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Introduction

Perhaps no technological innovation has affected the character of American cities as much as the automobile. Until recently, however, few historians ever bothered to examine the impact of cars upon American society. Those people who did write about the automobile usually lacked both objectivity and historical insight. This was particularly true during the 1960s when Americans began to recognize some of the less desirable aspects of living in a motorized society. The automobile, critics charged, not only polluted our air but also created sprawling suburbs, crippled our sense of community, and blighted inner-city neighborhoods. The 1970s brought new concerns when the oil crises demonstrated the vulnerability of a transportation system almost completely dependent upon the car. Frustrated with the quality of urban life, some social commentators lashed out at the automobile as the cause of many contemporary urban problems.[1]

One such critic was Bradford Snell. As a legislative analyst for the United States Senate, Snell attacked the automobile industry for its role in altering America's urban transportation system. In his widely quoted report presented before the Senate Judiciary Committee in 1974, Snell argued that automobile manufacturers conspired during the forties to destroy a thriving, efficient system of streetcars in cities throughout the United States. By purchasing controlling interests in urban railways, the corporations replaced electric trolleys with diesel motor coaches. The inefficiency of the buses in turn led to the demise of a once healthy public transportation network, and left urban residents with the automobile as their only means of transport. General Motors, Ford, and Chrysler, Snell claimed, had reshaped "American ground transportation to serve corporate wants instead of social needs."[2]

Snell believed that Los Angeles' experience epitomized the malevolent plans of the consortium. "Nowhere," Snell asserted, "was the ruin from GM's motorization program more apparent than in southern California." General Motors and other interested parties, Snell argued, began acquiring transit companies in Los Angeles County during the late thirties. Shortly thereafter began the systematic dismantling of what was once the largest electric interurban system in the world. The new owners replaced the streetcars with motor coaches. "The noisy, foul smelling buses," wrote Snell, "turned earlier patrons of the high-speed rail system away from public transit and, in effect, sold millions of private automobiles." According to Snell, GM's greedy, self-interested actions in southern California turned Los Angeles into an "ecological wasteland."[3]

It is true that General Motors and other automobile-related manufacturers invested in a company that purchased urban streetcar lines. During 1944, the Henry Huntington estate sold the Los Angeles Railway (LARY) to American City Lines, a subsidiary of National City Lines. Minority stockholders in the latter company included General Motors, Standard Oil of California, Firestone Tire and Rubber Company, Phillips Petroleum Company, and Mack Truck. The new management immediately began to replace the railway's streetcars with buses. Two years later, a federal grand jury brought suit against National City Lines for antitrust violations. The government sought to break up the interlocking stock ownership of the company, halt the purchase of equipment without competitive bidding, and abrogate the supplier contracts between National City Lines' operating companies, such as American City Lines, and the oil, rubber, and bus manufacturers. A trial in Chicago later brought both acquittals and convictions; most important, the corporate stockholders of National City Lines divested their holdings of that company before the suit came to trial.[4]

Up to this point, Snell is on safe ground. A company partly owned by automobile-related manufacturers purchased a streetcar line in Los Angeles and converted some of the railway's operations to bus service. It is not surprising that American City Lines purchased its equipment and supplies from some of its shareholders. In doing so, it appears that the company violated various federal statutes concerning the restraint of trade. But Snell assumes that these actions maimed a once healthy and efficient trolley system, leaving Angelenos to rely upon their cars for transportation. Snell therefore implies that the rise in popularity of the automobile in Los Angeles occurred largely because of a General Motors–sponsored conspiracy.

Snell's argument falls apart at this point. First, the decision to remove streetcars in favor of buses had been made years earlier. Traction companies in southern California had begun using motor coaches in suburban areas as early as 1921. Furthermore, the LARY's management had already decided to replace nearly all the company's trolleys with buses four years before American City Lines purchased the network. Only World War II with its rubber and oil shortages prevented the railway from adopting this plan. Consequently, the American City Lines' proposal to do away with the antiquated streetcars was hardly an original one. Nor did the decision to substitute buses for streetcars force commuters into their cars; far more Angelenos at this time used automobiles than public transportation. Several years prior to the sale of the LARY, a study found that 62 percent of the people entering Los Angeles' central business district did so by automobile. This figure was even higher in the suburbs where 86 percent of those traveling to such places as Pomona and Westwood used their cars.

The real irony of Snell's report was that he portrayed the traction companies as virtuous, responsible public utilities trying to provide a public service on the one hand while fighting off the evil designs of the automobile manufacturers on the other. In reality the situation was just the opposite. People in Los Angeles during the first three decades of the century constantly complained about the quality of rail transit. From their point of view the railways sought to benefit at the public's expense. In seeking to operate their business profitably, railway officials, in the minds of many citizens, deliberately ran too few cars, refused to build necessary crosstown lines or tracks into lightly populated areas, ignored the safety of the public, and bribed elected officials for favors. Frustrated by inadequate and inefficient service, Angelenos turned to the automobile manufacturers to supply them with an alternative means of transport. Although Snell portrayed the automobile makers as villains out to destroy the streetcars, Angelenos believed that these corporations could liberate them from the inefficiencies and corruption of the traction companies. Any study of the effect of the automobile on Los Angeles and other American cities must therefore look beyond the post–World War II era and the actions of National City Lines into the early decades of the twentieth century, for it was at that time that American urban dwellers adopted the automobile for urban use.

Los Angeles' close association with the automobile and its sprawling urban form make it a natural case study of twentieth-century urban development. Indeed, many writers have identified Los Angeles as the archetypal modern American city.[5] With the possible exception of Manhattan, which as an island suffers from geographical constraints, all American metropolises now depend heavily on the automobile for urban transportation. Most cities also have experienced substantial suburban development at the expense of their central business districts. It is true that Los Angeles decentralized earlier and to a greater extent than other cities, but that was largely because of the fact that southern California did not emerge as a major urban center until the twentieth century. Older metropolises such as Boston, Chicago, and San Francisco had by that time several layers of urban growth surrounding their downtown commercial districts which exerted strong centralizing forces on the rest of the city. Lacking such prior development, Los Angeles found itself less constricted and hence more easily adaptable to the automobile and a decentralized economy.[6] This should not, however, blind us to the fact that nearly all large American cities have experienced considerable urban sprawl. The difference between Los Angeles and other metropolitan areas is that the former developed much of its present form prior to World War II. Other cities began to decentralize largely after the war.

In order to understand how the spatial transformation of Los Angeles during the twentieth century fits into a general trend in urban development, one must review the structure of American cities prior to the invention of the automobile.[7] Before the advent of mechanized transportation, most people in cities walked. Only the most affluent could afford to keep horses or ride in horse-drawn cabs. This prevailing mode of travel necessarily limited the outward growth of urban areas to a radius of about two miles, the distance most people could walk in half an hour. American cities, however, grew continuously following the Revolution. By the early nineteenth century, large cities such as New York, Philadelphia, and Boston sported residential densities which reached upward of more than 75,000 people per square mile. By way of contrast, New York City in 1980 averaged about 35,000 people per square mile.[8] As the population in cities rose rapidly during the early to mid-nineteenth century, space became an important commodity. Row houses on small lots with tiny front yards became the norm for middle- and upper-class citizens. Members of the working class in the meantime often found themselves living in crowded multiunit apartments. Nor was there much differentiation between the residential and commercial parts of the city. Urban elites sought to avoid lengthy walks and therefore built houses near their workplaces in the urban core. Many white-collar workers, artisans, and skilled workers also lived and worked in the city center, resulting in a broad spatial integration of workplace and residence.

Ironically, the periphery then was the least desirable district within the walking city. The suburbs became the haunt of such objectionable industries as slaughterhouses and tanneries as well as the residence of many poor and unskilled workers who could not afford the high cost of housing closer in. When these suburban residents did find work in the core, they had to walk quite a distance to their place of employment. Their more prosperous neighbors living near the center therefore shunned the suburbs as a place of noisome industry and lowly citizens. One Philadelphian wrote in 1849 that "nine-tenths of those whose rascalities have made Philadelphia so unjustly notorious live in the dens and shanties of the suburb." Fifty years earlier, a Philadelphia newspaper had described the suburb of Southwark as one in which people were "saluted with a great variety of fetid and disgusting smells."[9]

The boisterous, crowded, and largely undifferentiated spatial structure of American urban areas remained typical until the mid-nineteenth century. By that time two factors had encouraged the spatial transformation of the city. First, the rise of an incipient factory system resulted in the separation of residence and workplace for many urban dwellers. Prior to 1830, most master craftsmen lived either above or adjacent to their shops. The distinction between work and residence was further muddled by the structure of the artisanal household. A successful master expected his employees, both journeymen and apprentices, to live in his home where he could exercise patriarchal control over them. Although tension surely must have existed between masters and workers, they nevertheless worked, relaxed, and resided together as a kind of extended family. This system began to break down, however, when an expanding economy encouraged the development of factories emphasizing specialized labor, larger workplaces, and the spatial separation of the manufacturing process from a company's administration.

Cities gradually responded to these changes by assuming a new form. In abandoning the traditional household economy, the factory owners placed both spatial and psychological barriers between themselves and their workers. As the century progressed, proprietors worked alongside their employees with far less frequency. The introduction of standard parts, specialized labor tasks, and later machinery meant that factories could employ semiskilled laborers. No longer did the master craftsman have to teach an apprentice the secrets of his trade. Foremen subsequently came to oversee the manufacturing process while the owner administered the financial, marketing, and planning needs of the company. The breakdown of the apprentice system also meant that workers now lived apart from their bosses. Laborers came to identify with one another and consequently moved into exclusively working-class neighborhoods near the factories. With the influx of semiskilled and unskilled laborers from overseas, these neighborhoods often took on an increasingly foreign character. The factory owners subsequently began to relocate in nicer quarters somewhat removed from the noisy factories and boisterous working-class neighborhoods. The separation of work and residence consequently resulted in the emergence of the central business district exclusively devoted to commercial and industrial enterprise. It also encouraged the rise of residential neighborhoods organized along class lines.[10]

The rapid expansion of urban areas after 1830 also influenced the structure of American cities. Fed by thousands of European immigrants, the population of cities in the United States grew by 92 percent during the 1840s alone. This influx of new residents put tremendous pressure on the already crowded housing stock. Furthermore, the inadequate waste disposal and water delivery systems could not handle the rising population. Cesspools and overflowing sewers leaked into the drinking water of many towns while families regularly tossed their garbage into the streets. All of this made cities during the nineteenth century extremely unhealthful. In addition, the middle class became increasingly uncomfortable living near what it perceived to be unruly and often ethnic working-class neighborhoods. These considerations convinced many middle- and upper-class denizens to look toward the wide open expanses of the countryside as a place of residence. Cities were noisy, crowded, and polluted places where the frequent outbreak of yellow fever, smallpox, tuberculosis, and cholera substantially lowered the life expectancy of its citizens. The rural environment, however, had long held a special place in the American mind. Pastoral and harmonious, the country symbolized healthfulness and virtue. This idealization of nature, combined with a desire to own one's own home and the middle-class dislike of ethnic neighborhoods, encouraged many people to move to the fringe of the city. The development of the suburbs, they hoped, would allow them to enjoy the amenities of the countryside while retaining all of the economic advantages of living in the city. But if one were to reside in the periphery, one needed improved transportation.[11]

The earliest forms of mass transportation in cities appeared prior to the Civil War. Entrepreneurs introduced the omnibus as one solution to the increased demand for public transport. Built as a large carriage drawn by a team of horses, the omnibus typically carried as many as twelve people along a fixed route for a fee of ten cents. Although the cost of riding in the omnibus was beyond the reach of most workers, many middle-class residents eagerly took advantage of this innovation by moving into newly accessible suburbs. Within only a few years, the omnibus had become commonplace in most large cities. As a Baltimore paper explained in 1844, the omnibus allowed "persons to reside at a distance from their places of business in more healthy locations without loss of time and fatigue in walking." This new mode of transport, however, was not without its discomforts. Omnibuses traveled at less than five miles an hour, while the carriages themselves had poor ventilation, uncomfortable seats, and a rough ride.[12] These problems limited its influence in shaping American cities.

The rise of the steam railroad after 1830 also affected the pattern of urban development. Railroad engines started and stopped slowly. They also spewed sparks, ashes, and smoke from their smokestacks, making them unpopular with those living near their tracks. These problems prevented trains from operating effectively within cities. The railroads could, however, connect independent small towns with a regional urban center. Commuter trains therefore created a string of small bedroom communities separated by rural greenbelts. It is not surprising that housing in these suburbs usually surrounded the railroad station. Once again the expense of riding the trains into the city meant that only the more affluent of the middle class could afford this means of transport. Nevertheless, by 1840 Boston, New York, and Philadelphia all had commuter trains serving their suburban districts.[13]

Although the omnibus and steam railroad provided limited urban transportation, it was the streetcar that played the most important role in realigning the American city prior to the twentieth century. Horse-drawn streetcars first appeared in Manhattan in 1832. With tracks laid down the middle of the street, the horse railway provided comfortable rides at a speed of six to eight miles per hour. By the 1850s, streetcars had spread to cities throughout the United States.

Thirty years later, Frank Sprague invented the first practical electric railway. Twice as fast as the horsecar, the electric trolley's advantages were immediately apparent as it opened vast new areas to development.

It is important to note, however, that these transportation innovations by themselves did not inevitably lead to the suburbanization of America. Rather, people invented these new modes of transportation in response to the desire of many city dwellers to live on the periphery of the city. With an efficient alternative to walking, many urban residents left the dense confines of the city. Most of the early transit users came from the middle and upper classes because only they had the time and money to commute between the suburbs and the central business district. Factory hands working twelve hours a day in the nineteenth century did not have time to travel far. Nor did they earn enough to afford the cost of public transport. The availability of mechanized transportation therefore altered both the social and spatial organization of the city. The suburbs, once the retreat of the unskilled and unemployed, suddenly became the preserve of the relatively affluent. At the same time, workers and ethnic immigrants moved into the areas left vacant by those fleeing the inner city. Streetcars, then, turned the walking city inside out, while lowering residential densities and lengthening the journey to work for many.[14]

Although urban railways opened the periphery to extensive development, cities remained highly centralized. People may have lived in the suburbs, but they continued to work and shop in the city center. Most streetcar lines therefore radiated outward from the central business district. The inefficiency of short-haul commercial transport also enhanced this centralized focus. Most goods moved within the city on slow horse-drawn carts. This meant that a city's commercial sector had to remain tightly packed. The decentralization of commerce would have to wait for the arrival of the motor truck.[15]

Electric railways became popular because they offered a solution to many of the nation's most pressing urban problems. Nineteenth-century cities were overcrowded and unhealthful. Government engineers and reformers constantly worried about the inadequacy of urban services such as sewage and refuse collection and the provision of drinking water. The increase in population densities throughout the century only worsened the situation. Streetcars promised to relieve the pressure on these services by dispersing much of the population across the countryside. Removed from the crowded tenements of the inner city, suburban residents could enjoy the amenities of the healthful semirural atmosphere while maintaining easy access to the central business district. The affluent therefore expected the railways not only to provide them with transportation but also to improve the quality of their lives.[16]

Traction companies in cities throughout the United States, however, operated as corporations. Executives of these railways consequently sought to lower costs and maximize income for the stockholders of their firms. This induced them both to build lines only where they might prove profitable and to run as few cars as possible. In addition, streetcar companies in many areas utilized their railways as a means of promoting real estate ventures. After purchasing tracts of land well removed from the city center, traction companies would extend railway lines to their developments and thus increase the value of their holdings. So prevalent was this practice that many urban reformers argued that railway companies designed their transit networks to service their subdivisions rather than the needs of the public. The rapid expansion of many railways also left them financially crippled. Consequently, these companies could not continue to expand their services into new suburbs despite the growing demand for additional housing. Many critics contended that because the trolley companies provided a vital urban service, they should acquiesce to public demands even at the expense of profit. Streetcar users constantly harassed railway executives over such issues as inadequate crosstown lines, overcrowded cars, and high fares.

The fact that streetcar companies along with other public utility companies usually controlled the local political apparatus through a generous use of economic pressure and wholesale bribery raised the public's ire even more. The battle between traction companies and the public therefore contributed to the progressive reform movement during the first two decades of the twentieth century. Although progressivism never existed as a coherent, uniform movement, it did bring together several political factions in an attempt to address various urban problems, including inadequate mass transportation. Ultimately, the fragmented nature of the movement prevented it from radically altering the urban economy. The most lasting legacy of the era was the establishment of government regulatory agencies, which tried to mediate disputes between the utility companies and the public. When these regulatory commissions later failed to solve the problems associated with mass transit, urban dwellers looked elsewhere for an alternative means of transport. They found their answer to these problems in the automobile.[17]

Frustrated by the inadequacies of rail transit, many urban dwellers turned to their automobiles as early as 1910.[18] The automobile provided its owner with unequaled mobility. No longer tied to the railway tracks or a timetable, the motorist could travel whenever and wherever he or she wished. People quickly found, however, that most cities could not accommodate large numbers of automobiles. The narrow, discontinuous streets of most central business districts became horribly congested while parking grew increasingly difficult. Nevertheless, city residents saw in the automobile the solution to their struggle with the streetcar companies and an opportunity to continue their pursuit of the suburban ideal. American urban dwellers therefore did everything they could to facilitate vehicular movement through opening and widening streets and instituting improved traffic regulation. At the same time, most cities did little to subsidize rail transit despite the frequent calls for subway construction. Urban residents believed that the railways should finance transit improvements themselves. The huge costs associated with this proposed construction usually precluded such actions.[19] Consequently, the automobile thrived while mass transit faltered in the congestion of the city core. The postwar inflation, declining patronage, and increased regulation combined to send many streetcar companies into bankruptcy during the twenties and thirties. Few city dwellers wept at the time because the automobile seemed to hold such promise for the future of urban life.

The automobile and truck had a lasting effect on the shape of American cities. Streetcars usually promoted growth only along the immediate vicinity of their tracks leaving large stretches of land vacant. With railways lines radiating from their cores, most cities consequently took on a star-shaped configuration. The automobile, however, facilitated development within the areas lacking rail service. The greater speed of the automobile also encouraged commuters to push suburban boundaries further into the countryside far beyond the reach of the trolleys. This allowed real estate developers to continue building single-family dwellings following World War I.[20]

Automobile traffic initially followed the patterns first established by the streetcar. Autoists lived in the suburbs, but worked and shopped in the central business district. As the number of cars entering the downtown area grew, congestion worsened. The initial attempts to improve vehicular flow through street widening and traffic regulation eased the problem for a few years. But these improvements only encouraged more people to use their autos. As traffic congestion resumed, people looked for new solutions. Businesses discovered that they could avoid the crowded conditions of the city center by moving into the suburbs. Trucks provided an efficient means of transporting goods while the popularity of the automobile ensured an adequate labor force. The central business district which had once contained most of a city's economic activity suddenly became only one of several such centers.[21] The extent and timing of this decentralization varied from city to city. In general, those regions with a long history of urban growth tended to decentralize later than cities such as Los Angeles. New York, Boston, and Philadelphia had built up over the previous two hundred years extensive urban cores, which even today continue to exert a strong influence over the transportation patterns of the surrounding area. These cities consequently experienced most of their economic dispersal following World War II. Other cities such as Houston, Los Angeles, and Phoenix emerged after the invention of the streetcar, automobile, and truck. Because these innovations encouraged residential and economic dispersal, the city centers of these later cities today appear less developed.

Los Angeles led the national trend toward decentralization despite the fact that it did not evolve into a major metropolitan area until after 1900. Founded in 1781, Los Angeles remained an isolated small town until the 1880s when the arrival of the Southern Pacific Railroad linked it with the rest of the country. From that point forward the greater Los Angeles region grew rapidly. By 1910, the city boasted impressive streetcar and interurban systems that allowed much of the population to move into suburban developments outside of the downtown area. Los Angeles therefore never existed as a true walking city. The central business district after 1890, however, dominated the regional economy and Los Angeles retained a centralized urban structure until late in the 1920s.

Los Angeles' suburban residents heavily patronized the streetcars and interurbans operating in the area. Nevertheless, Angelenos were not always satisfied with their transit system. Like urban dwellers throughout the nation, people living in southern California frequently complained about the crowded cars, high fares, and slow service. The railways, along with other public utility companies, tried to shield themselves from the angry public by dominating the local political machine. Sensational revelations of bribery and corruption eventually led to the rise of a reform movement determined to improve the quality of urban services, including mass transportation. When this progressive movement failed to ameliorate the problems associated with rail service in Los Angeles, suburban residents turned to their automobiles.

The adoption of the automobile in Los Angeles, however, did not come easily, as motorists had to fight the railways for the right to use the city streets. Once large numbers of motorists began driving into the downtown area, congestion became severe. The city had long suffered from streetcar congestion in its commercial center. The increasing number of automobiles only exacerbated the situation as autoists competed with the trolleys for precious street space. The City Council finally attempted to resolve this problem by enacting a rigid no-parking law in 1920. The council, in fearing the wrath of the streetcar riders, hoped to rid the town's crowded roads of cars and thereby improve rail service. Its actions engendered a major controversy as it soon became apparent that a majority of Los Angeles' citizens wanted to facilitate rather than restrict vehicular movement. The protest against the ordinance cut across class lines as many working-class commuters opposed the law. Their enmity toward the traction companies and the general perception of the automobile as a democratic piece of urban technology influenced them to support automobile transit as an alternative to the inefficiency and seeming corruption of the railways. The heavy protest and economic pressure applied by the city's residents forced the council to rescind the law. Once more, automobiles freely moved and parked in the downtown area. This crisis over the status of the automobile in Los Angeles provides the historian with a unique window through which to observe the transition from public to private transportation—a process that would later have a profound impact on the spatial organization of the city.

The council's decision to repeal the objectionable legislation sanctioned the automobile's place in the city's transportation system. Nevertheless, the severe congestion that had caused the parking controversy still existed. Indeed, the problem worsened after the council's removal of the parking ban. The heavy traffic in the central business district illustrated an important issue that plagued cities throughout America. Once large numbers of motorists began to use their cars for commuting and shopping, it became apparent that the physical structure of American cities could not readily accommodate the automobile. This was particularly true in Los Angeles where narrow and discontinuous streets, constructed during a different transportation era, could not sufficiently handle the large flow of private vehicles. Once the City Council had accepted the automobile as a legitimate means of transport, it had to find a way to speed its movement. Impatient for a solution, the region's property owners and businessmen took control of the situation themselves. With the approval of the city government, they organized a systematic program to reconstruct the municipal street system. This concerted effort to widen and open the city's roads greatly improved automobile access.

The region's electric streetcars and interurbans did not fare nearly as well. The general outlook for railways throughout the nation looked dim after World War I. Rising labor and material costs, combined with poor management decisions in the past, brought hard times to the industry. Many traction companies in urban areas throughout the United States filed for bankruptcy during the ensuing decade. Most of the survivors were liquidated during the Depression. Los Angeles' streetcar and interurban corporations