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# The American Transportation in the 1920s

Dissertation submitted to the department of foreign language as partial fulfillment for.  
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*I gratefully dedicate this work to my dear friends Asma and my partner Hanane.*

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**fatima z**

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## *Abstract*

This thesis examines the varied modes of transportation in America that were the most influential and most important inventions created in the 1920's. It helped both the economy and the lives of American people. It led to the growth of the states. Transportation was important because it facilitated trade, exchange and travel. Prior the development of transportation in 1920, regions were largely isolated from one another. Effective, affordable, it also played a role in letting people move to new areas.

# ***GENERAL INTRODUCTION***

## *General Introduction*

The United States started the 20th century as a country with formidable possibilities, and finished the century as the world's only superpower. Yet there are two manners of seeing at this strong nation in the 1920s - as a powerful country with a high level of living, big automobiles and large houses, or as a nation with a lot of people living in poverty and some enduring horrible racism.

Although the USA did not have access to the First World War until April 1917, the struggle affected over American society that would take a while to pass. There was a concise economic recession at the beginning of the 1920s, however, as the decade moved on, the economy boomed and America initiated the age of consumerism-many Americans bought cars, radios, refrigerators etc. Main cities like New York and Chicago developed quickly and the construction of skyscrapers like the Empire State Building that was completed in 1931 appeared to show the self-confidence of American society.

At the same time, many Americans desired to amuse themselves as much as they could by listening to the new jazz music. The confirmation on having amusement and spending money has led to the 1920s being called the Roaring Twenties- a stormy characterized by quickly variable lifestyles, financial excesses, and the rapid pace of technological progress.

The spirit of the Roaring Twenties was marked by a general feeling of stopping associated with modernity and a break with traditions. Everything seemed to be practical over modern technology. New technologies, essentially cars, moving pictures and radio increased "modernity" to a big part of the population.

The 1920s were a time of dramatic change in all domains mostly social and political. For the first time, more Americans lived in cities rather than on farms. The nation's total rich were more than multiple between 1920 and 1929, and this economic

growth swept many Americans into an affluent but unfamiliar “consumer society.” People from coast to coast bought the same goods, thanks to modes of transportation

The history of transportation in America is the saga of people permanently on the move. The difficulties Americans faced when they carried themselves or their goods from one place to another during the nineteenth century were remarkable.

Overland, folk could move only on foot, on horseback, or in a horse-drawn vehicle, on the water, by sailing ships, barges, rowboats, and canoes. Whether on land or water—most trips demanded both—travel was complicated and expensive. Americans were continually looking for new and superior ways to transport people and goods as reliably and as fast as possible, and they began with the horse after the first way of transport which is of course walking. So, how did the transport affect the American identity in 1920's?

This is what the extended essay tackles. It is divided into three chapters: The first chapter deals with the history of the American transportation. As for the second one, it examines personal modes of transportation in the 1920s. As far as the third chapter, it emphasizes public modes of transportation in the 1920s.

## ***CHAPTER ONE:***

# ***The History of American Transportation***

**Introduction:**

The 1920's represented an era of complete change and growth after the First World War; the decade was one of travel and exploration. America had become the first world power and was the world leader in all domains. The 1920's which is also known as "the roaring twenties", the decade of 1920's featured economic prosperity and carefree living for many people. The decade began with a roar and ended with a crash. The transportation played a great role in the changing of life of ordinary Americans, relating individuals with places, facilitating business and tourism with encouraging movements of American people. The American transportation was represented by roads, air, and water ways.

The first chapter of the extended essay deals with the American people who were keeping with the transportation until the 19th century; it also tackles the impact of the First World War on the society as Americans were in need to enhance their life looking for new things to change their lifestyle mainly in transportation to ease their moving from one place to another. Besides, it highlights the role of American government in the transportation facility. The chapter ends by shedding light on the improvement of transportation after the First World War and shows how technology, inventions, as well as innovation contributed to the transportation system.

## **1.1 American Transportation Background:**

The 1920's is known as the age of **jazz**,<sup>1</sup> it presented an era of change and growth. When World War One ended in 1918 and the troops came back home, Americans felt cheerful about the future and eager to get on with their lives. This optimism led to an extraordinary decade that brought major changes in the way citizens moved by rails, on roads, and in the air.

The American transportation story set on the American attitude across individual freedom with one of the driving forces in American history, it is a concept of personal or individual freedom.

It is no accident that the best-remembered line in the Declaration of Independence is the one about God-given right to life and liberty. One appearance of these rights is unfettered freedom to travel, to move wherever the assertion and economic opportunity lead. This, in turn has produced an American fascination with personal vehicles. Prior to the 19<sup>th</sup> century, it usually meant horse-drawn carriage. However, during the 19<sup>th</sup> century cheaper and lighter vehicles were developed, intended to be dragged by a single horse; they were less costly to preserve than a coach. New England builders developed the four – wheeled vehicles before 1825. It could carry light freight and be used for passengers. The pleasure wagon presaged the appearance of one of characteristic American horse-drawn vehicles.

Large cities like Cincinnati and smaller ones like Flint turned them out by the thousands overwhelming utilizing special purpose wood working machines from the burgeoning American machinery industry.

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<sup>1</sup>See Appendix I

[http://www.historylearningsite.co.uk/1920s\\_America.htm](http://www.historylearningsite.co.uk/1920s_America.htm) (19/01/2015,22:32)

“In a sense, then, the inexpensive, factory-made buggy became 19<sup>th</sup> century Americans what the model T Ford would become for their children and grandchildren”<sup>2</sup>

The bicycles used to as vehicles that approached great personal mobility. At once, the automobile became cheaper sufficient for large numbers to tolerate; Americans adopted it with revenge while it is true that Americans also quickly took to travel in railroad trains in the 19<sup>th</sup> century.

“After all, its old fashioned way of five or six miles and hewer, with one’s own horse and carriage, with liberty to dine decently in a decent inn, with the delight of seeing the country and getting a long rationally, is the mode to which Icing, and which will be adopted again by the generation of after time”<sup>3</sup>

When Europeans arrived to the American continent, they set eyes on it like large, vacuous space that needed exploiting by people, constructing and plantation. Earlier, settlers evolved a meaning of urgency to oblivious ground, plant crops and constructed the society. Impatience became an American characteristic. Historian Daniel BOORSTIN<sup>4</sup> names it « culture of haste ».

One cause that railroads were embraced so easily was then possibility for grabbing space and time. The seduction of fictional 30-miles-per-hour quick proved irresistible.

However haste had other appearances, it led to quicken building of roads and wagons with an emphasis on quantum over quality as one English observer put it:

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<sup>2</sup> sleater Kinney, May 2004, 22-23

<sup>3</sup> Douglass W.Rae, 1971, 22

<sup>4</sup> See Appendix II



“Let it go at that seems written all over the face of the land. You see it in the wretchedly laid railways and tramway tracks. In swaying telegraph poles and sagging wires....in streets unavenged in rubbishy cutlery.... In scamper and buried work everywhere. There seems to be a disdain of through work man ship and finish in detail”<sup>5</sup>

Also sit in transportation and democracy so Daniel BOORSTIN has commented that the diffuse production of wars is an expression and consuming of American democracy. The rail way made travel obtainable to a group of people. However, it was the car that truly democratized travel. The automobile really moved from being a wealthy man toy to being each man’s convey.

During “The Roaring Twenties”<sup>6</sup>, the characteristics of costly cars steadily emigrated down to the joint vehicles from senior engines over propriety like radios and power windows to developed technical features.

The American history also involves transportation and risk where the American has attracted danger takers. The risk averse did not make dangerous periphery voyage in tiny ships or in later years, did not leave familiar surroundings to go a new country where they did not even speak the language. Risk takers invested in canals, railroads, steamboats, and cable cave systems, street car system, stage lines and automobile companies.

In the 19<sup>th</sup> century, steamboats with sorrowful regularity and railroad accidents were common. Since cars became widespread, 40000 to 50000 Americans had died yearly in auto accident, a fact that seems not to reduce the favor for the vehicles<sup>7</sup>.

The first Europeans who came in America were distracted by its natural multitude. Land water, game and finally metal like coal and iron ore were

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<sup>5</sup> George Ferguson, 1979, 13.

<sup>7</sup>The American Heritage® New Dictionary of Cultural Literacy, Third Edition Copyright © 2005 by Houghton Mifflin Company, Published by Houghton Mifflin Company,<http://dictionary.reference.com/cultural>

obtainable in inexhaustible supplies. Game was slaughtered for nourishment, wool and leather. Land was cultivated, exhausted and abandoned for new fields. Nowhere was this type more representative than in the use of timber, for planters, wood was an annoyance, and clearing the land of arbors was one of their major tasks, trees fed the American ship building manufacture industry.

The fulminatory increase of American railroads was literally constructed on and fuelled by wood. Railroad cars were built of wood. Wood was further more fundamental to the development of highway transportation illuminate, solid wood like walnut permitted American transports to evolve the light substructure that amazed European supervisors. As on the railways, wood was employed for piers, from the classic wrapped bridge to amazing achievement like the 330-foot colossus bridge exceeding Schuylkill stream at Philadelphia.

Wood was also used as a collection material. Deforest laid part formed “corduroy roads ”lacking perfect protection techniques, wood side walk decayed fast but the fact it was used at all is testimony to the American damnation that wood was inexpensive and unfailing.

## **1.2 Government Role in the Development of American Transportation:**

American population was centered on the Atlantic Coast with all major people of the area centers situated on harbor or waterway that is wide and deep enough. Water and river transportation were central to the national economy, while most over land transport was horse that made it difficult to move large quantities of goods and baggage.

Before 1920, American people were not relaxed and confident, only the high class who were able to travel the world whereas people from middle and working class had difficulties to move outside their town or country.

With the increase in wage driven by persons who set up business entrepreneurial employers like Henry FORD, Americans for the first time had the

time and money to travel, the huge number of production methods resulted in the existence of automobiles that were available and easy for all people from different social classes.

During the 19<sup>th</sup> century roads and means of transport made a very noticeable change greatly increased national mobility, new and improved technology made it easier and faster to carry goods started by the national road<sup>8</sup>.



[explorehistory.com](http://explorehistory.com) (16/04/2015, 14:35)

National road the first improved highway in US that was the greatest of western migration to be built by federal government; it was found for unifying the young country especially when the state of Ohio was omitted from the Union in 1803. Construction became heading West in 1811 at Cumberland, Maryland the Potomac River, it crosses Allegheny mountains and South Western Pennsylvania, reaching Wheeling Virginia.

<sup>8</sup><http://www.u-s-history.com/pages/h66.html> (15/01/2015 13:00)

By 1830, the federal government conveyed part of the road responsibility to the state through which it runs. The national road played a key role in the expansion of the United States, and its importance was similar to that of the Erie Canal; the road was placed on the national register on 23/08/1985.

Then, the Canal Craze is a waterway which was founded for connecting major Eastern cities with the Great Lakes and surrounding heartland, it is made for the transportation of goods and people, it rose in the United States between 1825 and 1845, it helped facilitate westward migration and it reduced the transportation cost of goods as it made the nation known as a financial success. The “canal craze” was suddenly ended by the formation of the railroads; the Erie Canal was a distinct exception, continuing to prosper for years after the Civil War.



The Suez Canal, forerunner of the Canal Craze

<http://www.u-s-history.com/pages/h66.html>(15/01/2015 11:11)

The growth of American government played a basic role in the development of transportation, through roads and bridges, which led to a rapid expansion to the methods of transportation spending millions to improve roads. Thus, its efforts made productivity and profitability.

By 1920, the number of automobiles in the United States had passed 10 million besides the trains; both were the dominant mass transportation methods which made the continent open to the world: those methods of transportation captured the immigration of public and diminished the travel time. American government gave more important to the rail road making it the great driving force of American companies<sup>9</sup>.

Great numbers of people worked for the rail road to satisfy their needs and meet their wants. According to the American government view, when the railroad came to the town, the town would be better.

On the other side, canals became bigger to handle the rapidly increasing size of ships that desired to use the short cut. Air travel was included in the American government improvement of transportation; it made the air ships the symbol of modern technology, wealth and national pride. Air ships could carry huge numbers of passengers and bring to them comfort; it took a big part in speeding communication and commerce through the continent and over the sea.

❖ *Transportation Act of 1920 :*

The period of 1920s created better life for people from diverse races and classes. Prior to the Abandonment of Transportation Act, the transportation methods were very weak and in worse situation.

The American public should come into possession of an equal system of national transportation; the transport was controlled by the government. Carrying a big amount of traffic was obligatory for the trucks with little attention to replacement; the nation's rail road was in a bad situation.<sup>10</sup>

Transportation Act came in order to change the state of rail road since the public viewed that the rail road services were failing, this act entitled as act to

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<sup>9</sup> <http://www.historycentral.com/documents/Transportationact.html> (15/03/2015,11:20)

regulate trade, it was the act of American government of February 28/1920 that dealt with rail road rates, credit and financial return; it attempted to satisfy those who were concerned. The American government took over operation the trucks and ran the rail road from 26<sup>th</sup> December 1917 to 1<sup>st</sup> March. Thanks to the Transportation Act of 1920, the railroad returned to private operation by President Woodrow WILSON .i.e. from government operation transportation moved to private operation.<sup>11</sup>

Transportation Act of 1920 was the first constructive rail road legislation enacted by the Congress since the Land Grant Act passed in 1863 and 1866; it is a set of sections that tackled the improvement of transportation including help of rail road by correcting certain evil practice; these sections introduced canals, for instance The Erie Canal extending from New York State to Great Lake cut the cost of freight transport by Ninety-five percent.<sup>12</sup>

Section 18 of the Transportation Act of 1920, Congress provided that:

“No carrier by rail road subject to this act shall abandon all or portion of a line of rail road ,or operation thereof ,unless and until there shall first have been obtained from the commission a certificate that present or future public convenience and necessity permit of such abandonment”.

Section 20 authorized the Interstate Commerce Commission to grant a certificate of abandonment in the form prayed

“Attach to the issuance of the certificate such terms and conditions as in its judgment the public convenience and necessity may require”

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<sup>11</sup><http://www.transportation.alberta.ca/663.htm> (02/02/2015,14:30)

<sup>12</sup> Oliver P. Field, *Abandonment Section of the Transportation Act of 1920*, *Indiana Law Journal*: Vol. 2 <http://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article%3D1956%26context%3Dilj>

❖ ***The major provisions of Transportation Act of 1920 :***

The major provisions of Transportation Act of 1920 were:

- ✓ Ended federal control of rail road, effective March 1<sup>st</sup> 1920.
- ✓ Authorized the government to make settlement with rail road carries for matter caused by nationalization such as compensation and other expenses.
- ✓ Directed the ICC (Interstate Commerce Commission) to prepare and adopt a plan for the consolidation of the rail way properties of the United States into a limited number of systems.
- ✓ Granted authority to the Interstate Commerce Commission to set minimum shipping rates, oversee financial operations, and regulate acquisitions and mergers.
- ✓ Established procedures for setting labor disputes between railroads and employees, the rail labor board was created to regulate wages and settle disputes.<sup>13</sup>

### **1.3 The Transportation Improvement:**

After the end of the First World War in 1918, people felt optimistic about the future and enthusiastic to get on with their lives. This hope drove to a special decade that presented main transportation in the manner people moved by rails, on roads, and in the air.

People used to travel by train for long time throughout the 1920s, southern railway ran one hundred daily trains over the state. The rail road ran a large maintenance and reform shop and sciences as well.

Over than fifteen hundred, the station used to have railway stations in both time and cities, some of them with interesting design, still occurred in Salisbury. In 1920, railroad improved new plans for vacation travel.

Comfort plowmen cars for executing the might and quality food in the dining cars made long distance travel an enjoyment, Florida was unknown

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<sup>13</sup> A.B Cummins, The Transportation Act 1920, United States SENATOR, October 30, 1922, P33

destination however, rail road supported travel to luxury resort Ashville and Pinehurst: if anyone wanted to move by train to Ashville, she or he would carry to a street car.

Both towns and cities had street car system that gave appropriate rides for just five cents between railroad station, neighborhood and down town areas. Motorists and drivers were convinced by the freedom and the ease that cars have provided. Nevertheless they were depressed at having to drive on dirty roads between towns and cities mainly over rainy or bad weather, mud was a major problem, Harriet Berry was pinpointed to ameliorate the situation of the state's highway. She was a graduate of the geological and economic survey in Chapel Hill in 1901 as a vizier and evolved a name as someone who could quickly understand about high ways, the surrounding and placement.

The survey office aided many organizations involving the North Carolina Good Roads Association. The association had tried for many years to get roads and highway ameliorated. Berry observed that something have to be modified. In the beginning of 1919, she took charge of the perfect roads association raising the organization membership from two hundred to fifty five hundred in only two years.<sup>14</sup>

By the time the 1920 legislature recognized Berry and the good roads collectivity were well ready to impact the legislature and the advance.

By 1929, the legislature had advanced the gas tribute the five cents per gallon. These funds permitted the state to flatten more than three thousand miles of hard surface highways linking the country offices and state attractions. These courses contained the state's first three lane (Greensboro and Thomasville) and four lane (Charlotte to Gastonia) highways.

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<sup>14</sup>Walter R. Turner, Transportation Improvements in the 1920s, Travel by Railroads, Cars, and Planes in the 1920s. Reprinted with permission from the Tar Heel Junior Historian magazine. Spring 2004.



Included in 1929, the state highway patrol was ordered consisting of ten regulators and twenty seven troopers who rode motor cycles. Because of these accomplishments, North Carolina improved.

The great transportation story in 1920 was the making of all-weather highway which led to the link between countries and regions and benefited farmers with all people of towns and cities, the number of different vehicles brought new business, for instance dealership, service station and bus as well as trucking companies.

In addition, the highways drove the state to a nation reputation as good roads state. In 1920, most railroads began to experiment with other forms of power, and trucks were electrified by some rail roads while other railroads brought diesel engines, so trains were allowed to move more freight with fewer workers.

During the 19<sup>th</sup> century, cities usually had decent roads, bicycles and railroads companies began calling for good roads. In 1880, American road building came as a response to the high number of cars and trucks, and some of these new roads were private initiative such as the Linkon Highway. Nonetheless, after 1916 federal law and government finance fuelled much of the country's road building.

Technological growth plays a fundamental role in transportation growth, in great production of rail road's, automobiles, trucks and trolleys. Technological improvement in the transportation service in the 20th century represented the language of vehicles; there were well established rail, air, short sea, ferry good, auto and other services.

When improved transportation technology<sup>15</sup> enhanced service, people and things moved more easily, and communication raised, consumers had increased information and selection among goods and service as well as opportunities for socialization and recreation.

It can be said that transportation is a system of technology, people, energy, money and more. The growth of technology had an essential role in shaping transportation system. Transportation technology contains many related areas.

During the 19<sup>th</sup> century vehicles were used by human or animal power, the invention and technology evolved transportation making it cheaper and faster.

Innovation in control systems were important, rail roads created new management techniques, best example is in communication system to guard the trains on track and on time.

Highway engineers advanced traffic high interchange, thousand other design and control system to keep traffic moving.

### **Conclusion:**

The 1920 began with the last American troops returning from Europe after World War One, they were coming back to their families, friend and jobs. Most of the soldiers had never been far from home before the war and their experience had changed their prescriptive of life around them. After seeing Europe, they wanted new things in life for themselves and their families; they used to face difficulties when they traveled. They saw that the transportation have to be improved. Thus, by the early twenties transportation manufacture started to realize that the time was swiftly approaching by which American families would own ca

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<sup>15</sup> William L .Garrison, Technological Change and Transportation Development, University of California, Berkeley, USA without date.

## ***CHAPTER TWO:***

### ***Personal Modes of Transportation in the 1920s***

## **Introduction**

Transportation in the early 1900s was primarily on horseback and by sea, but the growth and the amelioration of the steam engine supported the improvement of personal transportation. Horses and horse-drawn transition lasted the primary modes of transportation over most of the century, at least for local travel. Towards the end of the 1900s, the automobiles and trucks came into existence, even though most 19th-century designs witnessed very limited adoption.

### **2. 1 Horse Drawn Vehicles**

#### **2.1.1History of Horse Drawn Vehicles:**

In ancient times, wagons were considered to be the vehicles of wealth and ceremony while farmers might use their wagons for both work and personal transportation.

The horse had been the prevailing type of transportation for thousands of years. Horses were totally fundamental for the functioning of the nineteenth century for personal transportation, load charge, and mechanical power. Without horses cities would totally literally starve.

No one knows when animals first started to carry things; it may have been around 6000 B.C when the first cities were built. Oxen the first animals used, then donkeys. They were probably not ridden by people but used to carry weight.

After about 4000 B.C three trunks were used for rollers, proceeding load get at eligible to drag. at some point concerning 3500 B.C, in Mesopotamia<sup>16</sup>, wheels were added to skates to make the initial carts. Wheeled vehicles were

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<sup>16</sup> See Appendix I  
<http://parkcityhistory.org/wp-content/uploads/2012/04/Teacher-Background-Information.pdf>  
(29/02/201509 :00)

soon used in combat. These premature wheeled vehicle award increase to animal powered wagons, permitting people to travel away from their houses; this aided to construct a great empire.

By the middle of 19th century, a carriage painted in the customer's choice of color even with their own coat of arms emblazoned on the transport could be chartered from as little as 630 a year. It was also potential to hire carriages for specific occasions like weddings, social events and contest gathering. Though the first special vehicles were city coaches, they were weighty and mentioned also demanded a group of horses to pull them.

Private carriages can be divided into those in which passengers drove themselves, and those driven by coach men. The first private wagons were always driven by coach men, as it was looked a humble vacation to drive, however when driving began to be understood as a sport, the case soon changed.

Even prominent personalities such as the lords took to retaining a carriage and pairing a gentlemen's skill with the reins come to be respected as a degree of his social status and to be a good driver was a sign of the highest education.

From the end of the eighteenth century into the twentieth century, the horse drawn vehicle was a key element in the development transportation system that increasingly related urban and rural America. Private carriages and commercial wagons likewise played a spirited role in the growth of cities.

Horse drawn vehicles donated to moving goods and people to and from urban station supporting the settling of rural areas, the growth of cities, the invention of wealth, and the rise of consumer culture.

One of the most significant kinds of specialized horse drawn vehicle was the firefighting wagon while well into the twentieth century, most city building and houses were made firstly of wood and light, also heat were mostly supplied by some sort of open flame. Hundreds of formation held fire every year. Fighting depended on horses. Each city fire fighting brigade protected a group of horses in particular skills within the fire house, fire horses had to be quick, graceful, and smart. They also had to be powerful.

Fire vehicles including all the equipment required to put outside a fire, weighed as much as 4000 pounds whether they attracted a wagon with ladders and houses on one including either hand or steam pumps, hauled the wagons through heavy city passage, and got to their purpose as fast as possible. Fighting fire with horses was so successful and so respected that well after motorized fire motors made their manifestation; many cities and towns were resistant to give up their horse drawn equipment. When the final team of fire horses in New York City made its last own in 1922, thousands of people streaked the roads to get one last look at the vision<sup>17</sup>

### **2.1.2 Types of Horse Drawn Vehicles:**

- The Horse and Cart: the humble horse and cart a two or four wheeled wooden wagon towed by a single witty horse, as luxurious and as concerning as a clump of fifth.
- The Dog Cart: was one of the unsophisticated vehicles, they could alienate two of four people, and a tiny quantity of baggage and were normally pulled by one to two horses. They extradited their name in order that they originally used to alienate pursuing dogs when the seiners of sprawling country boycotts went out tracking.
- The Trap: a trap was simple, two sealer cart for a husband and wife which were drafted by one horse. Several traps were so little, they

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<sup>17</sup><http://www.42explore2.com/horsdrawn.htm> (Monday03/03/2015 18:15)

could even be pulled by ponies reposing on their format, and a trap had not a place for the baggage.

- The Barouche: it was a light, rapid wagon with a small skin folding top at the back; it was pulled by two horses and carried between two or four people.
- The Brougham: an open carriage for four persons with door on the phase, relaxing seats and glazier windows; it is named after Baron Henry Brougham<sup>18</sup>, Brougham was four wheeled wagon with locality for baggage on the overheads. They were resolved to be reasonable, comfortable, private and quick. The wagon was pulled by two horses.
- The Coach: the coaches were very comfortable and luxurious and large, a show of the wealthy people and power, it was often pulled by two or even four horses and for four to six persons and the driver who was called the coachman.
- Horse Drawn Public Transport: it had space for two passengers and the driver which the driver sat at the back of the cab, instead of the front. The Hansom called the safety cab because it could go fast; its high wheels kept the cab of the ground and permitted it to travel very rapidly.
- The Omnibus: is a Latin word which means ‘for all’ was popular from the early 19th century until the early 20th century, it was either one or two dicker buses pulled by a pair of horses, they were a direction to proceed major numbers of passengers rapidly around a city.
- Horse Drawn Service Vehicle: version of emergency wagon such as fire trucks police vans.

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<sup>18</sup>See Appendix II

- Horse Drawn Ambulance: it had steam powered water pumps on board, it often had different markers on them mentioned that they were emergency vehicles:
- The Hackney Carriage: also named the four wheeled croaker, was the larger of two horses drawn taxi cabs practiced in the 19th century; it could carry more persons than the Hansom due to the larger size of its cabin and number of wheels.

Horse Drawn Vehicle was a lot more varied than most persons would think, it came in many varieties as their cars, they permeated different jobs, they could travel at various quickness and they were painted different colors as well.

## **2.2 Bicycles:**

Throughout the history of the bicycles, it is noticed that in its foremost two decades, these tools were not functional methods of transportation but hobby toys. Over the late of the nineteenth century, the elite formed the bicycle as a new method to move instead of early method as well as the horse, only to be substituted around the turn of the century by even more exciting tools. Bicycles were too expensive and roads were too difficult for them to become a helpful mode of transportation at first for ordinary American people.

“The bicycle had an extraordinary impact not only on personal mobility, but in every aspect of our culture. One example of how the bicycle penetrated society can be seen in the illustrations on sheet music, which enjoyed wide and popular distribution before the advent of home and commercial recording and playback technology. By studying examples of sheet music from the mid-19th century onward, we can see the evolution of the bicycle and the impact it had on society and popular culture.”Eric Shalit<sup>19</sup>

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<sup>19</sup> Eric Shalit , The First Golden Age of the Bicycle & Popular Music, Tubulocity magazine, on January 15, 2015 <http://tubulocity.com/>



### **2.2.1 History of Bicycle:**

The race of the bicycle is related to enigma. It is impossible to refer this innovation to any single person. Nevertheless, the predecessors of the bicycle were in the 18th century, and after the early 1820s, Americans became interested in bicycles, and started importing tools from England. Albert A. Pope<sup>20</sup> became the first American bicycle maker. In 1878, he began in the production of bicycles with the commerce name “Columbia” in Connecticut.

During this century, the American government improved the road in order to facilitate travel; the cost of bicycles had declined to where all people from different social classes were able to buy them.

By 1920, the desire to have a personal transport had really taken off in a big way by the Americans. They considered riding bicycle was for amusement, healthful, and a great way to be free in the movement and personal travel which meant that bicycles for them was an important vehicle rather than just a toy.

The high-wheel bicycle was a light weight and rapid machine. Yet, it was also grave, since the rider's center of gravity was only slightly behind the large front wheel and the rider was in danger of taking what came to be called a “header”—flying over the handlebars. Because of the ordinary's inherent danger, efforts were made to design a safer bicycle. Americans attempted to modify the ordinary to turn out it safer; people put their possibilities into redesigning the bicycle.

The last path won out as “Safety” bicycles became famous. These cycles had two small wheels of the same size, a chain driver, and equipment. Just after the development of the Safety bicycle<sup>21</sup>, John Boyd Dunlop patented a pneumatic tire (in both the United States and United Kingdom).

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<sup>20</sup> See appendix 1

<sup>21</sup> See appendix 1

The bicycle advent came with the invention of the safety bicycle, which turned the bicycle from a serious object limited to the world of risk for young men to a trusty and comfortable system that could be safely used by the Americans of all ages for everyday transportation<sup>22</sup>.

During the time, bicycles have developed in a big way. The first bicycles were formed totally diverse and were not almost as comfortable as now. In the 1920s, the bicycle world witnessed complete change and progress:

- ✓ In the same year, 1920s, one Kid's bicycle became known: the bicycle was looked firstly as children's plays. Kid's bikes were introduced just after the First World War by several industries.
- ✓ 1960s, the competition of race bicycles would be widespread and feature dropped handlebars, narrow tires, numerous speeds and a lighter frame.
- ✓ 1976s, 2000 cyclists celebrated the Bicentennial by riding across America
- ✓ 1980s, Stimulated by mountain biking and maximum sports, mountain bicycles became a known consumer subject and feature stronger frames.
- ✓ 1984s, the road race became the first women's cycling happening at the Olympics.
- ✓ 1985s, John Howard of the US adjusts a new quick bicycle record of 152.284 mph.
- ✓ 1996, Mountain bicycles arose in the Olympics.

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<sup>22</sup> David Mozer, **Chronology of the Growth of Bicycling and the Development of Bicycle Technology. Bicycle History (& Human Powered Vehicle History.**<http://www.ibike.org/library/history-timeline.htm>

### **2.2.2 Women Riding Bicycle:**

The first wave of the women's rights organization was well underway by the peak of the American bicycle craze in the 1890s. The bicycle, in its progress, came to embody the spirit of the development that the women's rights movement sought to engender. The bicycle brought to women new mobility and strong exit from the famous style of the day, including corsets, bustles, and long voluminous skirts.

"To men, the bicycle in the beginning was merely a new toy, machine added to the long list of devices they knew in their work and play. To women, it was a steed upon which they rode into a new world."<sup>23</sup>

In 1895, Frances Willard, leader of the Women's Christian Temperance activity, published a book entitled *A Wheel within a Wheel: How I learned to Ride the Bicycle*, which chronicled her research to learn to ride the bicycle late in her life, to help her relapsing health.

Though she died no more than three years later, Willard's thinking on bicycle riding supported others. She denounced the cumbersome and bound fashions of the day and called for a more reasonable and practical fashion for female bicyclists. Willard wrote:

"A woman with [bustle] bands hanging on her hips, and dress snug about the waist and stiffing narrow at the throat, with weighty trimmed kilts dragging down the back and numerous folds warming the minimum part of the spine, and with tight shoes, ought to be in misery. If women ride, they must...dress more reasonably... If they do this, many prejudices will melt afar. Cause will gain upon precedent and ere

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<sup>23</sup> American magazine *Munsey's Weekly*, later known as *Munsey's Magazine*, was a 36-page quarto American magazine founded by Frank A. Munsey in 1889 and edited by John Kendrick Bangs, [http://www.pulpmags.org/database\\_pages/munseys.html](http://www.pulpmags.org/database_pages/munseys.html) (02/03/2015 22:10)

long the e relaxing, sensible, and artistic wardrobe of the rider will make the traditional manner of women's dress absurd to the eye and un-durable to the comprehension."

Willard showed to the women that riding bicycles gave her a time to entertain variable roles of women in society at that time.

"You women have no idea of new realm with the bicycle open to us men."

The era was a time of the increase and change for people of the western world. Late in the 19<sup>th</sup> century, these social changes quickened. Firstly, the industrial revolution arrived in a new era of a rising middle class and for the first time countless people had a lifestyle which contained a certain amount of leisure time.

Women in the 1920s, across America used the bicycle to ameliorate their lives that gave females the freedom in mobility and aided in the emancipation of women. Bicycle racing was the sport in that time, drawing thousands in all cities. She completed in these weary races that lasted for hours or even days.

The bicycle, this new invention at that period, had transformed a tremendous cultural and political domains, and a slogan of women's rights, it had done widely to liberate women rather than anything else in the world<sup>24</sup>.

"The woman on the wheel is altogether a novelty, and is essentially a product of the last decade of the century"<sup>25</sup>

"She is riding to greater freedom, to a nearer equality with man, to the habit of taking care of herself, and to new views on the subject of clothes."

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<sup>24</sup><http://www.ibike.org/library/history-timeline.htm> (19/03/2015 20:15)

<https://www.pinterest.com/henkejakobsson/bikes-1920-1929/> (19/03/2015 20:30)

<http://www.oldspokeshome.com/bikes-for-sale/1920s-moto-bike> (19/03/2015 23:15)

<sup>25</sup>The Columbian (Pennsylvania) newspaper in 1895.

When the League of American Bicyclists started in 1880, bicycles were fixed to the man higher class. Within six years, nevertheless, when the Victor Safety Bicycle (the earliest version of the bikes seen today) hit the U.S. by storm, the sport opened up to include the middle class and women. And by the start of the 20th century, the wheel was synonymous with the “New Woman”<sup>26</sup>

## **2.3 The Automobile**

### **2.3.1 The Age of Automobile:**

The automobile or simply the car is a wheeled machine that loads its own engine and carrying passengers. In fact it was not invented in one day and by one creator. The history of the automobile reflects the transformation which picked place worldwide.

The American automobile plants were gathering line process which meant involve parts created by autonomous suppliers and placing them altogether at the plant.

In the early 1900s, the United States had some 2000 company making one or more automobiles. By 1920 the total of companies had cut down around 100 and by 1929 to 44. In 1976 the Motor Vehicle Manufacturers Association had only 11 organs.

Oldest automobile made for the people in the US was the three-horsepower, curved-dash Oldsmobile; in 1901, 425 of them were sold and 5000 in 1904--this example is still prized by collectors.

The company offered, and it was noticed by others, and from 1904 to 1908, 241 automobile industries went into business in the United States. For instance, the Ford Motor Company that was founded in June 1903, and sold its

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<sup>26</sup> Sarah Nipper, *Wheels of Change: The Bicycle and Women's Rights*, May 7, 2014 <http://www.victoriana.com/Fashion/cycling-clothing.html> (28/03/2015 23:15)

first automobile on July 23. The company made 1700 cars through its first full year of business. Model T was created by Henry Ford to be an economical car for the average American. By 1920 Ford sold around a million cars.

At the beginning of the century, the automobile went in the transport market as a toy for the wealthy. But, it became widespread through the general population because it afforded passengers the freedom to tour when they wanted to and where they wanted. As a result, in North America, the automobile became low-priced and more open able to the middle class<sup>27</sup>.

Henry Ford facilitated automobile that did two necessary achievements. First, he priced his car to be as cheap as possible and second, he paid his workers enough to be able to buy the automobiles they were making.

In the 1920s, the automobile manufacturing came into the mainstream; the rate family could believe owning an automobile. Manufacturers had discovered ways to produce cars more active, and safe to drive. Road forms for horses were being changed by roads for cars. Motors were stronger than previous ones, and some interiors were almost as relaxing as home furniture. In 1920s, Tunnels were being made, gas service stations were appeared in all directions.

During the first half of the twentieth century, the car improved from the hobby to the predominant mode of ground transportation in the United States. Through the 1920s and 1930s in the United States, the mass adoption of the car left few facets of everyday life untouched, and the young technology helped the development of economy, mobility, patterns, and culture. As cities became larger and denser, industries increasingly sought cheap land on the urban periphery where they could erect the large.

People's life changed completely by owning the automobiles. So, on weekends families could move and visit the city. A new mobile society greatly

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<sup>27</sup> Mary Bellis , [Automobile History, The History of Cars and Engines](http://inventors.about.com/od/cstartinventions/a/Car_History.htm)[http://inventors.about.com/od/cstartinventions/a/Car\\_History.htm](http://inventors.about.com/od/cstartinventions/a/Car_History.htm)(18/04/2015, 15:02)

helped the already bustling economy. Cars are rapid, comfortable, nice looking, and amusing in driving. People were able to move almost anywhere, and they were always ready for use. Of course, after the First World War, driving became easier than walking, biking, or riding in a train, bus, or airplane. In addition, Americans became aware because owning a car was a big responsibility.

It cost a lot of money to buy one and keep it running, and drivers had to be trained, licensed, and always alert to avoid mistakes and accidents. It took a lot of space to park cars, and too many cars caused congestion on roads and in parking lots.

Before the increase of automobile, people were fixed in few methods of transportation which were transportation on foot, by trolley, and train, limited the everyday travels of people, as they were often stranded to their living quarters. Moreover, complexity in transportation made it hard for workers to get areas of employment close to their homes and families.

The development of the automobile offered to Americans the freedom to move and travel. While transportation had been already fixed to job-related or long distance travel, it was now used for recreation, including shopping, travelling, and racing.

Cars permitted children in rural areas to attend schools that had previously been too far to travel to. Cars also made it more proper for people with medical conditions to get to the hospital in a timely manner. This new form of transportation greatly renovated the lifestyles of the people in American societies during 19th and 20th centuries, and facilitated every day challenges as well<sup>28</sup>.

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<sup>28</sup> Dictionary of American History | 2003 | Copyright(12/04/2015 13:40)

### **2.3.2 The Impact of Automobile on the 20th Century:**

The automobile changed a good number of things in the 1920s. It had completely modified the life of Americans. These changes included:

- Building of roads to be appropriate for driving in all kinds of climate.
- Houses began to form garages and driveways.
- Building of gas stations.
- Public garages (parks) and traffic lights were formed.
- The automobile gave the freedom to rural families. They became able to travel to the city.

People who lived in the areas that were far from towns were able to work in the city by commuting. The impact of the increase of the auto manufacture on American business generally would be difficult to overestimate. By 1928, the automobile accounted for over than four fifths of the rubber used in the United States. It had led the states to the world's chief rubber market; the automotive manufacture consumed also half the plate glass, eight per cent of the copper, eleven per cent of the iron and steel, sixty-five per cent of all leather upholstery, and more than seven billion gallons of gasoline annually<sup>29</sup>.

Most automobile company worked to insert each year some amelioration over the automobile of the year before. The majority of these improvements were simply for the search of a new design, however almost always there was some additional feature or importance as well. When the Ford became "dressy" in 1927 to meet the competition of the more colorful cheap cars, it was evident that mere cheapness, convenience and good motors were no longer all that the clerk or farmer expected.

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<sup>29</sup><http://livingstandards1920s.weebly.com/the-airplane.html>



The prevalence of luxury was shown in the rise ratio of closed cars: twenty-eight per cent of the production in 1922; seventy-four per cent in 1926, and the direction continued. On the other side, one car in a hundred was sport model that was specialized for speed. The low-price car again was ruling the market; however the taker granted on better value annually<sup>30</sup>.

The effect of the automobile had numerous favorable impacts on the United States between 1900 and 1945. One of the early impacts of the automobile was that it pushed up the sport of auto racing. The forms of early automobiles were equipped for racing. This was a reasonable aim because racing supplied great advertisement for the cars. Also, it was a good way for the preparer of the automobile to test their thoughts.

In the 1920s, automobiles helped to grow the women's role in society. The tradition place of a woman was fixed to the house not more. Her life depended on doing household chores and providing better milieu for her family. The automobile led women to escape from the boundaries of the house. It changed women's role from being maker of food and clothing into consumers of prepared food and clothing.

The automobile helped the process of the tourist infrastructure. In different towns, hotels were built in the American spotlight to satisfy traveling the salesman that moved from one place to another. The rise amount of automobile tourists developed the amount of business in stores, service stations, garages, and repair shops.

Yet, the impact on city life had been, if anything, more prominent than the effect on the farms. The automobile fully varied city life by accelerating the outward growth of population into the outskirts. The suburban trend is confirmed

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<sup>30</sup> William Slosson, *Social Impact of the Automobile From a 1920's Perspective*, article 08-21-2012  
Copyright 2012 by Author else Salt of  
America.[http://saltofamerica.com/contents/displayArticle.aspx%3F17\\_156](http://saltofamerica.com/contents/displayArticle.aspx%3F17_156)

by the truth that highway transportation braved business and manufacture to move outward to sites where land was cheaper, where access by car and truck was easier than in crowded cities, and where space was available for their one or two story structures.

Bestead roads were built, which further bettered travel throughout the country. As with other automobile related phenomena, the trend was most remarkable in the United States but was quickly spread in different places in the world.

Before the 1920s, people both lived and worked in the city, or lived in the country and worked on a farm. Owing to the automobile, the growth of suburbs had permitted people to live on the outskirts of the city and be able to work in the city by commuting. During this time, new jobs due to the effect of the automobile appeared such as fast food, highway construction, state police, convenience stores, gas stations, auto repair shops, auto shops and supplied more work for the world's growing population.

The automobile's influence on American life was widespread, for the car had much more than a means of traveling from one place to another. The invention of the automobile has brought more positive and negative effects than any other invention throughout transportation history<sup>31</sup>.

As the most widely accepted method of transportation, cars have changed the way people live in America. They have affected all aspects of society such as family life, the economy, and even the environment... Over the century, automobiles have operated all sides of society in different ways and have changed to keep up with the times.

The first mass-produced automobile became publicly available in the 1920s.

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<sup>31</sup>**Matt Koble, The Positive & Negative Effects of Cars (12/04/2015 10:11)**  
**[http://www.ehow.com/info\\_8028877\\_positive-negative-effects-cars.html](http://www.ehow.com/info_8028877_positive-negative-effects-cars.html)**

“In a world where heading to the grocery store is three miles East and thirty minutes away, the need for improved transportation was in demand”.

Modifications that were made in the industry process minimized the price to the point where the average Americans could have a car. Ford’s major aim with his collectivity line was to make sure that the Model T would be obtainable to a majority of the people. His low product cost enabled the final cost of the car to be lowered as well. “Between 1900 and 1920, Americans went from owning 8,000 cars to owning 8,000,000” (Hess 4). This was largely in part because of lowered production costs.

The more vastly used cars became, the more they started to influence the everyday lives of Americans. During this time, outskirts were also becoming known. The automobile presented a major role in the expansion out of these outskirts. It slowly affected family life, and created for a more mobile society. The role of women in society was also affected by the automobile<sup>32</sup>.

“The urban housewife of 1925 who could do well without a car was transformed into the suburban housewife of 1960 who required a car to do all her shopping or to pick up the kids after school” (Hess 9).

It was unimportant for women who lived in the city to own cars, because they lived within walking space of everything that they wanted. Growing suburbs meant that women looked for the comfort and rapid method of transportation. Women were not just restricted to the house anymore. They could get away their daily profession of the home, and came into the “cultural scene” (Hess 9). Now, women were not fixed to their domestic roles any longer. They got more sex

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<sup>32</sup>Mireille Myranda, *Comparing Now and Then: An Overview of How Cars (Drastically) Changed Human Lives* | Wed, Jan 30, 2013 at 7:00 am |

equality by competing with men for the same types of jobs. Automobiles helped change the role of women in society<sup>33</sup>.

The invention of cars has been one of the most significant of the various innovations of the previous centuries and it cannot be denied that today automobiles and vehicles have a considerable role to play in society<sup>34</sup>.

In the primitive ages, the exclusive means of transit from one place to another, across long distances were ensured by the domestic animals like horses and following the invention of the wheel, carts also became a popular means of transportation. As time advanced, automobiles came into being and today they have sprung as one of the basic necessities for most of those individuals who are able to afford to have a car. Automobiles have had various positive and adverse effects upon society and some of these are discussed below.

\* The automobiles or vehicles are one of the major causes of causing noise pollution and air pollution. The emission of toxic gases like carbon monoxide by the automobiles affect not only the environment but also the vital body organs of the humans and air pollution is capable of causing harm to the lungs and resulting in cancers. This is why nowadays, the use of alternative fuel vehicles are being encouraged as they can significantly reduce the harmful effects of pollution in the environment.

\* The extension of roadways has resulted in the reduction of forest areas affecting ecological balance.

\* It is also to be pointed out here that with the development of better quality automobiles and better mileage, cars are often a preferred option to travel over long distances than railways.

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<sup>33</sup> <http://livingstandards1920s.weebly.com/the-automobile.html> (18/04/2015, 15:02)

<sup>34</sup> Leisure Life , The Automobile - Effects / Impact on Society and Changes in Cars Made by Generation adopted on april 25/2012 (12/04/2015 12:11)

\* opposite to the use of domestic animals, cars and vehicles have emerged as a more favorable option as they can work efficiently and do not need to be rested after a while, thus utilizing lesser time to travel over long distances.

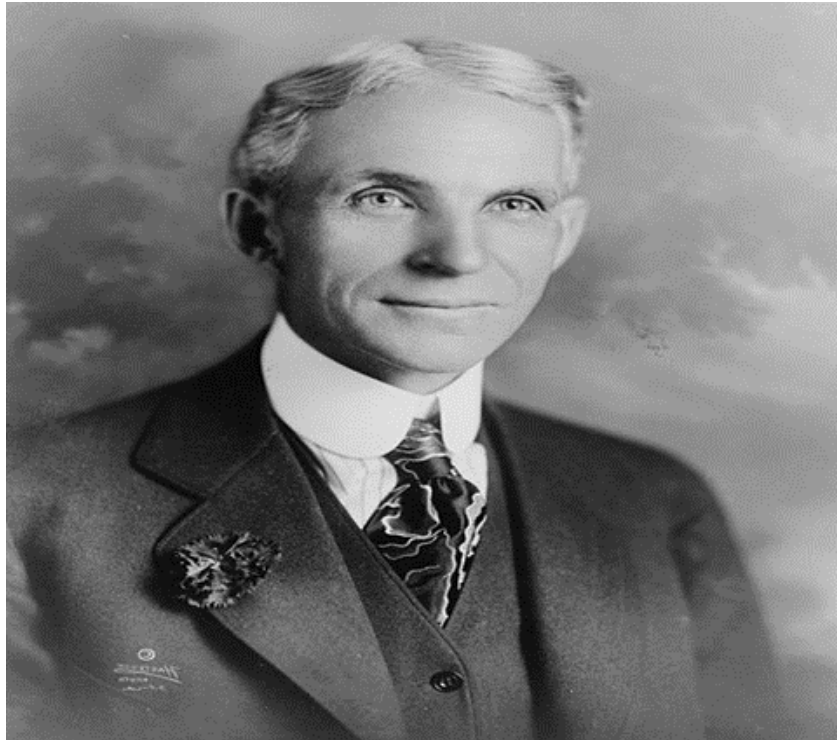
\* The increase in the number of automobiles has ensured the development of increased roads and highways.

\* Cars are a marker of social identity. One of its most important effects in the social circle is its effect on the social status of a person. An individual is often judged by the car he drives. For those who have luxurious vehicles and expensive models like sports cars, they are definitely considered to be an affluent lot<sup>35</sup>.

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<sup>35</sup> Robert Baird ,Cars and Society[http://www.streetdirectory.com/travel\\_guide/49904/cars/cars\\_and\\_society.html](http://www.streetdirectory.com/travel_guide/49904/cars/cars_and_society.html) (12/04/2015 12:11)

### **2.3.3 Henry Ford:**



**HENRY Ford**

[www.americanautomove.com](http://www.americanautomove.com)

Henry Ford was born in July 30, 1863 died in April 7, 1947. He was always worried in the work of things and how he could make them best work. He worked to reform watches, in the beginning at a small workbench by the window-sill in his family's farm, then after few years while working on the eve from the back room of a jeweler's depot in Detroit which was the most popular city in the US that time.

At that time Henry wanted to make a product that everyone could have. His first idea was for a pocket watch that he was sure that it could sell for no more than 30 cents. Henry imagined he would have to realize over 2000 watches every day, or about a half million a year, to recognize this low cost point. At the end, he arrived to the logic that there was insufficient demand to have that plane of production. Nevertheless Henry's wish of formidable production and low

prices would stick with him and the understanding of that vision would vary the way people live today.

Henry Ford's life spanned a period of dramatic change:

- From horses to cars.
- From plantation to factory.
- From the Civil War to World War II.
- From candlelight to electric light.

Abraham Lincoln was president when he was born and Harry Truman was president when he died. America would be completely converted pending Henry Ford's life time. Much of this modification would come about as a result of what he made to get his seeing of mass production into being.

Henry Ford can take duty for making the American consumer ethic and the American middle class. The American people thank him for what he has done, but either way, they have to acknowledge the effect that Henry Ford had on their community<sup>36</sup>.

Henry Ford did not begin out as an effective creator of cars. After constructing his first automobile, the quadric cycle, and working to ameliorate his essential design in the prototypes that pursue, he worked with investors, initiating the process of trying to make a car in quantity for selling to the citizens.

In 1899, Henry ford established the Detroit car Company; however it was speedily failed after only a few vehicles were made. Henry and some of his original investor reformed the Henry Ford Company which quickly went over obstacles as well.

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<sup>36</sup> Steven C. Stanford, Henry Ford "An Impact Felt"[http://hfha.org/the-ford-story/henry-ford-an-impact-felt/\(15/04/2015 14:21\)](http://hfha.org/the-ford-story/henry-ford-an-impact-felt/(15/04/2015%2014:21))

In 1902 Henry was fired by his board of managers from the company that took his name because of his inability to present an automobile to production. The company was reorganized as the Cadillac Motor Car Company under the engineering leadership of Henry Leland.

In 1903 Henry Ford realized that he was prepared to market an automobile for the public and the Ford Motor Company was incorporated, this time with just \$28,000 in cash set up by a diverse group of investors. That original \$28000 investment was spent down to less than \$300 before the company's first car was sold, however from that period on the company was going to be successful.

Henry Ford became an icon of a self-made man. He was a farmer's son and suddenly became wealthy and popular. Although an industrialist, Ford recalled the common man. He formed the Model T for the workers. He was in control of changing the automobile from a creation of unknown interest into a creation that deeply formed the 20th century and carried on to impact on our daily lives<sup>37</sup>.

Innovators modified the life. They took new thoughts, at times their own, sometimes other people's, and developed and enhanced those thoughts until they became an accepted part of the life.

Innovation demands self-confidence, a taste for taking risks, leadership ability and a view of what the future should be. Henry could have all these features; nonetheless it took him many years to raise all of them totally.

Briefly, Henry Ford was an American industrialist and inventor who formulated the assembly-line ways to the automobile industry that drove to rapid production at suitable price. One of the most known persons in history, Ford

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<sup>37</sup> **Jennifer Rosenberg, Henry Ford 20th Century History Expert[http://history1900s.about.com/od/1920s/a/flappers\\_2.htm](http://history1900s.about.com/od/1920s/a/flappers_2.htm) (20/04/2015 10:30)**



inspired the Industrial Revolution in the United States and worldwide. Henry Ford fell weak and came into retirement in 1945. He died of a cerebral hemorrhage two years later in 1947. Ford was buried in the Ford Cemetery in Detroit. He was 83 years old<sup>38</sup>.

### **2.3.4 Henry Ford Changes the World:**

Throughout the 20th century the car was a toy for the wealthy. Most samples were complicated motors that demanded a driver conversant with its single mechanical nuances to mobilize it. He decided to construct a normal, trusty and reasonable car; an automobile the average American factor could give. Out of this record came the Model T and the assembly line - two inventions which reorganized American society and formed the world people live in these days.

Henry Ford did not create the automobile; he made an automobile which was within the economic reach of the American people. While other industries were content to target a market of the well-to-do, Ford enhanced a design and a way of manufacture that decreased the price of the Model T. Instead of pocketing the profits; Ford reduced the price of his car. Consequently, Ford Motors sold more automobiles and raised their gain, modifying the automobile from a luxury plaything to a base of American society<sup>39</sup>.

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<sup>38</sup><https://www.thehenryford.org/exhibits/hf/> (03/04/2015 11:09)

<sup>39</sup><http://www.famousscientists.org/henry-ford/> (04/04/2015 09:15)



**Henry Ford and the model T on May 26, 1927**  
**[www.myautoworld.com](http://www.myautoworld.com)(15/04/2015 13:00)**

The Model T made its first appearance in 1908 with a purchase price of \$82500. Over ten thousand were sold in its first year, setting a diverse record. After four years the cost declined to \$57500 and sales soared. By 1914, Ford could demand a 48% share of the car market.

Central to Ford's ability to make an affordable car was the growth of the assembly lines that raised the competence of manufacture and reduced its cost. Ford did not conceive the idea, he perfected it.

Instead of workers going to the automobile, the automobile came to the worker who performed the same task of assembly over and over again. By the presentation and betterment of the approach, Ford was able to reduce the assembly time of a Model T from twelve and a half hours to less than six hours<sup>40</sup>.

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<sup>40</sup> Eyewitness to History, "Henry Ford Changes the World, 1908," [www.eyewitnesstohistory.com](http://www.eyewitnesstohistory.com) (2005).

## 2.4 Truck

In the era 1920, the Ford Company increased with a new production and gain, comprising some modern and well-received Ford trucks and tractors. Despite that, Model T was becoming dated by the twenties; Americans were keeping to taking them in recording numbers. One cause was that Henry Ford retained reducing the price; for beginning price of \$550 in 1920, one could be had for as little as \$260 by 1925. Yet even minimal prices would not constantly vend the product, and challengers were doing advances by introducing features not obtainable on the Model T.

Nonetheless, Ford automobile and truck products put recent records in 1920, and Henry kept spreading the easiest equipment at the River Rouge Complex. Although these were favorable points for the Ford Motor Company, not everything was rosy from an economic point of view. Production increased, but selling was coming off by an essential limit, that manipulated the account of money going into the company's coffers.

Ford shut down its plants and shipped cars and trucks to dealers even though they had not ordered them. And those traders had to pay for those cars on delivery and not when they were sold to regular customers. Merchants were not satisfied with this way, nevertheless they were obliged to accept it if they liked to preserve their Ford excellence.

During 1920, Ford regulated new production registers for Ford trucks and Ford cars from 1920 to 1923. The corporation saw some modifications in its corporate country as well, mainly in the market place.

1920 was a year of wide-ranging outcomes for the Ford Motor Company and Ford trucks. In May, the company became known due to the production of its five-millionth Model T, but this good information was offset by the **defection** of Ford's brilliant production boss, William Knudsen, to Chevrolet. It was

widespread because of this movement that Chevrolet became a special automotive, passing Ford on the sales charts by the late of the twenties<sup>41</sup>.

In 1924, Ford brought great variations to the methods in which it constructed its trucks. Ford trucks went through the main changes in 1924.

Before to 1924, Henry Ford sold his Model T trucks as rolling chassis, leaving the body business to aftermarket association. This model was modified that year when Ford's first factory-catalogued truck was offered as the Model TT with Express Body.

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<sup>41</sup><http://fordofwestmemphis.blogspot.com/2009/01/1920-1929-ford-trucks.html> (28/04/2015 17:00)  
<http://auto.howstuffworks.com/1920-1929-ford-trucks1.html> (28/04/2015 18:50)

**Conclusion**

To sum up, personal transportation was important for multiple reasons that included travel, economic activity and mobility without which the use of transportation services and the carrying of commodities from one place to another were to be difficult. The introduction of the personal transportation in the American society gave people more freedom than before for the sake of work, trade, communication, entertainment, visits and so forth.

## ***CHAPTER THREE:***

### ***Public Modes of Transportation in the 1920s***

## **Introduction**

Public transportation in the United States has developed over the years from boats and animal-drawn wagons to powered train, cable car, trolley and airplane. Dramatic modifications improved the globe between 1900 and 1928, introducing ever-quicker methods of public transportation.

### **3.1. Railroad**

Railroad or railway, modality of transportation usually consisting of steel rails, called tracks, on which trains of freight cars, passenger cars, and other rolling stocks are drawn by one locomotive or more. Still, there are other sorts of railroads, containing those whose units consist of single self-propelled cars, cable-drawn railways used to ascend steep grades, and monorails whose cars are usually propelled along a single rail<sup>42</sup>.

Colonel John Stevens<sup>43</sup> is looked to be the father of American railroads. The first railroad charter in America was granted to him<sup>44</sup>.

The epoch followed by the Civil War until the 1920s are called the 'Golden Age of the Railroad'. Moving by rail was the swiftest and simplest method to take people and freight from place to another within the United States<sup>45</sup>.

Railroads facilitated to people to populate outmost west. They aided workers and traders to come to new markets. New actions were made for many of farmers who assisted build then operate the rail lines. Thence, railway investors got very wealthy.

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<sup>42</sup> The Columbia Electronic Encyclopedia, sixth Edition, Columbia University Press, 2012.

<sup>43</sup> John Stevens, (born 1749, New York City—died March 6, 1838, Hoboken, N.J., U.S.), American lawyer, inventor, and promoter of the development of steam power for transportation.<https://www.behance.net/johnstevens> (28/04/2015 18:50)

The great system of railways in the opening of the nineteenth century in the United States was developed that helped transportation of goods and public across large spaces, simplified the settlement of huge parts of the country, formed towns and cities, and consolidated a nation.

In 1917, the union government took over the railroads for the period of World War I. Although the Transportation Act of 1920 returned the railways to their private processors, it also gave the **ICC** general control over the lines, including the truth to mediate work disputes.

Organization of railroad labor began with the unionization (1864) of locomotive engineers; by 1900 railway personnel were organized on an almost nationwide basis. Numerous unions were presided by the major Four—the brotherhoods of the engineers, the firemen and enginemen, the conductors, and the trainmen.

Early railroads were a far cry from the great system of railroads that were built in the nineteenth century and that continue to be used today. The old railways in the United States were crude, wooden railways formed by quarries and mines over which horses could drag carriages to nearby water paths. In 1827, quarry and mine workers in Quincy, Massachusetts, and Moch Chunk, Pennsylvania, constructed the first life-size railways<sup>46</sup>. The first locomotive for workers on railways was imported from England in 1829.

Railroads originated in the East of the United States, nonetheless speedily passed to the west, spider-webbing over the country. No matter where railroads went, the world followed and cities developed. Formerly uninhabited or sparsely inhabited areas of the country turned to be towns almost overnight when the railroad came through.

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<sup>46</sup> Mary Bellis, *Outline of Railroad History*, [http://history1900s.about.com/od/1920s/a/flappers\\_2.htm](http://history1900s.about.com/od/1920s/a/flappers_2.htm) (12/04/2015 15:10)



One striking example is the case of Terminus, Georgia. The small town of about thirty was chosen as the terminus for the Western and Atlantic Railroad. In 1845, it was renamed Atlanta and went on to become one of the most important cities in the South.

Railways demanded land on which to lay tracks, construct rail yards, and build stores. Starting in the 1850s, speculators bought land in the hopes that a railway would arrive through an area and they could then resell the land with a higher cost. Also in that time the United States government understood the importance of the railways and the territory confederated with them.

One of the first railways constructed as a one unit was the Illinois Central. The line could be built as a single unit partially because the government gave land to the rail company in a patchwork type of alternating one-mile-square parts, with the government retaining property of the intervening lands.

The mixture of people and private ownership produced by the award and others like it led to the employment and settlement of vacant lands, the extension of railroads into underdeveloped areas, and raised producing and fortune. In return for the land grants, the railways imparted government freight, mail, and personnel, including military troops.

Until 1946, railways were decisive in moving goods to markets. Eastern cities, like New York and Boston, and in the Midwest, like Chicago, became the station for railroad transfer of agricultural and industrial products.

Like canals before them, railroads became in essence man-made rivers. Railways proceeded freight and public between Eastern urban centers into the internal of the country and finally toward the Western<sup>47</sup>.

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<sup>47</sup>"Railroads." Dictionary of American History. 2003. Encyclopedia.com. (April 28, 2015). <http://www.encyclopedia.com/doc/1G2-3401803512.html>

In 1920s the railroads enjoyed their greatest predominance and profitability. The year 1916 viewed top mileage at over 254 000 and railroads grasped substantially 100% of all interstate transit, both passengers and loads. Below is a timeline of railway mileage over the years:

1840: 2808 Miles

1850: 9021 Miles

1860: 30000 Miles

1870: 52922 Miles

1880: 93267 Miles

1890: 163597 Miles

1900: 193346 Miles

1916: 254037 Miles

### **3.2. Trolley and Cable Car**

Urban people transportation was an invention of the industrial revolution, which created cities too large to traverse on foot. The average urban resident owned neither a horse nor carriage.

Public transportation in New York was initiated in 1827 with the omnibus. As the population of the city increased, the needs to move the masses became ever greater. The first major development in this area was the first light rail system: the horse car; a normal, small, in a form of box car dragged by horses over metal rails imbedded into the street.

Riding over rails cut contact, the horse car could carry a big amount of carriage with a less potential than the car, thus rising ability and rapid that was still, at best, no quicker than a brisk walk.

The first system of this kind in the United States initiated process in New York City in 1832, two years before Brooklyn, over the river, was integrated as a city itself. In the near future, horse cars, or trolleys, as they became known, went over the city, while in Brooklyn, that speedily enlarging city began its own communication in 1854<sup>48</sup>.

In the 1910s, the trolley had produced a new American city favored by specialized sections. Iconic was the stylish Central Business District, a vibrant region with specialized sub districts wherein were calibrated nearly all works and activities that the middle class wished to reach. Needy groups stayed in inexpensive, ancient housing surrounding the modern center cities. Workshops and depots also remained full around railroad square. These were middle and working class bedroom territory, every day the middle and working class populations raised into the middle on electric cars and raised outside in the evenings. At the middle of the day cars became full of women and children, and during the evenings mainly the week-ends families used these vehicles for relaxation<sup>49</sup>.

According to the lower class, the trolleys altered dramatically the American societies and the manner they tested it .The trolleys spread over with the metro zone, track was added until 1947.

The trolley was the predominant category of United States transportation until 1920. Its decrease set by the approach of extensive production of automobiles. The Great Depression of the 1930s worked by the side of public transportation and against it. It stopped most of the small city trolley systems, as

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<sup>48</sup>**Jeffrey Brown,Hilary Nixon,Enrique Ramos, The Purpose, Function, and Performance of Streetcar Transit in the Modern U.S. City. A publication of Mineta Transportation Institute, February 2015**<http://transweb.sjsu.edu/project/1201.html>

<sup>49</sup> **William J. Mallett , Federal Support for Streetcars, April 3, 2014**  
<https://www.fas.org/sgp/crs/misc/R43464.pdf>

well as the more exotic and lightly patronized portions of the big city arrangements<sup>50</sup>.

In Minnesota, every small city trolley was gone by 1938, and Duluth's cars quit in 1939. In the Twin Cities, the depression set a limit to 16 percent of the track miles containing the long suburban lines as far as Lake Minnetonka, White Bear Lake, Stillwater and Anoka, as well as a few light city routes such as Kenwood in Minneapolis and East 4th Street in Saint Paul.

During the early and mid-nineteenth century the trolley worked as a popular method of transit over Broadway. The Los Angeles trolley order was firstly run by Pacific Electric (1901-1961) and ameliorated into the widest trolley operation in the world by the 1920s.

This breath of scale enabled citizens and travelers similar to regular traverse the Los Angeles area, and joined many of Southern California's societies. The system ran for nearly half a century, and at its top crossed over 1100 miles of track with 900 electric trolley cars; this dense communication made the average of people transportation use higher than San Francisco does nowadays.

For seventy years, in New York City, trolleys ran in all five boroughs. Trolleys were controlled by electric-energy carried through cables running over or in underground canals. They were speedier and organized than horse cars and less expensive to form and manage than cable cars.

Motor buses progressively displaced trolleys between 1930s and 40s, although some trolley routes lasted until the 1950s.

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<sup>50</sup> Gregory Thompson , *The Streetcar in American Life*, *Trip Planner* magazine July 10, 2010 <http://www.triplannermag.com/index.php/2010/07/the-streetcar-in-american-life/>

The first main try to evolve a machine that could exchange horses on America's streetcar lines was the cable car in 1873. Cable cars were pulled by a tall cable that proceeded heavily under a city's streets.

To transform a streetcar line from horse cars to cable cars demanded drilling a moat between the rails and building a room under the passage from one termination of the line to another. This room was called a cellar. When the cellar was ended, a small gap was left at the upper of the cellar. Thus a tall cable was put into the cellar. The cable ran under city streets from one end of the streetcar line to the other.

New York City's first cable car line opened in 1883 on the new Brooklyn Bridge. Cable Cars were animated by steam-driven machinery in a powerhouse that evermore drew a loop of wire cables over an opening under the street.

When the cable car worker required the car to leave forward, he gripped the running cable with a particular system. When he wanted to halt, he released the moving cable.

Cable cars were obtainable on degrees which were too steep for horses. But once electricity became ready for trolleys, the importance of steam-powered cable was restricted, terminating the run of cable cars in New York City in 1909.

As the Industrial Revolution took hold, new technologies became obtainable. In one word after the Civil War, the cable car was introduced in many American cities, exchanging a numerous of the horse car lines. These practiced by linking the car to a constantly running cable underground. To halt, the worker would separate from the cable and apply the brake. Cable cars were bigger and quicker than horse cars and supplied an average tread in the evolution of the streetcar.

Cable cars also however, had main obstacles. Costly to operate and preserve, the cable propelled them at a stable quickness and therefore, could be

totally deadly rounding acute curves. Actually, the turn on Manhattan's Broadway around Union Square Park was known as Dead Man's Curve. Thus, as a major form of passage in most cities, they were short lived, soon to be substituted by a new, away more effective technology.

As the 1920s opened, the electric railroad (street cars or trolleys) had a realistic monopoly for street and inter-urban mass transmission systems because of its capacity efficient use. The force to drive the train was focused in a single central plant.

Charcoal provided a combined denominator for efficiency comparisons. Even though electric power required a greater primary capital expense, electric traction required having the amount of coal per car wanted with steam traction. Nearby water power for electric generation overwhelmingly made the electric force for mass transit a certainty for lower costs<sup>51</sup>.

### **3.3. Aviation**

All through the history, people have challenged themselves with one another with competition to know who is the powerful, able and self-protected, generally who could be the "superior." Airmen are no different. From the start of flight up to the present day, aviators have been a specially defy team as they competed to show who could fly quickly, rise the highest, and go the farthest.

The majority from them have also conflicted to view who could establish aviation "top." To non-pilots, some aviators' actions in pursuance of these goals may have seemed inconsiderate, or even mad and needlessly precipitous. Actually, these pilots were really motivating themselves in a brave and

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<sup>51</sup> Rick Zimmerman, *Trolley As Cost Efficient Transit*, Delmar in Mansfield Merriam's *American Civil Engineers' Handbook, 1920, 4th edition*.[http://www.surveyhistory.org/trolley\\_as\\_cost\\_efficient\\_transit.htm](http://www.surveyhistory.org/trolley_as_cost_efficient_transit.htm)(15/01/2015 10:40)

pinpointed way to go beyond their assumed mental and physical restrictions to conquer their many challenges<sup>52</sup>.

### **3.3.1. Aviation after the First World War:**

The First World War which started in 1914 and ended in 1918 was followed by the increase of air planes, so that by the early 1920s, people were much more trusty and able to fly longer space and charging huge loads. This allowed the carrying of passengers and freight on a commercial foundation.

American pilots who came back from WW1 helped themselves by traveling all over the states arriving to small cities and showing off their flying proficiency, as well as taking paying travelers for rides.

The growth abilities of 1920s planes also created the chance for courageous men and women aviators to break and to make aviation quick and distance registers. They captured the fiction of the public who loved the flying machines and who followed their exploits. Crowds would be waiting to welcome pilots after epic flights and huge street parades would be held in their honor where whole towns and cities turned out<sup>53</sup>.

4600 American airplanes were produced in 1928 and 104 various planes were displayed at an air show, leading Henry Ford to predict that there would have to be consolidation within the industry.

### **3.3.2. Aviation Event from 1920:**

Aviation has had a wide development after WW1, since the 1920, planes have increased and the capacity of flight has become as moving in rails. The use of airplanes made exploration easy and surveying of inhospitable areas like the Antarctic that were hard to go there by traditional ground-based methods.

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<sup>52</sup><http://airandspace.si.edu/exhibitions/pre-1920-aviation/>(12/01/2015 11:00)

<sup>53</sup> Jason C. Chavis, From Civilian to Military: All About 1920 Airplanes, edited by: Laurie Patsalides, updated: 5/19/2011

In 1929, Commander Richard I Byrd was able to discover many previously obvious characteristics of Antarctica with his flights generating plenty aerial photographs for following analysis and mapping.

| Date | Event   |
|------|---|
| 1920 | <b>February 22, 1920</b> First transcontinental mail service comes in New York from San Francisco. The travel occupied 33 hours and 20 minutes - roughly three days quicker than rail service.  |
| 1921 | <b>June 15, 1921</b> Bessie Coleman the first licensed African American aviator. She went to France to get her license and was known as "Brave Bessie" during her brainstorming days, and she flew in air shows to collect money for an aviation school for blacks. |
| 1922 | <b>June 12, 1922</b> Captain. A. W. Stevens, U.S. Air Service, made record parachute jump from 24,206 ft. from a supercharged Martin bomber over McCook Field, USA.   |
| 1923 | <b>May 2-3, 1923</b> Lieutenants Oakley Kelly <sup>54</sup> and John Macready accomplished the first nonstop coast to shore airplane flight. New York to San Diego - 26 hours, 50 minutes   |
| 1924 | <b>September 28, 1924</b> the first round-the-world flight was completed in Seattle, Washington by three, two-seat Douglas World Cruisers of the US Army Air Service.   |

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<sup>54</sup>See Appendix II



|      |   |
|------|---|
| 1925 | <b>June 12, 1925</b> Daniel Guggenheim gave \$500,000 toward the foundation of a School of Aeronautics at University of New York.   |
| 1926 | <b>September 3, 1926</b> Lt. James H. Doolittle, pretending Curtiss airplanes in South America, filed over the Andes Mountains  |
| 1927 | <b>June 28-29, 1927</b> Bird of Paradise: The first transoceanic flight from Oakland, California to Honolulu, Hawaii by Albert Hegenberger and Lester Maitland. It was the longest open-sea flight to that time |
| 1928 | <b>June 17, 1928</b> Amelia Earhart became the first woman to go over the Atlantic.   |
| 1929 | <b>1929</b> William Green <sup>55</sup> developed the first spontaneous pilot used on an airliner   |

<https://www.aiaa.org/SecondaryTwoColumn.aspx?id=5726>(12/03/2015, 11:30)

### 3.3.3. Aviation in Military Service:

After the first war, several states suggested a new affirmation on air planes as fighting force for military. The United States was the first that led the movement to contrast air abilities in order to be saved in the coming wars.

Nevertheless, just next the first war by a few years different forms for the first time constructed on the same concept as had been used through the prior conflict, by the exception of main push in order to better prove the sea plane-type fighter and bombers, the 1920 components of airplanes impacted this methodology<sup>56</sup>.

<sup>55</sup>See Appendix II

<sup>56</sup><http://www.afhso.af.mil/shared/media/document/AFD-100923-007.pdf> (12/03/2015, 11:30)

The great change in aviation brought new notions to bomb the enemy position, for example dropping bombs from the cockpits of the aircraft by pilots or fighters, the new forms for bombers consist of ways to position explosive over the pavilions and under the fuselage.

The US based company Glenna-Martin Company formed the Martin NBS' that return to be the standard bomber in the state's air service from 1920 to 1928, the design brought prosperity for other nations as well that the only significant design to challenge its position was the *Nieuport London*<sup>57</sup>, a British night bomber that was finally scrapped due to unreliable engine work.

Military aviation industry demanded very important point, which was the fighter; the US drove this effort to the improvement of the leaning PW2 single-seat monoplane.

The military used flight boats by as 1920 airplanes were designed; the US constructed Naval Aircraft *Factory Tandem Fighter*<sup>58</sup>.

## **Conclusion**

As a conclusion, by the increasing of public transportation, people were able to find new areas for working and relaxing. On the other side, airplanes were invented and airlines started offering scheduled services. Moreover, freeways and large roads made it easier for cars to travel long

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<sup>57</sup> See Appendix I

<sup>58</sup> See Appendix I

# ***GENERAL CONCLUSION***

## **General Conclusion**

As a conclusion, it is possible to say that in the twenties there were several factors that played a role in the changes in American society. After World War One many Americans were fed up with President Wilson and his liberal policies.

The 1920s was a period where Americans were living in the American dream. Countless people considered this era as the age of excess because it was the first time in American history that American people could afford to buy in abundance and purchase anything they desired.

The transportation industry was extremely important in the economic prosperity. Prior the 1920s, automobiles were only done by proficient blacksmiths, and there were very difficult to own one. Only about 4000 were produced each year. But Henry Ford changed all this after the end of the First World War. He set up the first real 'assembly line', where workers had only one or two tasks to do on an automobile as it passed them.

The widespread use of the transportation, especially after 1920, transformed the rural and urban landscapes in America. It is too easy to suppose, however, that the automobile was the single driving force in the transformation of the countryside or the modernization of cities. In some ways, transportation was a decisive means for change.

Transportation became an essential aspect of American society mainly during the 20th century.

The rising of “automobile society” of twentieth-century America resulted in dependence on a single form of transportation, the creation of automobile-scaled landscapes, the development of new urban and suburban forms and a wide business developed.

# ***APPENDICES***

## Appendix I

### DEFINITIONS OF A SERIES OF TERMS:

1. **The age of jazz:** (esp. in the US) the period between the end of World War I and the beginning of the Depression during which jazz became popular. The period brought dramatic change in American tradition and culture. From which jazz music and dance emerged. Although the era ended with the beginning of The Great Depression in the 1930's, people would do everything for fun.

[http://www.historylearningsite.co.uk/1920s\\_America.htm](http://www.historylearningsite.co.uk/1920s_America.htm)

2. **The Roaring Twenties:** was a time when many people defied Prohibition, indulged in new styles of dancing and dressing, and rejected many traditional moral standards. [http://en.wikipedia.org/wiki/Roaring\\_Twenties](http://en.wikipedia.org/wiki/Roaring_Twenties)

3. **Corduroy roads:** a road across swampy ground, made of logs laid transversely.

<http://www.merriam-webster.com/dictionary/corduroy%2520road>

4. **Mesopotamia:** (from the Greek, meaning 'between two rivers') was an ancient region in the eastern Mediterranean bounded in the northeast by the Zagros Mountains and in the southeast by the Arabian Plateau, corresponding to today's Iraq, mostly, but also parts of modern-day Iran, Syria and Turkey. The 'two rivers' of the name referred to the Tigris and the Euphrates rivers and the Arabs referencing what Egyptologist J.H. knew the land as 'Al-Jazeera' (the island).

<http://mesopotamiareport.weebly.com/fun-facts.html>

5. **A safety bicycle:** is a type of bicycle that became very popular beginning in the late 1880s as an alternative to the penny-farthing or ordinary and is now the most common type of bicycle.

[http://en.wikipedia.org/wiki/Safety\\_bicycle](http://en.wikipedia.org/wiki/Safety_bicycle)

6. **Nieuport London:** Aircraft designed a British night bomber in the First World War by Henry Folland. A twin-engine trip plane it did not fly until 13 April 1920, the London was dogged by the unavailability and unreliability of its engines, and did not fly until 1920. Only two were built.

[http://en.wikipedia.org/wiki/Nieuport\\_London](http://en.wikipedia.org/wiki/Nieuport_London)

7. **Factory Tandem Fighter:** The Naval Aircraft Factory Tandem Fighter was a United States twin-engine flying boat escort fighter first flown in October 1920. The aircraft originated from requirements drafted by the British Technical Committee in April

1918. [http://en.wikipedia.org/wiki/Dornier\\_Do\\_335](http://en.wikipedia.org/wiki/Dornier_Do_335)

## Appendix II

### FAMOUS FIGURES:

8. **Daniel Joseph Boorstin:**(October 1, 1914 – February 28, 2004) was an American historian at the University of Chicago, writing on many topics in American history and world history. He was appointed twelfth Librarian of the United States Congress in 1975 and served until 1987. He was instrumental in the creation of the Library of Congress Center for the Book. He published more than 20 books.

<http://www.amazon.com/Daniel-J.-Boorstin/e/B000AQ79EE>

9. **Henry Peter Brougham:** born September 19, 1778, Edinburgh, Scotland—died May 7, 1868, Cannes, France, lawyer, British Whig Party politician, reformer, and lord chancellor of England (1830–34); he was also a noted orator, wit, man of fashion, and an eccentric. Educated at the University of Edinburgh.

[http://fr.wikipedia.org/wiki/Henry\\_Brougham](http://fr.wikipedia.org/wiki/Henry_Brougham)

10. **Albert Augustus Pope:** was born in May 20, 1843 and died August 10, 1909) was a Brevet Lieutenant-Colonel in the Union Army. He was an importer, promoter, and manufacturer of bicycles, and a manufacturer of automobiles. Colonel Albert A. Pope was hailed as a leading automaker in the United States. That his name is not a household word today is the very essence of his story. Pope's company was the world's largest manufacturer of bicycles (under the Columbia label) in the late 1800s.

<http://www.usbhof.org/inductee-by-year/20-albert-augustus-pope>

11. **William Green:** was born March 3, 1873 and died November 21, 1952) was an American trade union leader. Green is best remembered for serving as the President of the American Federation of Labor from 1924 to 1952. Green was a strong supporter for labor-management cooperation and was in the frontlines on wage and benefit protections industrial unionism legislation.

# ***LIST OF PICTURES***



## List of pictures



**THE TRAP**



**THE CALECH**



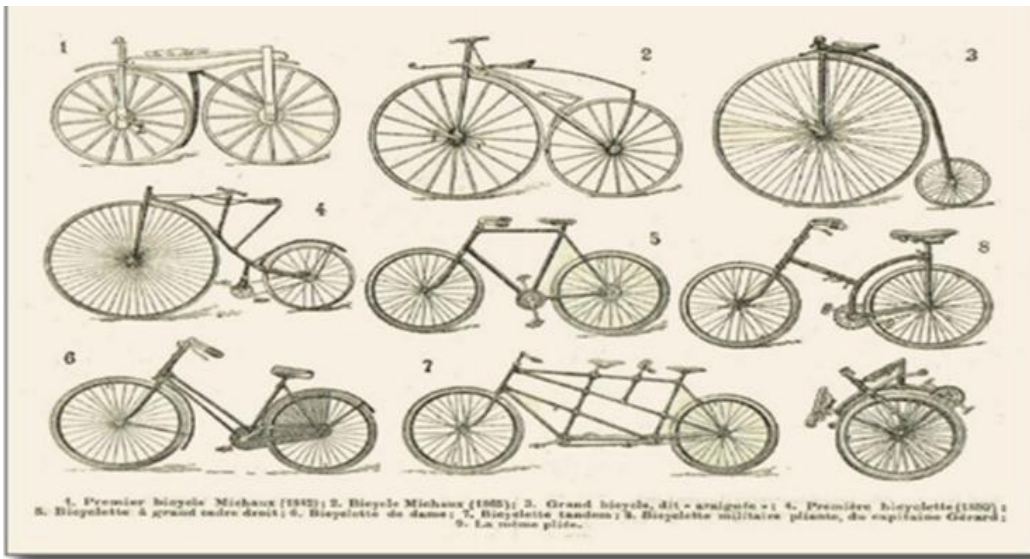
**THE BROUGHAM**



**THE COACH**

[www.media-cache-ec0.pinimg.com](http://www.media-cache-ec0.pinimg.com)

1920 Harley Davidson Bicycle



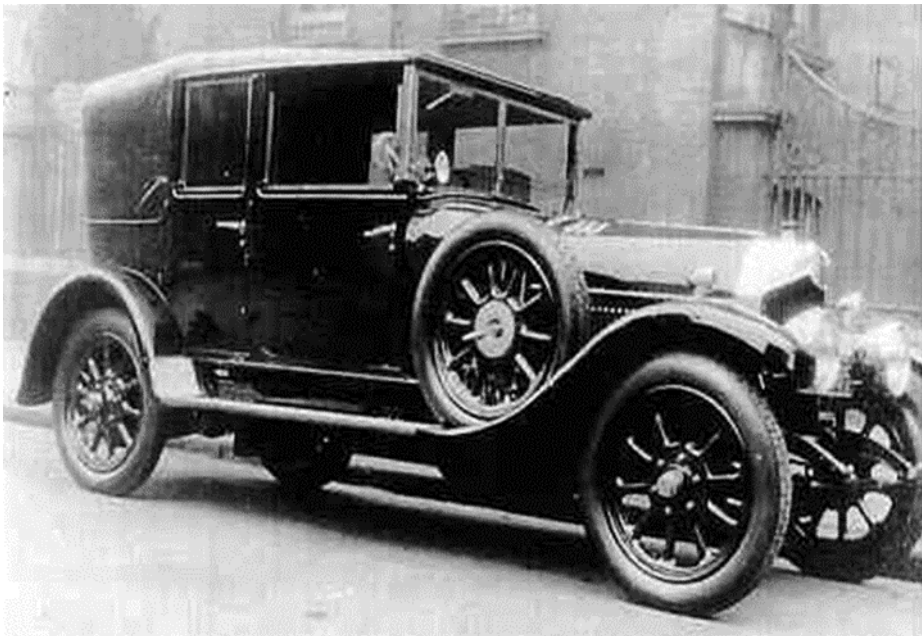
## Types of earlier bicycles

[www.ropa-ciclismo.com](http://www.ropa-ciclismo.com)



**First American automobile**

[www.american-utomobiles.com](http://www.american-utomobiles.com)



**Automobile in 1920**

[www.american-utomobiles.com](http://www.american-utomobiles.com)



**American Cable Car in 1920**



**American Cable Car in 1920**

[www.cable-car-guy.com](http://www.cable-car-guy.com)



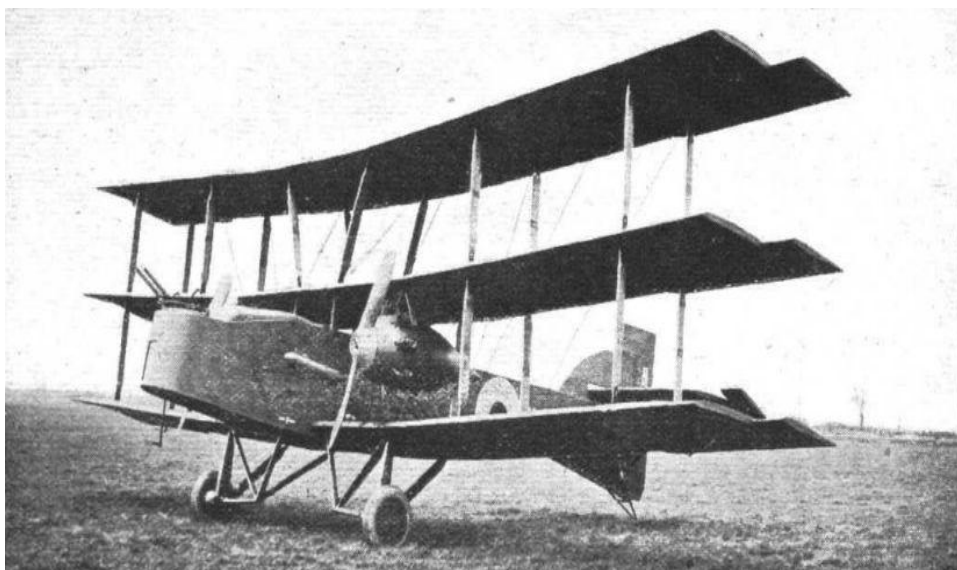
**American Trolley in 1920**

[www.mike.blackledge.com](http://www.mike.blackledge.com)



**Naval Aircraft Factory TF (Tandem Fighter)**

<http://www.airwar.ru/enc/flyboat/tf.html>



**Nieuport London**

[www.finemodelworks.com](http://www.finemodelworks.com)



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