Conclusion

After peaking about 1910 the passenger train’s influence in California waned for the next three decades as railroad managements struggled unsuccessfully to meet auto and highway competition. Historians disagree on how competently railroad management responded to the auto threat. Some maintain that rail managers tried but failed to maintain profitable passenger service in the face of overwhelming odds. Nothing managers did to improve passenger service could compensate for the auto’s flexibility or low operating cost. Others say that regulation hindered management’s ability to respond to a changing market. Still others argue that rail managers could have maintained some amount of profitable passenger service had they so desired. Instead they dumped passenger service when they realized through collusion with General Motors that they could make more money carrying freight resulting from increased auto production.

This examination of how passenger train managers reacted to the changing market after 1910 suggests the rejection of two of the explanations and the acceptance of the third in a modified form. The evidence in California shows that a significant, potentially profitable niche remained for passenger trains after the auto market first became saturated at the end of the 1920s. Rail managers failed to fully exploit it because of their business culture and cost understanding and not because of collusion with General Motors or interference from regulatory authorities in matters such as fares or train discontinuances. Rather than viewing passenger service as a significant source of profit, railroad managers saw it as a means of gaining competitive advantage over other railroads in the pursuit of freight traffic. This view led them to ignore important public preferences through the 1920s. In the early 1930s managements showed greater market sensitivity, but profitability eluded them because of their ignorance of the cost consequences of their passenger decisions. Unnecessarily high costs ultimately led to the passenger train’s demise. Management could have created a much lower cost service that met the demands of the public.
In this explanation, I find that regulation hindered management little if at all in making short term decisions affecting passenger service. However, government policy more indirectly interfered with management’s ability to adapt the passenger train to the auto age. After about 1915 California’s rail managements invested relatively little in the main rail routes connecting the state’s population centers. As early as 1916 some highway routes proved superior to rail lines in terms of directness and speed. By the late 1930s direct and high-speed superhighways built across all of the mountain passes separating California’s major cities rendered the state’s trunk rail lines virtually obsolete. Not even streamliners could overcome this handicap fully. This condition arose from government policy that favored other forms of transportation over railroads, and that before World War I actually penalized railroads.

Some observers, such as Albro Martin, excoriate government over this condition. However, I find that railroad managements must take much of the blame. In California, at least, managers failed to recognize the legitimate claims on the control of transportation policy of shippers and developers. Government policy toward the railroads, water transportation, and highways arose as a negative reaction by the state’s business groups to railroad management culture that demanded total control. After about 1910 other business groups held more political power than railroads. Railroad management failed to come to terms with this condition, and consequently the railroad industry was afflicted with what management called unfair government policy.

We also can infer that the beliefs of railroad managements about how costs and demand behaved contributed to the primitive quality of the major rail routes in California. The belief of railroad managements that most of their costs were fixed would have led them to underestimate the potential operating cost savings of shorter and less crooked alignments. While managements came to believe that faster services helped retain traffic, their surprise at the response of the public to fast streamliners showed that they greatly underestimated the elasticity of their market with respect to speed. They thus underestimated the gross revenue consequences of infrastructure investments. Had managements better understood their costs and their markets, they may have invested more in their most important rail lines and they likely would have been rewarded with profits.

Management’s ineffective response to the auto in California took root during the first two decades of the twentieth century as it confronted two threats to the railroad industry. One threat came from the state’s business community. The other, partly related threat came from a stagnating and then falling market.
In the first decade of the century California’s rail managers responded to explosive population and economic growth with tremendous investments to modernize and expand the state’s railroad systems. Despite such accomplishments, California’s business community by 1910 detested the railroad corporations operating in the state, particularly the Southern Pacific. The reason was simple. California’s business community wanted to control the transportation system upon which it depended. It wanted more transportation service at lower rates than private rail corporations could profitably provide.

Since the 1860s the Southern Pacific maintained sufficient political power to counter the business community’s desires, but about 1910 its political resistance crumbled. Business-backed anti-railroad candidates took control of the state government in that year, while nationally Congress passed legislation strengthening the Interstate Commerce Commission, effectively turning it over to the control of associations of rail users. Business groups nationally and in California used their newfound power to hold rates down during inflationary times, while those in California also championed the expansion of state-subsidized highways paralleling the main railroad routes in the state. At the same time automobile ownership soared in California.

These actions contributed to the second threat facing the managers of California’s rail passenger service after 1910: falling demand for that service. The rapid decline in consumer expenditures on passenger trains between 1910 and World War I suggests that the auto dramatically cut into passenger train demand in the era of primitive motorization and the earliest paved roads. At first local trains, which before 1910 experienced the largest usage, bore the brunt of the decline. By World War I local and long distance trains alike experienced falling per capita usage, and the decline persisted almost continuously through the prosperous 1920s and into the Depression.

The railroad industry’s management structure and culture influenced the way California’s rail managers responded to the twin threats of business community hostility and declining demand. The structure arose in the mid-nineteenth century as the world’s first example of a large, multidivisional business organization. Alfred D. Chandler, Jr., views such organizations as the rational response to coordination challenges posed by a complex technology spanning territories of hundreds of miles in length and breadth. Through an elaborate cost accounting system working through a hierarchical but multidivisional management structure, a relatively small team of professional managers could maintain control over the vast enterprises.

As Thomas C. Cochran found, these organizations contained weaknesses. Separation of revenue and cost analysis, reflecting the main structural cleavage between operations and accounting, hid from management
the profitability consequences of its actions. The evidence presented in this book shows that this cleavage contributed to a false paradigm of railroad economics that most operating costs were fixed.

Managers could have surmounted this weakness had not ideology intervened. Railroad managers mistrusted their primary customers—freight shippers and town development interests—believing them to be short-sighted and incapable of understanding the complexities of railroad technology. Only railroad managers understood the ramifications of fare and service policies and therefore bore the burden of deciding what was best for shippers and passengers. Financial ruin would result if managers allowed users to influence railroad affairs through the ICC or government operation. The administration of the ICC under the control of shippers between 1910 and 1917 confirmed railroad managers’ fears, convincing them not to cooperate in the development of information on the workings of railroads that might get into the hands of users. When the railroads came under federal control in late 1917, railroad managers reasserted sufficient political power within Woodrow Wilson’s administration to prevent shippers from having any say in the government’s administration of the railroad industry. After the war railroad managers resisted developing information that would reveal the cost of moving different commodities, because shippers potentially could use such information against them.

Consequently, railroad managers ignored the important work of ICC economists pointing to the falseness of the railroad cost paradigm. By 1914 ICC economists confirmed the costing work of several railroad engineers thirty years earlier showing that most railroad operating costs rose when traffic rose and fell when traffic fell. This meant that high-volume services on which railroads charged low rates probably lost money and were subsidized by lower volume shippers, contrary to what railroad managers argued. The ICC, and in particular Louis D. Brandeis, viewed cross subsidization as the source of railroad inefficiency and financial difficulties and pressured the railroad industry to adopt more advanced cost finding methods to end such abuses. Fearing that more advanced cost finding would further erode their already seriously weakened political power, railroad managers adamantly rebuffed the ICC in these efforts. The ICC succeeded only in forcing railroads to separate costs between freight and passenger service.

The railroad industry’s attitudes towards its shippers led California managers to develop responses to falling passenger demand that ignored important market signals until about 1930. Rather than allowing shippers a say in the conduct of the railroad industry, managers sought an accommodation with them. The Southern Pacific, which had been the principle political force in California, responded to the business attacks by cutting
back its political activities and assuming a more subservient stance. It sought a social contract with the state's business leaders whereby it provided a comprehensive package of needed transportation services. These included many unprofitable freight and passenger services, but in exchange the railroad received some business interest protection from the threat of new railroad competition from out of state.

Under this accommodation, railroad managers came to view passenger service more as a public relations effort than as a source of profit. Since at least 1900 railroad managers held the view that certain deluxe trains operated as loss leaders for freight service. By 1920 they judged passenger service in general by its direct or indirect utility to the business community. The Santa Fe ruthlessly eliminated rural local trains as usage evaporated, until it operated no more than a token gas-electric service on most lines out of deference to shippers. Its management concentrated on business traffic between Los Angeles and Chicago.

Because of its status as the dominant railroad in California, the Southern Pacific behaved somewhat differently. Businesspeople, who were among the first to own autos, likely quit using rural local trains as the paved state highway system took shape by the beginning of World War I. One can infer that the Southern Pacific management's cessation of investments in new cars, locomotives, and facilities for rural services about that time reflected the loss of usage and prestige of rural services. However, management continued operating such trains for another decade under no duress from the railroad commission, most likely because of the fear that if it did not maintain a comprehensive passenger service, other railroads might be allowed to build routes into California. The Southern Pacific also continued to invest in heavily traveled commuter trains that the business community valued but which lost money. As did the Santa Fe, it continued investing in mainline limited trains.

Railroad management's view of passenger service primarily as a service for business travelers explains the industry's fare practices during the 1920s. The industry enacted the high 3.6 cent fare and the Pullman surcharge in August 1920 under pressure from the ICC as a means of restoring profitability to U.S. passenger operations as a whole. Over the next several years the high coach fare destroyed the nonbusiness-oriented railroad coach trade. This included passengers using all short and long distance coach services, except those short distance coach trains linking large cities such as San Francisco and Sacramento or Los Angeles and San Diego. The latter most likely remained popular with businesspeople in the early 1920s because of congested driving and parking conditions in large cities,
and high fares did not matter to them. In contrast, most other coach services, whether short or long distance, catered to budget-minded tourists, migrants, and travelers visiting friends and relatives. These passengers left the rails in droves in the early to mid-1920s as a consequence of the high fares. Many nonbusiness travelers also used Pullman cars at the beginning of the 1920s. They, too, left the rails. Their departure not only dried up traffic on many short distance coach trains, but it resulted in the stagnation of demand even for transcontinental trains operating into the rapidly growing Los Angeles and San Francisco areas.

For almost a decade railroad management did nothing to counter this trend except discontinue coach trains when usage dwindled to the vanishing point. Except for the trains linking Los Angeles and San Diego, the Santa Fe discontinued its relatively few local coach trains that remained after World War I. The Southern Pacific maintained its illusions of providing a comprehensive public transportation service, but it replaced its rural trains with buses beginning in 1927, when traffic dwindled to the vanishing point. Management believed that the modern image of buses reflected favorably on the company in the towns of California, and buses cost far less than trains to operate.

At the end of the 1920s various railroad managements began to break out of this mold and listen more carefully to market signals, and as they did, they became fare conscious and concerned with nonbusiness travelers. To boost sagging traffic on its prestigious San Francisco to Los Angeles all-coach Daylight, Southern Pacific management significantly lowered the Daylight's fares in 1927 and was rewarded with an increase in gross revenues. It also began discounting long distance coach and tourist car tickets and recognized the need to improve the comfort of long distance coach travel. Santa Fe's management also discounted long distance coach and tourist car tickets at this time.

These moves at the end of the 1920s anticipated a more market-oriented passenger strategy by the middle 1930s. After 1934 the Santa Fe management oriented its passenger decisions toward increasing passenger volume and profits. Through high speeds, low fares, and greater amenities it attempted to wring more passenger traffic out of its long-favored Los Angeles to Chicago market, but it also aggressively turned its attention again to shorter distance passenger markets in California and the Midwest. The Santa Fe initiative prodded the Southern Pacific into similar market-driven improvements, but the Southern Pacific ignored potentially important markets that lacked effective rail competition, most notably between San Francisco and Sacramento.
Where implemented between cities with large populations, such measures attracted large numbers of passengers back to the rails, but they failed financially. Because rail managers misunderstood how costs behaved, their improvements increased costs as fast or faster than revenues. Managers hoped to make money from the lower fares by concentrating more passengers onto fewer trains, and superficial results showed that they succeeded. Despite fares of less than 1.5 cents a mile in the late 1930s compared to fares of more than 3.2 cents per mile in the late 1920s, the more popular streamliners of the late 1930s grossed as much or more per train mile as the best trains of a decade earlier, which was about $4.50 per train mile.¹ This was possible because the popular coach streamliners at the end of the 1930s averaged about 300 to 500 passengers spread over thirteen to eighteen cars, while the typical limited train of the late 1920s carried only 100 to 150 passengers in seven to nine cars.

Despite the appearance of success of individual passenger strategies, the financial position of California’s passenger service significantly worsened in the later period. In the late 1920s passenger service earned enough to cover operating costs, if not enough to provide an adequate return on investment. A decade later passenger service failed to come close to earning its operating costs. The culprit in the later period was not branch line or commuter trains. By 1939 the Southern Pacific and the Santa Fe abandoned most of these or took them off the mainline railroad financial accounts. Rather, the reason was the simple fact that the long trains of the late 1930s cost much more to operate than the short trains of the 1920s, leaving much less of a margin for management. Railroad managements based their passenger strategy on a false paradigm of railroad economics that adding cars to a train cost them almost nothing.

Had managers wanted to make money from passengers and had they perceived the profitability consequences of their actions, they could have engaged in more fruitful strategies. To begin with, they should have departed from the high 3.6 cent fare as soon as its failure became apparent, about 1922. At that point profit-oriented managers would have lowered the fare and sought means to reduce the excessive cost of passenger operations. If, for example, the public would pay no more than 2.5 cents a mile to ride a train, the onus was on management to find a way of operating the train at a cost of no more than 1.5 cents a passenger mile. The one-cent margin would give managers an adequate return on investment. Restoration of many of the economies that the United States Railroad Administration implemented in World War I would have made a good start toward cost reduction. Railroad managers eliminated these in 1920 in order to solicit freight traffic.
Had managers listened to those who warned them about the falseness of their cost paradigm, they would have done things differently in the 1930s, when they finally decided that carrying nonbusiness travelers was a good idea. By this time managers knew that substantial portions of the public would pay no more than 1.5 cents per mile to ride between larger cities in high-speed trains offering comfortable accommodations. In hindsight, we see that the long, heavy streamliners that they designed to attract this traffic proved too costly to yield substantial profits. An accurate costing method would have shown managers that they needed to reduce substantially the tare weight per passenger while still offering pleasing accommodations. The truly brilliant designs of the first generation streamliners showed that this was possible, but these streamliners failed to excite railroad managers. Informed by the traditional railroad economic paradigm, they saw no compelling reason to maintain a low tare weight per passenger. Blind to the cost consequences of doing so, they gave each passenger more space by making the trains longer, larger, and heavier. Managers also altered the original streamliner designs because they wanted new trains that looked and felt more like how they thought traditional trains ought to look and feel. Small ultra-lightweight trains did not fit in with railroad culture and did not appeal to most railroad managers; long, heavy trains pulled by massive locomotives did. Such considerations motivated managers to offer trains that pleased the public but that ended up costing far more than managers had thought, and too much to make passenger service financially viable.

Pacific Greyhound Lines’s impressive financial results during the Depression suggest that California’s railroad managers could have done better. The bus company’s profits emanated from a managerial consciousness oriented to profits rather than gross revenues. As the market compelled bus managers to lower fares, they compensated with new bus designs and better management to increase the passengers carried per ton of bus. By such means they not only maintained but increased the profit margin on each bus mile, even as the gross revenue per passenger mile fell. In contrast, during the same period the rail deficit per passenger mile increased. Consequently, as bus and rail passenger traffic increased in California after 1933, bus profits mushroomed and rail passenger service sank deeper into the red.

One might protest that bus technology lent itself more to profitable operation than trains. This is perhaps true, but entrepreneurs entering the bus business could not count on profits. The Santa Fe’s experience with bus operations showed this. Confidently expecting that it could replicate Pacific Greyhound’s 30 percent rate of return, the Santa Fe established a large bus system in Pacific Greyhound’s most lucrative territory. The railroad’s bus operations succeeded in capturing a significant part of the market, but
it failed financially. At the same time, Pacific Greyhound’s profits continued undiminished. The Santa Fe’s experience suggests that the difference in financial results between buses and trains arose as much if not more from different management methods than from differences in train and bus technology. Railroad managements could please the public, but not in a cost-effective manner.

This is not to suggest that the Southern Pacific and Santa Fe passenger strategies lacked positive results. Both companies received substantial indirect benefits from passenger service. Southern Pacific’s management believed that the Santa Fe scored a public relations coup with its Golden Gates, which may have helped it gain a greater share of San Joaquin Valley freight revenue as well as unmeasurable but valuable public esteem. Well into the 1950s, the Daylight provided a highly visible positive image for the Southern Pacific Company in California. Averell Harriman, board chairman of the Union Pacific, credited streamliners with erasing the negative image of the railroads in the eyes of the public. In a letter to Fred Sargent, president of the Chicago & Northwestern, Harriman commented, “Entirely aside from the stimulation of passenger travel that is resulting, [the streamliner] has been most effective in changing the attitude of the public to the railroad industry.” These points likely are true; it is a pity, however, that the railroads did not achieve such secondary benefits through policies that would have carried more passengers at a lower cost and at a profit to the railroads.

Rail managers failed in other ways. The Southern Pacific ignored the development of potentially important markets in the 1930s, primarily because it made its passenger investments in response to competition from other railroads rather than to potential traffic. After opening the Carquinez Straits Bridge in 1930 and dramatically lowering fares in the early 1930s, it did little to develop passenger service between San Francisco and Sacramento. The Santa Fe’s experience with its high-speed streamliners between Los Angeles and San Diego showed that such a market contained substantial potential traffic. Had the Southern Pacific implemented high-speed, lightweight motor trains in this market, as its marketing consultant recommended in 1933, passenger traffic would have increased substantially, likely at a profit.

Railroad managers also failed by denying the California business community’s legitimate interest in the state’s transportation system. This denial led to unnecessary and counterproductive strife, resulting in an over-emphasis on highway construction and underinvestment in the state’s main rail routes linking northern and southern California. By its promotion of subsidized highways, aqueducts, harbors, and power grids, the business
community showed that it was willing to support major infrastructure improvements with tax dollars. Hostility between the state’s railroads and its users precluded such investments in railroads.

Investments in better rail routes over mountain passes into the metropolitan areas could have made a major difference. The Bureau of Reclamation’s new rail route around Shasta Dam, opened in 1942, showed that modern construction could shorten rail routes and lift passenger train speed limits from around 20 miles an hour to 50 miles an hour in the most difficult mountainous territory. Similar construction over Tejon Pass and Altamont Pass would have removed hours from the rail schedules between Los Angeles and San Francisco. The traffic booms that both the Santa Fe and the Southern Pacific received from high-speed trains in California suggest that new, faster alignments would have resulted in crowds of additional passengers.

The Southern Pacific’s and Santa Fe’s results with passenger operations mirrored those of other major American railroads, as table 23 confirms. The uniformly dismal passenger operating ratios as shown in the table prompted a thoughtful railroad manager to suggest during World War II that something in railroad passenger management methods was amiss. Charles E. Smith had been in the railroad business since the 1890s and in 1943 was a vice president of the New York, New Haven & Hartford, one of the nation’s most important commuter and intercity passenger railroads. During the 1930s he directed the New England Transportation Company, the New Haven’s bus subsidiary. In 1943, when Judge R. V. Fletcher, vice president of law for the Association of American Railroads, solicited opinions from railroad executives on postwar passenger policies, Smith eagerly responded.⁴

Smith’s reply was a lengthy, pessimistic analysis of American railroad passenger policies predicting a disastrous postwar future if 1930s management policies continued. Evidence as shown in table 23 told Smith that railroads such as the Santa Fe, Southern Pacific, Burlington, or Union Pacific—roads supposedly following the most progressive passenger policies by lowering fares and investing heavily in streamliners—had little financially positive to show for their investments. Much of the blame for this situation Smith placed on his fellow railroad managers:

I believe there is considerable fallacious, shallow and emotional thinking in connection with the passenger train service problems of the railroads which should be superseded by logical analysis and realistic thinking. . . . In my opinion, there is no phase of railroading that is in more urgent need of study. In discussions of the problem, the investor in the railroads is usually the forgotten man.⁵
Smith wanted the nation’s railroad officers to address this situation through the Association of American Railroads, but he later wrote that his suggestions and criticisms so incensed passenger traffic officers that they refused to allow discussion of the matter. Instead they plunged forward blindly with plans to invest almost $1 billion in streamliners that surpassed the inefficiency of those of the late 1930s.

These points suggest that California’s rail managers responded less effectively to the automobile than they could have, and most likely rail managers in many other parts of the United States performed as poorly. The concern of California’s rail managers with keeping the business community out of the affairs of the railroad resulted in overdeveloped highways and underdeveloped rail routes. It also led management to view passenger service more as a service to the business community than as a source of profit. Combined with the false paradigm of railroad economics, this concern led managements to neglect major nonbusiness markets for about a decade. When managements finally began successfully pursuing such markets after 1933, the prevailing paradigm of railroad economics and a related management culture that preferred massive machines led them into unprofitable passenger investment and operating strategies that persisted into the post–World War II era. The inadequately developed rail routes compounded passenger diseconomies. Such difficulties prevented rail managers from finding profitable niches for passenger trains in the automobile age, although bus (and later air) managers succeeded in operating their public transportation technologies profitably under similar market conditions.