasadena and Mount Lowe Railway first opened to passenger travel in 1893 as a year-round mountain retreat. The trip was made in stages of which the first and third stages were made in standard electric trolleys winding their way up the side of the mountain and offering spectacular vistas. The second stage, however, required passengers to break their trolley ride and transfer to an "incline" car which had been developed by Lowe and an engineer to achieve an elevation change of more than 1200 feet in less than one-half mile. The

special cars operated on a grade of approximately fifty-nine percent[17] in a design now known as a funicular.[18] Under Lowe's management there were dining and sleeping accommodations at the end of each travel stage. However, by the time the Southern Pacific acquired the line, only the Mount Lowe Tavern at the end of the last stage remained to offer passengers the opportunity to rent a cottage for overnight or more extended vacations.

Operations Under the Southern Pacific

The Southern Pacific continued to expand the Pacific Electric's passenger services in the region as well as its freight services. The SP further capitalized on the PE's standard gauge trackage by using some of its lines as a "switching network" for its own freight operations between San Pedro's port facilities and Los Angeles.[19]

The PE continued to service outlying communities and to attract passengers by offering transportation to regional special events. In 1912, for example, after service to Pomona had begun, excursion cars were run directly to the gates of the Los Angeles County fairgrounds. As soon as the Pacific Electric reached San Bernardino in 1914, special service was also provided to the National Orange Show grounds.[20]

By 1926 the Pacific Electric had reached as far east as Redlands and as far south in the Inland Empire as Corona.

The travel corridor between Pomona and San Bernardino was special to the PE system in several ways. It ran through a rural area with comparatively fewer stops than on lines in heavier populated areas nearer to Los Angeles. It operated on a line which carried twice the voltage of the rest of the system and which made high speeds possible. More importantly, it had a protected right-of-way with very few crossings. As the motormen operating the trolleys did not have to worry about cross-traffic, they could safely accelerate to speeds of approximately sixty miles per hour, making the San Bernardino line a true rapid transit provider.

Streetcars in the Spatial Development of the Los Angeles Region

Los Angeles had, of course, existed prior to the introduction of electric streetcars, but, unlike Boston and New York, it had never developed as a densely populated pedestrian city. Furthermore, while interurbans existed and thrived in other cities, they developed somewhat differently in Los Angeles because interurban trolley developers in most cities first had to raise funds through stock sales or private subscriptions before any track could be laid and then to build their lines between established towns and cities. Huntington, on the other hand, used his trolleys as a tool to attract customers. His inheritance and the success of his real estate developments had provided him with the financial wherewithal to purchase the right-of-ways he

needed, build a trolley line, and make it possible for people to reach his properties in fledgling communities around the Los Angeles Basin.

Even before Huntington built the Pacific Electric, Los Angeles' transportation system had developed differently than other urban areas had because, unlike most other American cities, it had become an urban center during the Electric Streetcar Era (1890-1920) rather than during the Walking/Horsecar Era (pre 1800-1890).[21] Cities which developed during the Walking Era were small and densely populated out of practical necessity because the primary means of transportation available to most inhabitants was walking. The radius of the city could only expand out from the center to a distance that could be comfortably walked in a thirty to forty-five minute period. Anything larger made it impractical for workers to travel from their homes to their workplaces.

By the 1830s steam railroads made it possible for the wealthy to move to the outskirts of the cities or to nearby small towns from which they could commute into the city on a daily basis. The majority of the population, however, could not afford to use the trains, so the limits of most cities were not much affected by this particular technological development. With the introduction of the horsecar, on the other hand, thin suburban belts began to appear around the cities' edges. When electric streetcars were introduced in

the 1890s, the layout of the typical city changed from a circular shape to a star pattern as homes and businesses were built along the corridors formed by streetcar lines radiating out from the city center.[22] Because Los Angeles had developed at the same time as the streetcar, its residents were so dependent on the trolley lines that developers seldom ventured out more than four blocks from the tracks.[23]

Los Angeles' already low population density had little opportunity to increase because the streetcar had made it possible to avoid crowding by spreading outward. Until the mid 1920s, the region around Los Angeles was a collection of autonomous communities of single-family homes on large lots with distinct separations between residential and business districts.[24] Although there were multiple business districts in the region during the streetcar era, downtown Los Angeles was the largest, and it dominated the region as long as the trolleys were the primary means of transportation and while their routes radiated out from downtown.[25] This dominance would change, however, as automobiles became more popular, sprawling suburban settlement became standard, and multiple business centers replaced the single dominating central business district.

Fares, Jitneys and Private Automobiles

Although privately owned and operated, the Pacific Electric and LARY were often considered and treated as

public utilities. This disparity created problems whenever the trolley companies appealed to the California Railroad Commission (later the Public Utilities Commission) for a fare increase. Los Angeles residents had long harbored a deep distrust toward railroads in general which was a result of the Southern Pacific's attempts in the 1870s to force the city to turn over control of a local railroad and to pay the Southern Pacific a $600,000 "subsidy" to build an SP line into the otherwise isolated city.[26] The lingering distrust of the motives of the railroads was evident in the public's attitude toward them whenever a proposal for increased fares was presented.

In spite of frequent requests for an increase, LARY's fare remained at five cents from the earliest years of its existence until 1926 when, after the Public Utilities Commission decided once again to deny a fare increase to adjust for post-war inflation, LARY won an appeal to the United States Supreme Court for a two cent fare increase.[27]

The five cent fare had provided a good return for the trolley companies' investors in the early years of the century. Before World War I, fare increases were opposed partly because it was assumed that operating expenses would decrease over time because rail transportation was virtually the only means of practical transportation available to the public, and operating efficiencies would be realized as the number of riders increased. But by 1914, LARY and the

Pacific Electric began to experience competition from privately owned automobiles as well as a new form of public transportation, the "jitney." Initially, jitneys were privately-owned automobiles which were used by their entrepreneurial owners to offer taxi-like services. By 1915 a reported 1800 jitneys in the city carried 150,000 passengers each day.[28] Jitneys operated along the same routes as the streetcars and had competitive fares and better maneuverability (they were not dependent upon tracks).

They quickly became popular with the public because they had several advantages over the streetcars: they could flit in and out of traffic; and although they usually traveled along the same routes as the trolleys, they could, if required, leave the standard route and deliver a passenger directly to his own home; they had the same five cent fare as the trolleys; and, finally, their popularity was enhanced by the very novelty of the automobile.[29] In addition to filtering off a significant number of streetcar passengers, when they first appeared on the streets of Los Angeles, jitneys were an annoyance to LARY and the Pacific Electric because they were unregulated and paid neither state nor local taxes and only nominal business licensing fees. The initial reasoning behind the lack of regulation was that the city's Board of Public Utilities was willing to treat the developing trade as an experiment in an alternate form of transportation.[30]

Part of what made the increased competition from jitneys and other automobiles so frustrating to LARY and the Pacific Electric, was that the traction companies were bound by their franchise agreements to pave and maintain the streets along which their lines ran. They, then, provided their competition with the very means to compete, and the more congested the streets became with automobile traffic, the less efficiently the streetcars could operate. All of this limited the traction companies' ability to earn what they believed to be a fair return on their investment.

Late in 1914 the Pacific Electric and LARY appealed to the city council to enact legislation to regulate the jitneys as public utilities. In March 1915, an ordinance was passed which required jitney operators to obtain a permit to operate in a specific territory and route and to carry insurance. The jitney operators protested by appealing for relief from this regulation through a city-wide referendum, but in the face of an organized opposition from the traction companies and their employees, the challenge failed.[31] Over the next three years, even more restrictive ordinances were passed. In 1917, jitneys were barred from operating in the central downtown business district in an effort to reduce traffic congestion, and the final blow came during the summer of 1918 when the Los Angeles Board of Utilities voided all jitney licenses adjacent to trolley tracks. With access to these popular routes denied, the jitney operators

could not sustain their business and jitney service disappeared.[32]

Although their services had been popular, the jitney operators had not been organized enough to withstand the objections of the traction companies. And while many passengers had utilized the jitneys because they were dissatisfied with streetcar services, public policy had turned against jitneys only when it was determined that they did not provide an efficient alternative to the trolleys. A similar public policy induced scenario would unfold later when the trolleys themselves fell out of fashion and favor.

Even as the jitneys faded from competition, the trolley companies came to realize the more formidable challenge posed by the personal automobile. In the first fifteen years of the twentieth century, autos were primarily gadgets owned by the wealthy. Interurban trolleys were still the most efficient and popular means of travel for the working class, but that was changing as automobiles became more affordable and ownership more common.

The railway companies appealed to the California Public Utilities Commission in 1919 for permission to institute a fare increase to help recover increased operating costs resulting from the effects of World War I. Labor shortages had pushed up wages[33] and many of the commodities needed to support operations had become scarce and expensive. By 1918 the operating cost ratio for LARY increased from sixty-nine

percent to eighty-three percent, and both it and the PE were showing a net income deficit.[34]

In responding to the requests, the commission set a precedent which played a fundamental role in the failure of the trolley system in later years. It decided that an increase was not in the public's best interests and denied the fare increase recommending instead that the railways find more efficient methods of operation. It suggested that lines be rerouted and technology implemented in the form of one-man operated safety cars instead of the two-man cars commonly used.[35] The commission determined that these cost cutting measures would result in a $1.5 million savings which, in turn, would cover expenses, fixed costs, and finance the suggested capital improvements.[36] It also stipulated that only if the changes were implemented would the commission consider a future fare increase. As much as it needed the fare increase, the Pacific Electric could not employ one-man cars because of existing labor union agreements. LARY did its best to meet the commission's demands, but the savings generated by the changes were lost to inflation. It filed another request for an increase in 1921, but the commission made approval of a one cent increase contingent upon the implementation of further cost savings measures by the railway. LARY officials decided to forgo the increase and to hope that better economic conditions would return.[37]

The commission did make one concession to the trolleys by requesting municipalities served by LARY and the Pacific Electric to relieve the traction companies of their obligations to pave the streets along their routes. The appeal was largely ignored, however, as civic leaders realized that their constituents' taxes would have to be raised in order to maintain the roads if the railroads were no longer required to provide the service. They decided to continue the railways' obligations to pave rather than raise taxes on residents within their districts.[38]

Street Congestion

As early as 1910 there were reports of heavy street traffic congestion in downtown Los Angeles. Automobiles were becoming so popular that in 1914 the state of California began tracking the number of registered automobiles within the state.[39] The congestion caused by automobile traffic downtown severely impacted the efficiency of the trolley lines because the trolleys did not have an exclusive right-of-way on most of the intraurban lines and had to contend with the same traffic as everybody else and had the additional hindrance of being tied to the rails. The streetcars could not move from lane to lane as horse-drawn conveyances and later autos and buses could, and the slower the trolleys got, the more passengers they lost.

The traction companies were caught in the middle of an

impossible situation. On the one hand, they were facing demands from the citizens of Los Angeles to improve efficiency and accommodations and to expand the area serviced. On the other hand, they were barred by the CPUC from increasing fares to finance improvements. When the railway companies failed to respond to their demands, residents complained to the CPUC, asking the agency to require the traction companies to make the improvements. Utility commissioners could not force the railways to make the changes and even made matters worse by refusing to authorize increases without making them contingent on the implementation of some other program with which the railways could not comply. It is no wonder that residents began to find and utilize alternative means of transportation:

> The people gave up on the politicians and took reform into their own hands by claiming the right to their own private means of transport. The automobile therefore became a symbol of the democratic impulse that had originally sparked the progressive movement.[40]

Los Angeles city planners failed to recognize the negative impact the automobile could have on transit within the city until it was too late. They had estimated that the number of automobiles in Los Angeles County would peak at 100,000: by 1924 there were more than 500,000.[41] They also failed to realize the positive effect that a well-organized, publicly supported public transportation system could have. During the same period that other American and European

metropolitan authorities were constructing publicly financed subway and elevated intra- and interurban transit systems, Los Angeles continually rejected proposals by LARY and the Pacific Electric to finance improvements to the infrastructure of their companies.

Heavy traffic congestion in downtown adversely affected businesses as access to their premises was limited by available parking. As the popularity of automobiles increased, businesses began to move from the center of the city out to developing suburban business districts. Between 1920 and 1924 the number of registered automobiles in Los Angeles County increased from less than 200,000 to more than 500,000. By 1924 approximately 262,000 automobiles traveled through downtown Los Angeles daily: the city's streets were jammed. Streetcars, routed on the most heavily traveled streets, were hampered by autos which refused to yield the right-of-way and by unthinking pedestrians who constantly crossed the streets in front of the moving streetcars.[42]

Only once was serious consideration given to the purchase of LARY by the city when late in 1925 it opened negotiations with Henry Huntington to bring the intraurban line under public ownership. Proponents of the idea pointed out that the company could not afford capital improvements without raising fares, but that under public ownership, some of its expenses could be reduced through lower cost municipal bonds and the cessation of the paving requirements of

the franchise agreements and at the same time, the five cent fare could be maintained. The Los Angeles Times initially opposed the plan as socialistic, but its opposition never really caught on as the city had already succeeded in municipalizing its water, electricity and gas services.[43] In attempting to determine what a fair purchase price would be, the city failed to act quickly enough. Huntington died in May 1927 and his estate went into probate. Negotiations were never reopened as the plan's supporters lost interest.[44]

Even though the trolleys offered reasonably efficient and inexpensive service, Los Angeles residents had chosen automobiles early and enthusiastically because they were comfortable, private, and they could go just about anywhere the driver wanted to go. When compared to the national average, Los Angeles far exceeded other cities in the number of cars per resident; as early as 1915 the national mean was one car per forty-three residents while Los Angeles had one for every eight.[45] By 1925, the ratio of cars to people nationally was 1:6, but in Los Angeles it was 1:2.[46] Table 2 helps to illustrate just how much more dependent Los Angeles residents were on automobiles than the average American by comparing the number of residents per automobile in the United States, Chicago and Los Angeles.

Just as the streetcar had contributed to the region's dispersed nature of settlement, the automobile had its own

TABLE 2

Residents Per Automobile

	United States	Los Angeles	Chicago
1915	43.1	8.2	61.0
1920	13.1	3.6	30.0
1925	6.6	1.8	11.0
1930	5.3	1.5	8.0
1935	5.6	1.6	NA
1940	4.8	1.4	NA

Source:Scott L. Bottles, Los Angeles and the Automobile (Los Angeles, The University of California Press, 1987), 93.

effect on the spatial development of the region by making it possible to fill in the spaces between radiating railroad lines which had previously been inconvenient to settle. It also increased the accessibility to those areas where streetcars had never reached. With increased usage, automobile drivers demanded more and better roads and highways. Their demands generated a change in public transportation policy whereby public agencies began using tax dollars to construct and maintain roadways rather than waiting for private enterprise to provide.[47]

The provision of better roads further affected the operating efficiency of LARY and the Pacific Electric. Once protected right-of-ways were violated by roads crossing the tracks at grade level and over which motorists would some-

times race the trolley or just assume the right-of-way. The increase in cross traffic on formerly protected or rural routes meant that the motormen operating the trolleys needed to slow their traveling speed in order to avoid the possibility of collisions. While there were some instances of cooperation between the railroads and public entities to build over- and undercrossings, there were too few of them built and too many automobiles to positively affect the streetcars' operations.

A telling example of the sacrifice of the interurban in favor of the automobile was the demand by the motoring public to pave around the rails of the Long Beach line. The line had been constructed in 1902 with a protected right-of-way and included separate public roadways on either side of the tracks which allowed the Pacific Electric to travel at its highest possible speed and efficiency. In the 1920s, however, the public demanded a change, and although the PE argued that its efficiency would be deeply and negatively affected, the right-of-way was eliminated and pavement laid around the tracks. The result, a wide boulevard, increased accessibility and movement for automobiles, but it also increased the traveling time for Pacific Electric riders by about thirty percent which prompted many passengers to abandon the Red Cars in favor of their own automobiles.[48]

In the 1920s the interurban began to face competition from privately and municipally owned motorbuses. Like the

jitneys which preceded them, the buses tended to travel the same routes as the streetcars because they were the most heavily traveled. Instead of supplementing and enhancing the Pacific Electric's and LARY's services by operating within areas where the streetcars could not reach, the buses offered direct competition to the streetcars. The continued lack of efficiency encouraged trolley passengers to use other forms of transportation and further reduced the traction companies' revenues.[49] The Public Utilities Commission could do nothing for the traction companies to control the competition from buses because the buses were out of the commission's jurisdiction.

Although the streetcar companies had successfully challenged competition from the jitney trade in the previous decade, buses posed a more difficult challenge because they operated in a wider area than the jitneys had. Jitneys had operated almost exclusively within the city of Los Angeles and, for the most part, were independently owned and operated. Buses, on the other hand, were either municipally owned and operated within the confines of the communities for which they were purchased, or were independently owned and operated between the various communities. There was no single entity to which the traction companies could appeal to receive relief from competitive pressures. Furthermore, the Los Angeles City Council had imposed regulations upon the jitney trade because jitneys were adding undesirable

traffic to downtown streets, buses were apparently not having the same effect.[50]

UNION STATION CONTROVERSY

Traffic in downtown Los Angeles had emerged as a major planning problem by the first half of the 1920s. Most of the streets had been laid out during an era when horse drawn wagons and the trolleys had easily shared the space. With rapid population growth and the introduction of large numbers of automobiles, the streets were not able to accommodate the resulting volume of congestion. Neither automobiles nor streetcars could negotiate the streets at a consistent pace and parking had become almost impossible. The streetcar system was severely impacted and "slowly dying of congestion."[51]

Rather than encouraging the use of the potentially more efficient public transportation system, the Los Angeles County Board of Supervisors decided that the use of downtown streets needed to be limited to automobile traffic. In 1923 it set up a regional planning commission charged with developing an integrated countywide highway system. In 1924 voters elected to establish what was called the "Major Traffic Street Plan" which, when completed, was to include recommendations for widening streets and otherwise enhancing the movement of traffic through the city's streets.[52]

Although downtown businessmen did not want to admit it, there was a shift developing in which downtown Los Angeles was fading as the dominant central business district and being replaced by smaller business districts throughout the

region. Between 1923 and 1931 the number of people entering downtown Los Angeles fell by twenty-four percent despite a general population increase in the metropolitan area.[53] The Pacific Electric was not equipped to accommodate this change because its services operated out of a central hub located in downtown and could not provide direct service between many of the communities which were located on separate radials.

Huntington's Pacific Electric had contributed much to population dispersal in the Los Angeles area, and it was its sprawling nature that made the Pacific Electric's chief competitor, the automobile, so popular. Initially, people had moved to the suburbs located along the PE's tracks. However, as automobile ownership became common, developers were able to construct homes which were far from existing PE lines but which were easily accessible to automobiles.

Another of the many problems that affected the efficiency of the streetcars within the city was that they almost always shared the street with other vehicles and pedestrians. Automobiles routinely traveled on the streetcar tracks and obstructed the movement of the trolleys. Pedestrians frequently crossed in front of moving trolleys slowing already sluggish progress. Streetcar passengers became frustrated with the uncomfortable and decaying conditions of aging trolley cars, and many eventually stopped riding them in favor of their own automobiles in which, at

minimum, they could travel at the same speed the trolleys did but in greater comfort.

By the mid twenties, enterprising businessmen recognized that downtown Los Angeles was crowded and inconvenient to shoppers and moved all or part of their businesses out of the downtown area to outlying commercial centers.[54] Bullock's Wilshire, for example, opened its doors in 1928 a few miles west of downtown. It immediately demonstrated that it possessed a distinct advantage for motorists over downtown stores because it provided a large parking lot right next to the store for the convenience of its shoppers.[55]

In 1924 the Los Angeles City Council appointed the firm of Kelker, De Leuw & Company to develop a rapid transit plan for the city. Known as the Kelker-De Leuw Report, the firm's conclusions were submitted to the city in 1925. The report advised that a reduction in downtown congestion could be achieved by segregating streetcar traffic from automobile traffic by creating rapid transit lines with protected right-of-ways via elevated tracks, subway routes, and limited stops. This would provide speedy and efficient transportation to downtown from outlying communities as well as improved automobile traffic flow on the city's street. The report also acknowledged the continuing importance of streetcars and interurbans to other communities in the region as a part of an integrated system.[56]

Perhaps because it had been commissioned by the city,

the Kelker-De Leuw Report's primary flaw was that it assumed the continuing importance of downtown Los Angeles as a destination, but the automobile had already made this assumption obsolete. It had become much more convenient and common for shoppers to frequent the stores and other businesses which were springing up on the periphery of the city and in its surrounding communities. In addition to the convenience of doing business locally rather than downtown, the idea of small, autonomous communities appealed to those who had come to California to escape the densely populated cities of the east in pursuit of a healthy, uncrowded lifestyle. These people were not interested in funding a rapid transit plan which did not satisfy their own interpretation of the Southern California lifestyle.[57]

One of the more important features of the Kelker-De Leuw Report as it related to the trolleys, was that it warned that a healthy rapid transit system could not be self-supporting in an area of low population density and that public subsidization was essential to its success in Los Angeles. It cited New York, Boston and Philadelphia, as examples of cities which had provided public funding for their rapid transit plans and had achieved their objectives. Only with some form of public funding, the report argued, could fares be kept reasonable and serve as wide an area as required.

Soon after the report was presented, a Citizens' Rapid

Transit Committee was formed to study and implement the report's recommendations. Committee members included representatives from various civic organizations, the Pacific Electric and Los Angeles Railway, members of the city council and other city officials.[58] During this review period, opposition quickly formed because of the Los Angeles Times' focus on Kelker-De Leuw's recommendation to construct elevated right-of-ways for the trolleys. The opening of the rapid transit issue also regenerated interest in the construction of a new centralized train station for the city which would eliminate the separate stations currently in use by Southern Pacific, Santa Fe and Union Pacific and provide access for passengers wanting to transfer to Pacific Electric trains. In 1925, the city council endorsed a plan to establish just such a terminal at the "Plaza" site a few blocks from the new city hall building, parallel to the banks of the Los Angeles River. The question of building a union station and, if built, whether it should be located at the Plaza site was put on an April 1926 ballot.

The railroads, not wanting the expense of building a new station, submitted a plan of their own. They offered to build elevated lines to the Pacific Electric terminal building and protected walkways for travelers to use when moving between the various stations.

Although it would not be required to move its operations to the proposed union station, the Pacific Electric

would be affected by the change. The plan did allow for the future possibility of constructing a subway access to the station for the PE, but in the meantime, service to the new station would have to be provided via additional surface grade crossings. The Los Angeles Times reported that Pacific Electric officials had informed the Public Utilities Commission that if the Plaza plan were implemented, it would probably have to move its main line operation to the east side of the Los Angeles River to escape the worst of downtown congestion.[59]

The railroads' proposal was opposed by the public in general and by Harry Chandler, publisher of the Los Angeles Times, in particular. Chandler used the newspaper to wage a campaign against the railroads by focusing on two key issues: the inconvenience to travelers of the railroads' multistation system and the proposed introduction of elevated lines in the city. In the weeks prior to the election, the Times ran numerous front page articles about elevated lines in cities on the east coast emphasizing their negative aspects such as the noise, how they darkened the streets over which they ran, and how difficult they were to access when accidents occurred. Accompanying the articles were photographs depicting long, dark blocks of streets overshadowed by elevated tracks. The day before the election, the railroads and their supporters placed a three-quarters page ad in the Times which included a statement

signed by the presidents of the four railroads which declared that elevated lines in Los Angeles meant altered grade crossings such as under- and overcrossings, not miles of trestles raised to run longitudinally over the streets of Los Angeles as the Times had implied.[60] The voters cast their ballots in favor of the union station and the Plaza site plans.

Although it was not immediately apparent, the election had at least two damaging long term effects on the Pacific Electric's future: first, the Kelker-De Leuw Report's recommendation for public subsidization of rapid transit had been buried and all but forgotten in the station controversy; and second, the failure of the plan for elevated lines dashed its chances of being able to compete successfully against the automobile. Without the elevated lines and subways, the Pacific Electric could not reasonably improve its operational efficiency because it simply could not move its cars efficiently through the city's traffic entanglements.

The Kelker-De Leuw Report had anticipated correctly what would happen if the streetcar companies were not publicly subsidized. The report had indicated that a streetcar system could either be privately funded and provide quality, limited service with high fares or it could be publicly funded and provide extensive service with reasonable fares. The Los Angeles streetcar companies could accomplish neither

because they could not raise their fares without the approval of the Public Utilities Commission which, despite numerous requests, had not authorized an increase in years. Furthermore, without public subsidies, it became increasingly difficult for the traction companies to service their current lines even as area residents continued to criticize the PE for not expanding into newly developed areas.

THE GREAT DEPRESSION

The Great Depression dealt the trolley system a severe financial blow. Patronage fell sharply and the Pacific Electric's operating revenues fell to a twenty year low while the L.A. Railway's reached a ten year low.[61] Between 1931 and 1949 the PE suffered average losses of two million dollars per year, and while not as great, LARY also posted losses during the Depression years.[62] The deficits made it increasingly difficult for the companies to make capital improvements and even to maintain existing lines properly.

While LARY had been granted a two cent fare increase in 1927, it used the increased revenues to improve its balance sheet instead of rolling them back into the business by making capital improvements and upgrading customer services. The Pacific Electric had also requested a fare increase at the same time but was denied based on the CPUC's determination that higher fares would lead to losses in ridership. The commission actually recommended that the PE reduce its fares on one of its routes in order to encourage new riders. The PE complied and when this failed to generate the hoped for increase in ridership the commission relented and permitted the fare increase. Unfortunately, this time the commission's predictions were realized as both patronage and revenues fell after the fares were raised. Both LARY and the Pacific Electric decided that it was necessary to close unprofitable lines. The commission agreed with the traction

companies' decision and authorized the closing and dismantling of many lines in the late 1920s and through the 1930s.[63]

Neither the Pacific Electric nor LARY had the financial reserves necessary to do more than survive the Depression although the Pacific Electric had the advantage of the Southern Pacific's financial backing. The infrastructure of both companies suffered as rolling stock and rails aged. Even as services were reduced or suspended on lightly traveled lines, the public never fully understood the problems the traction companies faced and continued to lodge complaints about the lack of crosstown lines and other services.[64]

Although it might have seemed practical during this period of economic distress for people to abandon their automobiles and turn to the more cost-efficient public transportation system, this did not happen. The automobile had become a necessity rather than a luxury by this time, and while annual car sales fell seventy-five percent between 1929 and 1932, car registrations fell only ten percent which indicates that while people were willing to delay the purchase of a new vehicle, they were not as receptive to the idea of giving up the one they already owned.[65]

DECLINING OPERATIONS

Throughout the 1930s the Pacific Electric terminated service on unprofitable lines. Each time services contracted, the company lost more passengers and was criticized for not attempting to attract business by putting new cars into service or by expanding into new communities. The public apparently could not comprehend the idea that a railroad company did not have the funds to finance expansion projects. Worse, the Public Utilities Commission compounded the problem by consistently siding with public by refusing to authorize fare increases which, over time, could have financed expansion and other improvement projects.

Most people seemed to have lost interest in the trolleys as an important factor in the regional transportation system. Periodically downtown advocates and city officials formed committees to investigate the rapid transit plan, but whenever the question of financing the implementation arose, proposals which included public bond measures or increased property assessments were rejected. There was a general distrust toward the idea of rapid transit which stemmed from a resentment toward downtown advocates by those living in surrounding communities. There was also an assumption by the public that rail-based transportation was within the realm of private enterprise and that any changes to it be privately financed even though the trolleys were regulated by a public agency that illogically and regularly denied

them the ability to charge a fair price for their services. Between the competing priorities and assumptions of the public, the rapid rail transit plans were always put aside and the trolley companies were virtually powerless to improve their situation.

World War II provided a temporary resurgence of popularity for the streetcar system when gasoline and rubber shortages made it difficult for people to operate their private automobiles. The streetcars were put into extremely heavy use during the war. In addition to regular passenger traffic, they were used to transport large groups of soldiers and sailors from the trains at Union Station to their bases and other duty posts in the Southland.[66] The Pacific Electric experienced so large an increase in the number of passengers that it had to take its old wooden cars out of storage and borrow additional rolling stock from other cities in order to meet demand.[67] Soon after the end of the war, however, residents returned to their old habits and the convenience of their personal automobiles.

In 1946, the Pacific Electric requested approval for its first post-war fare increase to cover rising operating costs. The Public Utilities Commission granted the request, but it also ordered the company to upgrade its equipment before any additional requests would be approved.[68] While the company would have liked to follow the directive, it still did not have the financial reserves necessary to

finance an upgrade. The fare increase merely kept it in operation.

The Pacific Electric made its final attempt to maintain a position as a viable transportation alternative in 1947 when it tried to obtain city and state funds to finance the construction of a right-of-way for the Pacific Electric down the center of the new Hollywood Freeway which was still in the planning stage. The PE's president, Oscar Smith, believed that, if successful, a double-tracked line running down this freeway would serve as a model for future cooperative projects. He estimated that the railway could transport twice as many people per hour along its right-of-way as the eight lanes of automobile traffic. In spite of its obvious utility, the proposal was rejected as too costly both in terms of money and time because it was determined that construction on the freeway would have to be delayed in order to introduce the rail lines into the project.[69]

In response to the directive to upgrade from the CPUC and the failure of the Hollywood Freeway proposal, Pacific Electric officials began to seriously evaluate their position in the passenger rail service market. Even before the war, its rolling stock was outdated and worn because the company had not had the funds to make improvements. During the war, the continuous, heavy usage had almost worn out the trolley cars, but the company could not update the equipment because of materials shortages caused by the war. As soon

as the war was over, ridership had fallen off again and company officials recognized that there was little prospect for improvement in the future. The Pacific Electric made the decision in 1953 to sell its passenger operations to Metropolitan Coach Lines, a bus service provider in the Southern California region. Metropolitan operated the Pacific Electric at a loss for five years before it sold the system to the Los Angeles Metropolitan Transit Authority (LAMTA), a state-owned agency, which oversaw the actual demise of the interurban after it announced the suspension of passenger trolley service in 1961.[70]

LARY experienced a similar fate. In 1940 it had begun making arrangements to convert from a fixed rail service to a motorbus service. Company officials believed this change would position the company to take advantage of the next phase of intraurban mass transit. Before the buses could be purchased, however, World War II broke out and modernization plans had to be put on hold, and then in 1944 the Huntington estate sold LARY to American City Lines, a subsidiary of National City Lines which owned transit systems nationwide. American City Lines changed LARY's name to American Transit Lines and implemented the modernization plans set forth by LARY in 1940, completing the transformation of the company from a streetcar line to bus service before the company was sold again to LAMTA in 1958.[71]

THE CONSPIRACY THEORY

As streetcar companies across the nation were sold and their operations converted to bus service, there arose a popular belief that a group of auto, rubber, and oil companies had conspired over the years to remove trolleys from competition in the transportation industry. There is little evidence of the existence of an actual conspiracy. If, however, one is inclined to distrust the business practices of large corporations, then the theory is appealing, but it does not withstand comparison to the facts of the situation in the Los Angeles region.

The conspiracy theory argues that streetcar systems were sold and converted to motorbus service nationwide beginning in the 1920s and through the early 1960s, but it is also true, but infrequently mentioned, that the Pacific Electric and LARY had been using buses to augment their rail service since the early 1920s[72] and LARY had planned to modernize its operations with buses before World War II. It is also true that many of the nations' streetcar companies were purchased by National City Lines (NCL) which was a subsidiary of General Motors, and that National City Lines purchased GM buses to operate in its franchises. What is largely ignored, however, is the fact that when NCL purchased many of these lines nationwide, the trolleys were often in deep financial distress because of a declining market: this was the case in Los Angeles. National City

Lines was not organized until 1936 and did not have any connection with LARY or the Pacific Electric until the late 1940s.

As this examination has shown, the Pacific Electric experienced decades of financial troubles before it decided to give up on passenger service. There had been frequent opportunities available for the public to fund or otherwise subsidize improvements and expansion of the streetcar services, but these were consistently rejected for various reasons: short-sighted fare decisions made by the Public Utilities Commission; a general public objection to fund privately owned companies; and a long-standing struggle between the downtown advocates and those who preferred decentralization and viewed rapid transit as a ploy by downtown to increase its importance at the expense of outlying communities.

In 1974 Bradford C. Snell gained widespread recognition when he presented a report entitled "American Ground Transport" to the United States Senate Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary. In this report, he attempted to explain how General Motors, Ford and Chrysler "eliminated competition among themselves, secured control over rival bus and rail industries, and then maximized profits by substituting cars and trucks for trains, streetcars, subways and buses."[73]

He reported that in the mid-twenties, GM needed to

secure a new market for itself because the private automobile industry had become saturated. To that end, GM purchased Yellow Coach Lines in 1925 and began production of motor buses. In 1926, it was involved in the formation of Greyhound Corporation which, according to Snell, had as its purpose the conversion of passenger rail services to intercity bus service. In 1932, GM "undertook the direct operation and conversion of interurban railways and local electric streetcar and trolleybus systems to city bus operations."[74] Snell further contended that it was GM's ultimate intent to replace buses with automobiles by making buses so inconvenient and uncomfortable that passengers would abandon them in favor of private cars.[75]

Snell explained that GM formed United Cities Motor Transit (UCMT) specifically to purchase and convert streetcar systems to bus service. UCMT was successful in several cities where it established a pattern of purchasing the streetcar line, converting its services to bus service, then reselling the company before moving on to the next city. UCMT and GM were censured in 1935 by the American Transit Association (ATA) for similar activities in Portland in which GM as a bus manufacturer was deemed to be self-serving. As a result of the ATA criticism, UCMT was dissolved. In the next year, however, Snell argued that three GM and several Greyhound executives formed National City Lines to perform the same service that UCMT had.[76] The idea of an

interindustry conspiracy emerged because GM and Firestone Rubber and Tire owned stock in NCL and Standard Oil of California, Mack Truck, and Phillips Petroleum owned stock in NCL's subsidiary, American City Lines. National City Lines had agreements with all of these companies to purchase their products to fill its equipment and supply needs. Between 1936 and 1949 more than one hundred electric transit systems in forty-five cities had been purchased and converted to GM buses.

While the facts of the above situation are true, Snell's accusations that the actions of all of the companies, but GM in particular, were performed with the specific intent to destroy passenger rail service ignores the possibility that GM did what all good businesses do by recognizing a need in the marketplace and devising a means to fill that need while earning a profit from it at the same time. Snell assumes, incorrectly, that all of the trolley systems that NCL and its subsidiaries purchased were healthy concerns which had years of usefulness and profit ahead of them and which also had no choice in the matter of their sales. He and others who favor the conspiracy theory fail to acknowledge that in some cases, people had already stopped using the streetcars in favor of their personal automobiles long before UCMT or NCL were even thought of. In Los Angeles this trend had been apparent since the mid 1920s and yet the Southern Pacific maintained its ownership of the

Pacific Electric until 1948 when it decided that its profit potential had been lost.

Snell's arguments also fail to include recognition of the effects of local public policy on the ability of streetcar systems to survive. In cities where municipalization of transit systems took place when the issue was popular amongst the citizens, the systems tended to decline less than they did elsewhere.[77] In other words, where the public agreed there was value to rail-based passenger service, that service remained in operation. Wherever the service was assigned little overall value, it disappeared. In Los Angeles, municipalization had not occurred because the city had acted too slowly in the negotiations to purchase LARY when it had the chance between 1925 and 1927, and because by the time the city was prepared to consider the idea seriously, rail-based rapid transit had already lost much of its significance. There was little real need to keep the trolleys going because the automobile provided a viable, seemingly efficient, and comfortable alternative form of transportation.

In Los Angeles, people had turned away from the streetcars long before NCL came into town. Automobiles were consistently given priority over other means of transportation because residents wanted it that way. They approved projects which removed the streetcars' right-of-ways, which allowed grade crossings on formerly high speed interurban

tracks, widened streets and improved traffic flow, financed freeway construction with public funds, and provided freeways with the protected right-of-ways which had been denied to the Pacific Electric for years. They also repeatedly refused to fund improvements on the streetcar lines by failing to support fare increase requests. It is then fair to state that, at least in Los Angeles, GM was not responsible for the death of the streetcar system, and that in fact, it was actually the public through its repeated demonstration of a preference for the automobile and the California Public Utilities Commission with its short-sighted decisions which made it virtually impossible for the trolleys to survive, much less compete, against the automobile.

EPILOGUE

After decades of massive freeway construction designed to relieve traffic congestion and in an effort to reduce smog emissions, Los Angeles and its environs turned once again to the idea of rail-based commuter service in the early 1990s when it launched a new light rail trolley system to serve the area.

Ironically, the first new trolley line to be put into service in July, 1990 was the Blue Line which closely follows the Pacific Electric's old Long Beach line. Since the Blue line opened, the system has grown rapidly and combines electric powered light rail trolleys and subways that within Los Angeles are collectively known as Metrorail with a regional network of diesel powered trains known as Metrolink which serve communities outside the immediate vicinity of Los Angeles.

The Blue Line initially offered trains at ten-minute intervals during peak commuting periods and at 15 minute intervals at other times. The initial fare was set at $1.10 per one-way trip, the same as bus fare.[78] While transit officials were concerned that the fares might be too high, they are heavily subsidized. In the first year of its operation, the Blue Line was expected to bring in only about five percent of its operating budget through fares. In contrast, the Rapid Transit District's (RTD) buses typically returned approximately forty percent of their operating

budget through fares.[79] After two years of operation, however, the Blue Line was receiving about thirteen percent of its operating budget from fares which was a much better return than anticipated.[80]

The attitude toward funding rapid rail transit changed drastically between the time the Pacific Electric went out of business and the inauguration of Metrorail's service. The public is currently fiscally and politically supportive of the rail-based system and has voted in favor of increased sales and gasoline taxes, approved bond measures and supported lobbying for federal funding.[81]

While Metrorail has been successful in attracting riders, a survey done in 1992 during the second year of the Blue Line's operation showed that sixty-four percent of its passengers had previously taken the bus as their primary form of commuter transportation. By switching from bus to rail, they were actually utilizing a more expensive form of transportation than the one they had used before. The survey also showed that thirty-six percent of the riders had previously used their cars. At the time the survey was taken, it was estimated that 35,600 people rode the Blue Line each weekday and that about 5,800 cars were kept off the freeways each day.[82] Metrolink proved even more successful at attracting commuters out of their autos and onto the trains. A 1993 survey of Metrolink riders showed that sixty-five percent of its riders had formerly commuted alone

in their private automobiles which translated into removing approximately 16,000 cars each week from the region's freeways. About half of those surveyed rated Metrolink as a better value than commuting by auto even though they believed that it cost them more out of pocket than driving did.[83]

Other than the old right-of-ways and that it is rail-based, the current system of rapid rail transit bears little resemblance to the old Pacific Electric and LARY systems. Because it is publicly owned and operated this system has a better chance for survival as it does not have to compete with the automobile directly as its predecessors did. It will also be protected from competitive pressures until the priorities of the voting public shift again.

APPENDIX A: SYMBOL OF LOS ANGELES

Over the years the Pacific Electric's cars became so widely known that they came to represent Southern California symbolically in popular culture. Merely showing them in the background of a movie or mentioning them in descriptive passages of a novel helped to establish a scene in the Los Angeles area. People might not consciously realize that a trolley car had appeared on the screen because the streetcars were such an integral part of Los Angeles life that they did not need to be emphasized but could be accepted as a subtle confirmation of location; just as one would not have to explain a visual reference to the subway in a story set in New York City or the cable cars in San Francisco, one did not need to explain the appearance of the Big Red Cars in Los Angeles.

In "Singin' in the Rain," the 1952 Metro-Goldwyn-Mayer musical set in the late 1920s, the main character is a silent screen actor who finds it necessary to flee a horde of adoring fans after the premiere of his latest film. The only available means of escape is to leap atop a passing Pacific Electric Railway car. He runs along the top of the trolley as it moves down the Hollywood street, then jumps into a passing convertible automobile. The trolley continues on its way in the opposite direction.

Raymond Chandler referred to the streetcars casually in his novels about the darker side of Los Angeles. In 1939's

The Big Sleep, he describes the background as the character, Philip Marlow, begins an investigation:

> I finished my cigarette and lit another. The minutes dragged by. Horns tooted and grunted on the boulevard. A big red interurban car grumbled past. A traffic light gonged. The blonde leaned on her elbow and cupped a hand over her eyes and stared at me behind it. . .[84]

In Farewell, My Lovely, another Chandler novel, the author sets the scene in the Los Angeles detective's office by briefly referring to the interurban:

> A wedge of sunlight slipped over the edge of the desk and fell noiselessly to the carpet. Traffic lights bong-bonged outside on the boulevard, interurban cars pounded by, a typewriter clacked monotonously in the lawyer's office beyond the party wall. I had filled and lit a pipe when the telephone rang again.[85]

While the Pacific Electric disappeared from the landscape more than thirty years ago, contemporary authors continue to use references to the system to set their stories in time. Stuart M. Kaminsky, a mystery writer, often places his characters in Los Angeles during the forties and fifties. In one book, Buried Caesars, the main character unexpectedly finds himself on the San Marino estate of Henry Huntington. Although Huntington had died years before the character stumbles onto the estate, Kaminsky takes the time to explain Huntington's significance as it related to the character's experience:

> Old man Huntington had put together the Pacific Electric Streetcar System, the big red cars and the yellow cars, the . . . trollies

> with the overhead cables that you could ride through the canyons for a dime. "The world's wonderland lines," he called it, and at its peak Huntington's Pacific Electric carried more passengers every day than the transit systems of the five biggest cities combined.[86]

In another of Kaminsky's books, The Fala Factor, a character makes a passing reference to attending an important meeting "with some folks at Pacific Electric Railway."[87] Although all of these examples include only a very brief reference, they are sufficient to demonstrate how much a part of everyday life the Pacific Electric played. It is an entity which readers can identify without much explanation. The reference becomes part of the story without causing interference.

The Disney movie, "Who Framed Roger Rabbit?", actually introduces a form of the conspiracy theory of the demise of the Red Cars as a significant subplot. The villain of the piece, Judge Doom, buys the Red Cars specifically so that he can remove them from service. With the trolley out of the way, people would be forced to use their automobiles on the soon to be built freeways which would, in turn, create a paradise in which automobiles would generate demand for innumerable roadside businesses such as gasoline stations, garages, and fast food restaurants. Judge Doom's vision seemed unrealistic to the hero, Eddie Valiant, who did not own an automobile and could not imagine the city without the Red Cars. In the end, Valiant thwarted Judge Doom's efforts

to control Toon Town and his intention to resell it when the freeway cut through.

NOTES

[1]William B. Friedricks, Henry E. Huntington and the Creation of Southern California (Columbus: Ohio State University Press, 1992), 48.

[2]Robert M. Fogelson, The Fragmented Metropolis: Los Angeles, 1850-1930 (Los Angeles: The University of California Press, 1993), 87.

[3]Friedricks, 96.

[4]Spencer Crump, Ride the Big Red Cars: How Trolleys Helped Build Southern California (Los Angeles: Trans-Anglo Books, 1965), 18; Friedricks, 7.

[5]Peter O. Muller, "Transportation and Urban Growth: The Shaping of the American Metropolis," in Geography, ed. Gerald R. Pitzi (Guilford, CT: The Dushkin Publishing Group, Inc., 1993), 155.

[6]Crump, 18.

[7]Ibid., 18, 106.

[8]Friedricks, 90.

[9]Ibid., 50.

[10]Crump, 53.

[11]Ibid.

[12]Ibid., 103.

[13]Fogelson, 89-91.

[14]Ibid., 89.

[15]Fogelson, 92; and Friedricks, 99.

[16]Friedricks, 103.

[17]Charles Seims, Mount Lowe: The Railway in the Clouds (San Marino, CA: Golden West Books, 1976), 43.

[18]The recently restored and reopened Angels Flight in downtown Los Angeles is a local example of a funicular railway. The original Angels Flight was built in 1901, several years after the Mt. Lowe Incline, to perform the same function: to carry passengers up and down a steep incline.

(http://www.westworld.com/~elson/larail/angelsflight.html, 11/13/96)

[19]Friedricks, 103-4.

[20]Crump, 126.

[21]Muller, 155.

[22]Ibid., 156-7.

[23]Scott L. Bottles, Los Angeles and the Automobile (Los Angeles: The University of California Press, 1987), 183.

[24]Bottles, 177; and Fogelson, 144-5

[25]Bottles, 191; and Fogelson, 151.

[26]Walter Bean and James J. Rawls, California: An Interpretive History (San Francisco: McGraw-Hill, Inc., 1983), 178.

[27]Bottles, 36.

[28]Fogelson, 167.

[29]Bottles, 51; and Stanley I. Fischler, Moving Millions: An Inside Look at Mass Transit (New York: Harper & Row, 1979), 39.

[30]Bottles, 49.

[31]Fogelson, 167.

[32]Friedricks, 122-3.

[33]In 1916 the typical wage for a LARY worker was twenty-seven cents per hour and by 1918 it had increased to thirty-six cents; on the Pacific Electric, it rose from seventy-five dollars per month to one hundred sixteen per month (Fogelson, 168).

[34]Fogelson, 168.

[35]Ibid., 168-9.

[36]Ibid., 169.

[37]Robert C. Post, "The Fair Fare Fight: An Episode in Los Angeles History," Southern California Quarterly 52 (September 1970): 276-7.

[38]Fogelson, 169.

[39]Crump, 99.

[40]Bottles, 53.

[41]Kevin Starr, Material Dreams: Southern California Through the 1920s (New York: Oxford University Press, 1990), 79; and Fogelson, 152.

[42]Bottles, 55; and Fogelson, 152.

[43]Post, 278-9.

[44]Ibid., 285.

[45]Bottles, 92.

[46]Ibid.

[47]Fogelson, 92.

[48]Ibid, 146-7.

[49]Mark S. Foster, "The Automobile and the City," in The Automobile and American Culture ed. David L. Lewis and Laurence Goldstein (Ann Arbor: The University of Michigan Press, 1983), 169-70.

[50]Fogelson, 170.

[51]Starr, Material Dreams, 106.

[52]Ibid., 107-8.

[53]Fogelson, pp 179-80; Joseph Interrante, "The Road to Autopia: The Automobile and the Spatial Transformation of American Culture," in The Automobile and American Culture, ed. David L. Lewis and Laurence Goldstein (Ann Arbor: The University of Michigan Press, 1983), 95.

[54]Fogelson, 180.

[55]Bottles, 194.

[56]Ibid., 128-32.

[57]Bottles, 123, 243-9; Fogelson, pp 144-5.

[58]Bottles, 133.

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[61]Fogelson, 183.

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[65]Joseph Interrante, "The Road to Autopia: The Automobile and the Spatial Transformation of American Culture" in The Automobile and American Culture ed. David L. Lewis and Laurence Goldstein (Ann Arbor: The University of Michigan Press, 1983), 100-1.

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[67]Fischler, 61-2.

[68]Sy Adler, "The Transformation of the Pacific Electric Railway: Bradford Snell, Roger Rabbit, and the Politics of Transportation in Los Angeles," Urban Affairs Quarterly 27 (September 1991): 62; Bottles, 238.

[69]Crump, 202.

[70]Adler, 81; Bottles, 238-9; and Crump, 94.

[71]Bottles, 239-40.

[72]Fogelson, 171.

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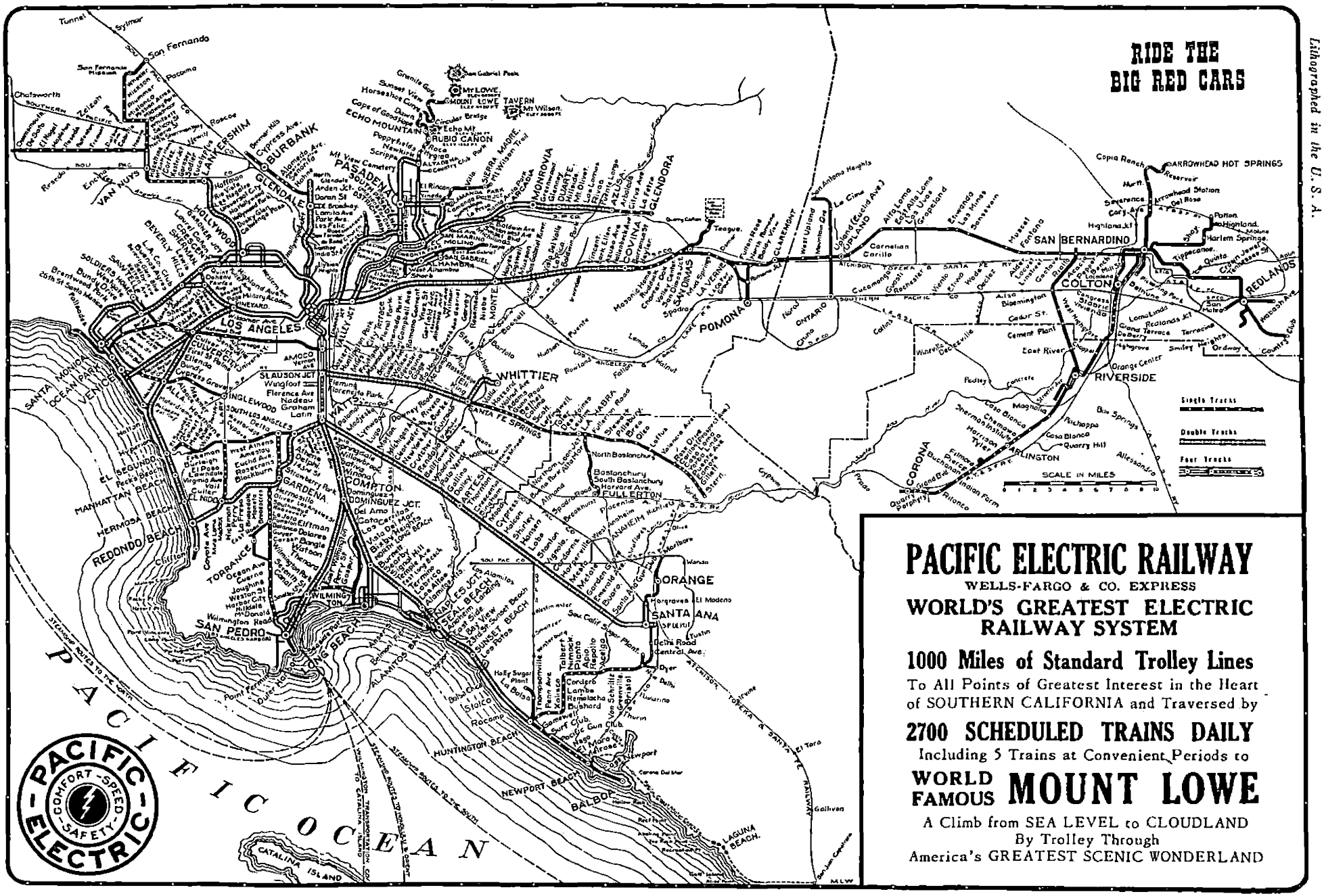
LINES OF THE PACIFIC ELECTRIC RAILWAY IN SOUTHERN CALIFORNIA



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Here is the way the Pacific Electric Railway looked in 1926, when the system was reaching its peak. The interurbans ended all operations in 1961. Map reproduced from Trans-Anglo Books' *Ride the Big Red Cars*.