

Transportation in the 19th Century During the first half of the 19th century, improvements in **transportation** developed rather quickly. Roads, steamboats, canals, and railroads all had a positive effect on the American economy

The movement of people and goods from place to place is known as **transportation**. Together with communication-the movement of ideas-**transportation** has been essential in bringing about the integration of regions and nations into a single world community.

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5 Modes of **Transportation** In order to have easy mobility of persons and goods, it is necessary to have a sophisticated and widespread **transportation** system. This system is made up of five primary areas of **transportation**, which are: · Motor vehicles · Railroad **transportation** · Air **transportation** · Water **transportation** · Pipelines

Urban Transportation

The development of urban transportation has not changed with the cities; cities have changed with transportation. In the early years of transportation it was the mass transit of horse and buggies or electric rail cars that shaped cities. Then as the automobile became affordable to the public, personal transportation redefined the city as it was known. It is the automobile and the movement to the suburbs that has public transportation struggling to make money today.

The very first transportation was with the horse. Then someone came up with the idea to pair a horse up with a buggy. Now four to six people could be carried at one time. These horse and buggies began to be common sight in cities and public transportation was born. Before the horse and buggy people were confined to the distance they could walk, so cities could not grow much. People lived in the central business district because that is where they worked. Now with the simple horse and buggy, people that can afford the transportation can move a mile or two out of the central city (Guathier 174).

The big explosion of growth and increased ridership came at the turn of the century. The cause of this explosion was the electric streetcars that were installed in many cities. Whichever direction the rail lines were laid down and the streetcar moved, people began building their homes in that direction. The automobile was just getting its beginning and people were depending on public transportation to get them to work. As the streetcar's tracks expanded east and west, the city's population shifted that way as well. People did not need to be in walking distance of their workplace anymore, but in walking distance of the nearest pickup point of the streetcars (Guathier 175). As streetcars increased their length of lines and service, the public increased their choices of residential locations. People with higher incomes were able to move out of the central part of cities and into outer areas (Guathier 174). This also fostered the concentration of different ethnic groups within separate neighborhoods (Guathier 175). This separation reversed the intermingling that had been taking place during the late 1800's between various economic groups and the different ethnic groups in the cities. Social stratification and sorting of different groups throughout the city was rapidly increased thanks to the streetcar spreading out the cities (Guathier 175).

As cities spread out in the early 1900's, railroads developed interurban and suburban railroad to connect the outlying areas of the city. As the electric streetcars continued to move the people around the cities, the railroads opened up the first suburbs on the outlying areas. Large industrial industries were the first businesses to relocate around the peripheral area of the old city thanks to rail easing the transport of goods (Gauthier 175). Suburbs that were railroad dependent created a beads-on-a-string look. People still had to be close to the train station and small communities began developing around each station (Guathier 175).

The Automobile

After the Great Depression the automobile began to be more affordable to the public. Just as the middle-class seemed to go car crazy, the United States found themselves in World War II. The American love for the automobile was put on hold until the 1950's. After the war people were ready for the changes that were to come, however public transportation was not ready for the changes. During the 50's the automobile became common sight in everyone's driveway. Even the television explosion had an impact on public transportation. The thing that finally put public transportation in the back of everyone's mind was the development of the expressway and the interstate system.

The big wigs in Detroit looked to be poised to deliver an affordable product to the U.S. citizens and make automobiles common sight to even middle class driveways, but the Great Depression and then World War II delayed the idea two decades. The Great Depression would actually lay the foundation for the automobile explosion that was to come. However, during the years of the depression public transportation began to soar as the transit mode of choice. Most people could not afford the automobile and those who had a car were unable to maintain it during the tough times (Smerk 37). Unemployment continued to soar and ridership began to drop off. As the depression came to an end, public transportation found itself severely hurt. The government had to help pull the nation out of the depression so federal work programs were developed. Many of the work programs that the government developed to pull the U.S. out of the depression were centered on transportation, but not on public transit (Smerk 43). Development of new roads and improving existing ones would get the nation ready to fight a war then be ready to transport millions of Americans. During the war public transportation was once again depended upon greatly. This was due to the rationing of gas, rubber, and the metal need to make cars (Smerk 38).

It was after the war that Americans fell in love with the suburb and the automobile. As the soldiers returned from the war, suburban communities looked the most lucrative and affordable. The one thing about all of the suburbs was they did not develop on the existing public transportation lines. These new suburbs were building on the new roads that were being developed. With so many suburbs being developed in so many places around cities, public transportation could not possibly establish affordable transit to all of them. With the everyday use of the automobile now possible, public transportation would no longer be needed commute and travel.

With more people using their personal cars to enter the cities, the city streetcars were becoming less of a staple for cities (Smerk 37). People were driving right to where they want to go instead of using public transit. After the war many cities could for see the decline in the streetcar, however a handful of cities including Cleveland held on to the streetcar. All the cities that held on to streetcar service were dropping the service by the

mid 1950's. Cleveland ended 94 years of streetcar service on January 24, 1954 by offering a free farewell ride (Toman, Hays 248).

Even the people who still depended on public transportation did not need to go to the city as much. With the television providing entertainment in the comfort of a family's living room, an evening trip to the movies or to a play downtown was not needed anymore. The television and other home conveniences also contributed to the downfall of public transportation. The suburbs also began to build their own businesses and entertainment centers (Gauthier 176). With the development of these opportunities for work and play near the home, public transportation took another knock on the chin.

There is still a chance for public transportation, right? Public transportation could develop to provide transportation to and from these suburbs. The key would be connecting the suburbs with public transit. Once again however, the personal automobile would prevail over public transportation. The final blow to public transportation was the development of the expressways and the interstate system.

Limited access expressways made it even quicker and easier for people in the suburbs to travel into the city. As these expressways developed, so did the suburbs along the roads. The government had a plan on the table since the 1930's to build a system of highways connecting major cities across the nation and make travel within cities easier. In 1956 this dream became a reality with the Federal Aid Highway Act of 1956. This dream to most people was a nightmare to those that owned or had interest in public transportation. The Act of 1956 set 90 percent federal aid assistance with just 10 percent of funds coming from the local government (Praeger 15). This system of roads was pushed along thanks to the cold war. The money was set aside sighting the need for a "National System of Interstate and Defense Highways" (Praeger 14). With the possibility of a war being fought on American soil, the public could not hold an argument to the building of a system of highways designed to move troops quickly across the nation. All in all the plan was put into motion with the Act of 1956 to build 41,000 miles of limited access highways with the highest construction standards to date (Praeger 14). About 20 percent of the mileage was designed to develop service into, through, and around urban areas (Praeger 15).

At the time of the Federal Aid Highway Act of 1956, federal funds were not available for mass transportation. The Act of 1956 was financed through user charges such as taxes on rubber and gasoline (Praeger 14-15). This was not the only time federal money was set aside for roads and construction. Remember during the depression, entire work programs were designated for road construction. It was not until 1961 that government assistance was handed down to public transportation in the form of the Housing Act of 1961. The act only provided a low-interest loan program for capital improvements and allowed federal planning assistance however (Praeger 15-16).

It was not until the transit industry was having large difficulties that the federal aid started to be put into the industry. The Housing Act of 1961 was to help the commuter rail services that were having financial difficulties. As always with the government, the ideas were not to make things right before they go bad, but to try and fix things once they have gone bad. That would be the basis on federal aid throughout the decades leading up until present time.

President Kennedy addressed the need for public transportation in a national transportation message delivered in 1962. It appeared that help was on the way for the transit industry that was falling quickly into red ink. At the time the industry was still marginally profitable, but it took two years for legislation to be passed. The help that public transportation needed came in the form of the Urban Mass transportation Act of 1964 and its amendments that came in 1966. The Act of 1964 was the cornerstone of the federal transportation program. The government finally realized how hurt the public transportation industry was due to the federal spending on highways. The 1964 transit legislation was to help build equity in federal money spent on transit and highways (Smerk 91). Most of the aid came in the form of grants and loan programs. The focus was to keep public transportation in the private sector, as 95 percent was private in 1964.

The equity between highway and transit could never be met though; by the way it was thanks to the federal aid toward highways that had transit in the situation it was in. The acts to help public transportation generated 375 million dollars, during the same time federal aid for highways was \$24 billion (Smerk 94). Public transportation was so far behind highways by the mid 1960's, not only in the federal aid sector but also in the minds of the people. In less than two decades, American's had fell in love with their cars. The car was easy and affordable. It got people where they wanted to go, when they wanted to be there. People were not going to give up the luxury of their personal car so they could wait to board a bus and sit next to someone they did not know. It would take a national crisis or public concern for the minds of the people to be changed. Both of these requirements would be filled, but was America going to give up the car?

Public concern began to rise during the 60's as people really started worrying about the environment. By the late 60's this public debate had reached the government and regulations were being passed to protect the environment. Then in the 70's America was hit by the crisis of the oil embargo. With rationing of gasoline public transportation was bound to benefit. By the way it would help the environment if everybody road together in public transportation, and without any oil how would people get around other than public transit. Public transit did not reap any of the benefits of the tough times though. There was only a slight increase in ridership during the height of the oil embargo. One thing that these two events did do is began a new era in transportation planning (Weiner 53).

The scare of the oil embargo and the environmental concerns that the public had did throw some support back toward public transportation. More policy began to focus toward the need for public transit. Two major acts were passed in the 70's that were focused on the improvement of public transportation.

The National Mass Transportation Assistance Act of 1974 raised the level of federal funds allocated for public transportation. The act also encouraged the experimentation of fare-free transportation (Smerk 140). The Surface Transportation Act of 1978 was the other act passed in the 70's. This act once again raised the amount of money allocated for public transportation. One of the major differences in the Surface Act was the focus toward money pin-pointed for light rail. The act also set aside money for universities to study transportation. Provisions for environmental studies were also added to the 1978 act (Smerk 160-161).

Many large cities looked toward light rail travel during the 70's (Weiner 59). Light rail used little energy and was environmentally friendly. Two major problems with light rail did develop though. It has a high capital cost and people do not want the rail to be constructed near them (Weiner 60). Construction is loud disrupts people's lives. If the construction is bad enough, a mental scar is left and a bad image of the project is entrenched in people's minds for years to come (de Boer 62). Even with these negative aspects, for the most part light rail looked to be the trend for cities looking to improve its public transportation. Two major cities that went to the light rail are San Francisco with the BART system and Atlanta's MARTA system.

The BART system in San Francisco was actually the first such rail transit built in the U.S. and was to be studied to understand impact of a light rail system on the economy, environment and the people (Weiner 69). Between 1972 (the beginning of service) and 1978 the study found that the impact on the surrounding areas was limited. Existing local condition and the enactment of supportive policies were more important in determining the influence of a rail system on an urban area (Weiner 70). Even though the government did the study of BART on the surrounding areas, little federal money was spent on the actual project. 80 percent of the project was funded with local money. BART was a success in carrying people, however it did not do what the local government wanted, enhance the competitive advantage and economic growth of the region (Weiner 70).

With the project in Atlanta, true bureaucracy was visible in the planning and implementation of MARTA. In 1971 the referendum was passed to build a light rail system. It took until 1980 for the rail to be in operation and until 1983 for the full-proposed routes to be completed (www.itSMARTA.com). MARTA quickly found out what all other public transportation companies were, to keep up with costs fares must be raised. This rise in fare amounts would not go over very well with customers though. Hence the age of operating deficits (Guess 115).

With the amount of money being spent on roads and highways, surely the federal government could allocate some of that money to public transportation. Even though some federal money was being spent on public transportation, it was not enough. The worst thing about the federal money was that it was a set amount to an area, not based on specific needs of the transit industry. This became apparent to MARTA when the Cobb County Transit System began operations in 1986. Federal money was now being split between the two transit authorities. Before the Cobb System, federal assistance accounted for about 8% of MARTA's budget. After the Cobb System entered the Atlanta area, the percentage of federal money allocated in MARTA's budget dropped to 4% (Guess 123).

During the 1980's public transportation received little or no help. President Reagan's block grant system allowed local governments to disperse federal assistance money (Smerk 189). This put transit authorities up against sewage and highways in the fight for federal dollars. Reagan did not look well upon public transportation in the first place (Smerk 194). With the inflated federal budget, cuts had to be made and those cuts fell on public transportation. Instead of money allocated based on need of a given area, money was allocated based on population of cities (Smerk 205). This gave basically the same amount of money to cities with little public transportation as cities with a large network of public transit.

Reagan sent another blow to public transportation when in 1984, 70% of promised money was slashed from a 1982 act to help transit. When it came time for reauthorization of transit aid in 1986, the Reagan administration stepped in and stopped the aid (Smerk 240). The little bit of money that did get through to transit authorities was spent toward light rail projects. Many cities built rail systems in the early 80's. Most of these cities were large cities desperate for rail; smaller cities got little or no aid (Smerk 241).

Throughout the 90's public transportation has continued to build. A couple of projects that were supposed to be newer and better however turned out to be worse than older transit designs. The project in Los Angeles for example has been an eye sore to public transportation. There were budget delays, then construction delays. Part of the subway section collapsed during construction, leaving a large hole in a downtown street. Once the transit opened it was filled with delays and rider complaints. The Los Angeles transit system did nothing to help the image of public transportation.

Public transportation shaped the way we lived during the beginning of the century. Transit made suburbs the place to be. Then as automobiles grabbed the hearts of Americans, public transportation fell out of the public light. Government killed public transportation with the aid toward the federal highways. Then government never helped out public transportation in the way it pushed along highways. Public transportation will continue but it needs the help of federal aid to improve and expand.

During the first half of the 19th century, improvements in transportation developed rather quickly. Roads, steamboats, canals, and railroads all had a positive effect on the American economy. They also provided for a more diverse United States by allowing more products to be sold in new areas of the country and by opening new markets. Copied from ideas begun in England and France, American roads were being built everywhere. In an attempt to make money, private investors financed many turnpikes, expecting to profit from the tolls collected. Although they did not make as much money as expected, these roads made it possible for cheaper (not cheap) domestic transportation of goods. It still cost more to transport a ton of freight a few miles over land than it did to send it across the Atlantic Ocean. But because of turnpikes, for the first time, goods were able to make it over the formidable Appalachian mountains. The steamboat was the first economical means of inland transport. It was faster and cheaper than the rafts used before them. Additionally, the steamboats made it possible to travel back up the Mississippi, allowing farmers and lumbermen to come down by raft, and travel home in the luxurious comfort of a steamboat after selling their goods. This also made the northwest less self-dependent because it was now able to purchase southern goods. While steamboats sparked the economy on the western frontier, canals became increasingly popular on the east coast. Although expensive (\$25,000 per mile), and difficult to build, canals were an important source for those farmers and merchants who needed a cheap method of inland transportation. The water allowed horses, once only able to pull a ton of materials, to now pull over a hundred tons with the same amount of work. These canals were not only economical for exporters, but also for the state. Tolls alone collected from the Erie Canal had, by 1825, already paid for the entire project (\$7,000,000), and now was making a substantial amount of profit. Even though it had not totally expanded yet, the cheapest, most economical method of transportation was the railroad. Speed, durability, and safety all contributed to the success of it. State legislatures and the national government all provided aid to the railroad companies by decreased the tax on rail iron. During this time period, manufacturing also boomed. New ideas and inventions made it faster to produce products. However, it is because of these new modes of transportation that this was ever able to occur. The cotton gin, invented by Eli Whitney, would never have been able to develop fully if the transportation system did not make it easy to obtain cotton from the south. With these new technological breakthroughs, American economic growth was significantly increased. By allowing cheaper importation and exportation of goods, manufacturers were able to produce more of these products. Also, it opened new markets to different places. In the northwest, where coffee was an expensive luxury (costing almost seventeen cents per pound), it was now a common item. The steamboat reduced the price by over thirteen cents. Also, our new transportation

system helped other regions work together. And aside from material items, our country benefited economically from tourism. Any tourist to the New York area would not miss "The Great Western Canal." So although manufacturing did have a significant role in developing the American economy, it is because of transportation that manufacturing could have ever improved.