# SOME INFLUENCES OF THE AUTOMOBILE ON AMERICAN LIFE

by

# Patricia C. Kail

B. S., Kansas State College of Agriculture and Applied Science, 1939

## A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree of

MASTER OF SCIENCE

Department of History and Government

KANSAS STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE LD 2668 R4 1945 ¥13 Ciuments

# TABLE OF CONTENTS

INTROD	UCT	IO	Ti .					٠		٠		*		*	•		*	*		•	*	Page 1
HISTOR	Y.		•		•	4		٠					•	4	4				*	<b>0</b> L		1
PARKER	AN	D	TH	ELF.	Aī	ITC	源(	BI	LE	i a					4	4	4					5
ROAD I	MPR	OV	EM	E	T	d.		•		4	2			*								7
TRAVEL		*	u			٠	#-						*			*		*	#			9
TRAFFI	C R	EG	PUI.	AT	CIC	N	4						*					*			•	10
CRIME.	٠				٠			-						*	•			*		*		12
YOUTH.	. 10	•				•	•		*		*		4	ė	٠			*	٠		•	13
SCHOOL						٠							6	4						•		14
CHURCE				*						•		•	٠		•		4		9		4	14
MEDICA	L P	RO	FE	SS	SIC	n					4	•	•		•				•	•		15
CHANGE	OF	R		SII	)EI	NC1	3			•								*			*	15
OTHER	TRA	MS	PO	RI	CA:	TI(	HC						*				٠	4	4		•	16
BUSINE	355	AN	D	I	NDI	US!	rr:	Y.					•				•					17
NATION	AL	RE	VE	ent	JE	4		*	•			*										19
ACKNOW	LED	MOM	Œ	T		*			*			•		•			•	*	•			21
BIBLIC	GRA	PH	X		*							*										22

Introduction. The story of the people of the United States can be read in the history of transportation. In the nineteenth century, the turnpikes, rivers, canals, and railroads were used as a means of reaching the frontier. Horse power and steam power were the chief motive forces for this period of transportation. A new motive force, the gasoline engine, was put into use at the time the frontier was disappearing. The gasoline-driven engine was combined with the carriage to produce the automobile. The automobile industry had its beginning as a commercial reality2 in 1900 when there were 8.000 registered motor vehicles in the United States. In 1942 there was an approximate registration of 32,582,000 and the industry employed 508,0003 persons for manufacturing alone. The automobile has had widespread influence on American life. Business, travel, suburban development, life and health, crime, rural life, religious and educational standards. recreation and the use of leisure time, and many other activities were touched in some way by this twentieth century machine. 4 It is the purpose of this paper to describe some of the influences of this new means of transportation on American society. History. We have usually thought of the automobile as being typically American. However, the Europeans, particularly the

<sup>1</sup> Mark Sullivan, Our Times (New York 1928), Vol. I, p. 504.
2 U. S. Department of Commerce, p. 440, Statistical Abstract of the United States.

<sup>3</sup> Ibid., p. 140.

<sup>4</sup> John D. Hicks, The American Nation (New York 1941), p. 619.

French and the Germans, at the end of the nineteenth century were much farther advanced in the production of the gasoline-propelled vehicle and in road building. The motor vehicle the European developed was only for people of great wealth. Consequently, when it was brought to the United States a similar class of people were the only ones who could afford to buy and operate it. Not until American manufacturers began to use standardized interchangeable parts and mass production did the automobile begin to mold the lives of the mass of the people.

The American story of the automobile began in 1879 when George Selden applied for a patent which would cover any type of 2-cycle engine in a gasoline-propelled vehicle. With this application he made a model of the car that satisfied the Patent Office. He kept making changes on the machine until 1895, when he was granted a final patent. Selden never manufactured a single automobile. In 1903 he sold his patent to the Association of Licensed Automobile Manufacturers. This Association was made up of the majority of the automobile manufacturers whose chief purpose was either to bring all manufacturers into the organization or to keep them out of business and competition. It formed a patent monopoly. This monopoly was broken in 1911 after a six year court battle by Henry Ford. It was the first and the last time that the automobile was ever monopolized through the use of patents. 5 Not considering the Selden patents, the Smithsonian Institution gives credit to Charles E. Duryea for the first Amer-

<sup>5</sup> David L. Cohen, Combustion on Wheels (Boston, 1944), pp. 109-111.

ican made automobile which was tested in 1893 and 1894. Others would give the honor to Elwood Haynes who tested his vehicle in 1893 and 1894. By 1899 Ranson Olds was the director of the first automobile company in Detroit, the Olds Motor Works. He made the automobile so popular that in 1908 Gus Edwards was inspired to write a song, In My Merry Oldsmobile. This motor company was the first in the United States to do a large export business through dealers and sales representatives, and it also began the mass production of low priced cars. Olds left the company in 1903 though it bore his name until 1908 when it was sold to the General Motors Corporation of New Jersey. 7 Henry Ford, a young engineer-machinist with the Detroit Electric Company, often visited the Olds plant. Ford had come into public view because he had built two winning racers, the Arrow and the 999. He had an 80 horse power engine put in them and hired a former bicycle racer, Barney Oldfield, to drive them. In 1903 Ford organized a motor company of his own8 and probably did more than any other automobile manufacturer to make the mass of the American people car conscious. The Ford Motor Company was backed by \$28,000 eash and incorporated with a capitalization of \$100,000.9 Ford contributed no cash, but he was to receive a 25.5 per cent interest in the company for his services. 10 By 1906 Ford had obtained control of 58.5 per cent of the shares and was able to follow his

<sup>6</sup> Ibid., pp. 31-32.

<sup>7</sup> Ibid., pp. 32-89. 8 Ibid., pp. 97.

<sup>9</sup> William Adams Simmonds, Henry Ford (New York, 1943), p. 87. 10 Gohen, op. cit., p. 104.

own policy of producing a car which would sell for the low price of six or seven hundred dollars. 11

The event which marked the beginning of the adaptability of the slogan "Watch the Fords Go By" took place at the Alaska-Yukon-Pacific Exposition of 1909. Robert Guggenheim, mining magnate, offered a trophy cup to the automobile manufacturer who would be the first to blaze a route for automobile traffic across the United States from New York City to Seattle. Ford entered two cars of his newest model, the Model T, in a five car contest. One of the Model T's was the only car to reach Seattle over trails of Mid-West mud and through Rocky Mountain snow drifts in the unheard time of 22 days and 55 minutes. 12 The result of the contest was to demonstrate to the people that a low-cost, light-weight car was practical and to increase the sale of the Model T to people in the low income group.

Ford had revolutionary ideas on production and wages. He became noted for his rapidly moving assembly line. In the period between 1908 and 1927, 115,000,000 Model T's rolled off the assembly line. In 1914 when the basic pay for the laborer was \$2.34 and his usual laboring day nine hours, Ford began to pay \$5.00 base pay and established the eight hour day. Along with these material benefits, Ford became very paternalistic in his attitude toward labor and allowed no independent labor unions in

<sup>11</sup> Ibid., p. 108.

<sup>12</sup> Ibid., p. 150.

<sup>13</sup> Simmonds, op. cit., p. 214.

<sup>14</sup> Ibid., p. 136.

his company. Other companies producing automobiles at the same time as Ford changed the models of their cars frequently. Because Ford had not changed, Model T sales were so low by 1927 that Ford found that he must either leave his automobile field or retool and bring out a new car. The new Ford, the Model A, came off the assembly line late in 1927. Although it retained its comparative inexpensiveness, it was changed in outward appearance and mechanical design. Due to the long delay in changing style, Ford lost his title as the top man in automobile manufacturing.

Farmer and the Automobile. Ford's Model T and later other low priced automobiles changed the life of the farmer in an almost revolutionary manner. No longer did the trip to town for supplies mean a slow journey in a spring wagon or buggy, but a quick trip in the family car. Formerly the journey had been measured by the day, now it was measured in hours and minutes. Cooperative marketing associations would have been impossible without the automobile because they require frequent meetings and a rapid method of transportation. Milk routes for dairies have been expanded over a vast territory because the truck without the use of refrigeration can pick up the milk from the farm and get it to the factory before it is spoiled. If a farm machine breaks, the farmer does not have to waste time and depend upon the mails to get his repairs but may jump in his car or

<sup>15</sup> E. R. Bastman, These Changing Times (New York, 1927), p. 9.

truck, or send one of his family, and get the replacement in a matter of minutes or hours. By 1920 automobiles were very prevalent in rural areas. The states which had the greatest density of automobiles in relation to population were the farming and ranching states of California, Iowa, Nebraska, Kansas, South Dakota, Montana, Minnesota, and Wyoming. 16 During the year the farmer drove his car over 4,600 miles, of which 78 per cent was on business. 17 In 1934, the country as a whole showed an increase of 45.7 per cent in automobile registration over 1933. The Middle-West led with an increase of 95.7 per cent. 18 With a total farm population of 30.546.894 in 1940.19 the farmers owned 5,191,220 motor vehicles out of a total automobile registration of 31,104,118.21 Approximately 23 per cent of the population of the United States owned about 16 per cent of the motor vehicles. The farmer not only uses his automobile for business, but for pleasure as well. In the days of the horse and buggy the average trip was four or five miles, but now the length of the trip has been extended to forty or fifty miles. 22 The trip to the county seat is no longer an annual occasion, but has become commonplace. Because of the automobile and other labor saving devices, the

<sup>16</sup> Cohen, op. cit. p. 151.

<sup>17</sup> Ibid., p. 151. 18 James Truslow Adams and Charles Garrett Vannest, The Record of America (New York, 1935), p. 846. (Quoted from Automotive Daily News)

<sup>19</sup> World Almanac and Book of Facts (New York, 1944), p. 461.

<sup>20</sup> Statistical Abstract, p. 609.

<sup>21</sup> World Almanee (1944), p. 510. 22 Charles A. and Mary R. Beard, Rise of American Civilization (New York, 1928), Vol. II, p. 715.

farmer often takes a vacation every year. He attends the movies, lectures, and farm gatherings where he comes in contact with other people and hears about new ideas. No longer can the farmer be said to be provincial minded because he has no contact with other groups of people.

Road Improvement. The farmer has always been interested in efficient and rapid methods of getting his products to market. Even before the widespread use of the car in rural communities the farmer protested against the bad roads. But his dislike of bad roads was not enough to reconcile him to the idea of paying high road taxes. The agitation for the present improved roads began in New Jersey in 1891 and was followed in other eastern states.23 One of the demands of Coxey and his army, when they marched on Washington in 1893, was for better roads.24 The farmers, through the National Grange, entered the movement for better roads in 1907.25 The local governments began to make small contributions for town and county road improvement and later the appropriations were expanded by the state. The agitation for better roads became well organized in 1910 when the American Association of Highway Improvement was formed. By 1914 some of the states were spending millions of dollars annually to keep roads in repair and to build new ones. Stretches of concrete roads were being laid and the new bridges built at that time were of the

<sup>23</sup> Harold Underwood Faulkner, American Economic History (New York, 1943), p. 509.

<sup>24</sup> Hicks, op. cit., p. 265. 25 Cohen, op. cit., p. 11.

same material. 26 The Federal government entered the road building field with the Rurel Fost Roads Act of 1916. Congress appropriated five million dollars the first year to be divided among the states on the basis of size, population, and existing mail routes. The bill carried the dollar matching principle, and a state was required to accept federal control when it accepted the money.27 This money has been used for secondary interstate roads and connecting roads. By 1933 soms 108,000 miles of road had been improved and the federal government was appropriating annually about \$75,000,000. This is a small amount of money when compared to the \$2,500,000,000 to \$3,000,000,000 spent by 1930 by the states to improve county and city roads. In spite of this vast expenditure, at the present time slightly more than 20 per cent of the 3,000,000 miles of roads in the United States are little better than dirt roads. 28 The farmers of the nation are the ones who suffer the most inconvenience from these unimproved dirt roads, because they depend upon them to get crops to market. The importance of road improvement is understood when it is known that there are 48,000 communities in the United States that depend completely upon motor vehicle transportation. 29

The farmer is not alone in his dependence upon the automobile and good roads. There are 872 cities in the United States that

<sup>26</sup> Faulkmer, op. cit., p. 509.
27 U. S. Stat. at Large, Vol. XXXIX; Part I, pp. 355-359.
28 Faulkmer, op. cit., p. 662.
29 George R. Leighton and Joseph L. Nicholson, "Has the Automobile a Future?" in Harpers Magazine, Vol. CLXXXV, p. 72.

depend upon the bus for mass transportation. 30 In 1940 there were many large cities including Kansas City, St. Louis, Omaha, and Los Angeles, that depended upon trucks for the transportation of their milk supply. It is demand for good roads has expanded into a Federal trans-continental highway system. The Lincoln Highway from coast to coast, the Dixie Highway from the Lakes to the Gulf, the Pan American Highway from Chile to Alaska are examples of what a motor-minded people demand from their government. Travel. With increased leisure time and an economical and easy method of transportation, the people of the United States became interested in seeing their nation. By the end of 1930 there was an automobile for every 4.63 persons in the United States and the whole population might have gone off in cars for a vacation. The ratio varied considerably by states; California contained an automobile for every 2.78 persons and Alabama one for every 9.55 persons. 32 The people of the United States had always liked to travel but the railroad had been too expensive for most of them. If a person did not have a car of his own, there was always the public bus. The person who lacked bus fare might thumb a ride to his destination. although state legislation discouraged him. Early motorists confined their vacations to warm weather, but when automobile heaters and windshield cleaners were perfected and the closed car became popular any season was vacation time.

<sup>30</sup> Ibid., p. 72.

<sup>31</sup> Ibid., p. 70.
32 Report of the President's Research Committee on Social Trends,
Recent Social Trends in the United States (New York, 1933),
Vol. I, p. 72.

The state highway departments kept the roads in good repair and cleared the anow from them in winter. In the mid-thirties, trailers, the "homes on wheels," began to appear on the roads. 33 The American Automobile Association estimated that in 1930, one year after the financial crash, the tourist spent more than \$3.000.000.000.34 One of the outgrowths of tourist travel has been the cabin or tourist camp, or the motel. Previous to 1918 there were almost no tourist camps, but they were soon built to meet the demand for an inexpensive and convenient place for the traveler to stop. Then too, one did not have to dress as well as in a hotel. The West began this movement by the town or city offering evernight camping spots, often without charge. These first camping grounds evolved into the deluxe tourist camps of today which offer standard hotel service at moderate cost. The motorist makes a considerable saving on traveling expenses, and the tourist camp owner has a good income. Many private homes along the main highways of the nation have become tourist homes.35 Because of more tourists and competition from the tourist camps. the standard hotels began to offer better service and lower rates. The number of hotels increased in the period between 1920 and 1929 at a percentage rate greater than the population. 36 Traffic Regulation. One of the results of so many people travel-

36 Ibid., p. 501.

<sup>33</sup> Homer Carey Hockett and Arthur M. Schlesinger, Land of the Free (New York, 1944), p. 638. 34 Fremont P. Wirth, The Development of America (New York, 1939),

p. 688.

<sup>35</sup> Cohen, op. cit., p. 214.

ing on our country's highways has been traffic regulation. One of the earliest laws for auto traffic regulation was passed in 1899 by New York City barring horseless vehicles from Central Park. 37 It was dangerous because the horses became frightened and injured their ridors or drivers. In contrast, the Kansas City Star of July 1, 1945, carried the notice that the horse and buggy had been barred from Swope Park because they were dangerous to the automobile drivers. In 1904 the traffic problem had become so great that New York State passed a law providing a maximum of 20 miles per hour on open highways and 10 miles per hour in closely built up sections of the city. Other states soon followed the example established by New York. 38 In 1919 a few states, such as California and New York, had increased their maximum speed limit to 30 miles an hour. The average over the nation was 20 miles per hour. The average speed limit had increased to 35 or 40 miles per hour by 1931. 39 Between 1931 and 1941, many states established minimum speed laws of 35 or 40 miles an hour to keep traffic moving on the highway and to avoid congestion: the maximum speed limit was raised to 60 or 65 miles per hour. Traffic regulation has always been left to state supervision except in 1942 when the United States government, as a war measure, asked for a maximum speed limit of 35 miles per hour to conserve automobiles and tires. The great bulk of the automobile

<sup>37</sup> Sullivan, op. cit., p. 500. 38 <u>Ibid.</u>, p. 501.

<sup>39</sup> Fredrick L. Allen, Only Yesterday (New York, 1931), p. 7.

traffic has been around the urban centers or back and forth between them. In April 1939 the Bureau of Public Roads stated that most of the twenty-seven million cars on the roads traveled in round trips of less than 50 miles. 40

Because of the increase in speed limits and the number of automobiles on the highway there has been a resultant rise in traffic accidents. In 1913 out of a total of 82,000 accidental deaths in the United States, 4,200 of them were caused by the motor vehicle. By 1941, accidental deaths had risen to 101,513, of which 39,470 were caused by motor vehicles.41 On the list of criminal statistics traffic violations have increased steadily since 1910.

Crime. Even though the automobile is not mentioned in many of the robberies, burglaries, murders, kidnappings, and other crimes, it is implied that the automobile was used. Before the use of the motor vehicle the occurrances of crimes had centered in urban districts. Rapid transportation has made every small town and the open country accessible to the criminal.42 John Dillinger rode by automobile from state to state in the years of 1933-1935. shooting police and holding up banks. All the time he fled from the state police and the Federal Bureau of Investigation agents, the only federal charge against him was a violation of a law forbidding interstate transportation of a stolen automobile. He was finally captured and killed in Chicago by the Federal Bureau of

<sup>40</sup> Leighton and Nicholson, op. cit., p. 71.
41 World Almanac and Book of Facts (New York, 1945), p. 501.
42 Recent Social Trends, op. cit., Vol. II, p. 1135.

Investigation agents. While Dillinger terrorized the Middle West, Clyde Barrows and Bonnie Parker spread panic through the Southwest by holding up banks and shooting anyone who got in their way. They were finally shot in their car as it careened down a Texas road at 85 miles per hour. 43 To apprehend criminals the law enforcement officers have become motorized and have adopted the teletype and radio communication system. 44

The fake automobile accident racket has cost insurance companies hundreds of thousands of dollars annually. The racket begins to work when a driver, after stopping for a traffic light, starts his car and hears a woman scream. A policeman reports the accident and the woman's injuries. The driver later becomes a defendant in a law suit brought by the injured woman, and if the costs are more than his insurance he pays the difference. The shyster lawyer, the doctor who treated the woman's faked injuries, and the woman divide the money between them and plan another accident.45

Youth. Another influence of the automobile has been upon the life of the American youth. The car has made it easier for the young people to get beyond the control of their parents and local public opinion. In a few minutes the car will transport them to a town or city 20 to 30 miles distant beyond the control of their parents. Many a high school boy has no social prestige because he does not have a car to take his girl to a party. "Who shall

<sup>43</sup> Cohen, op. cit., p. 227-229. 44 Recent Social Trends, op. cit., Vol. II, p. 1135. 45 Cohen, op. cit., p. 229-230.

use the car, has been the subject of many bitter arguments within the family. Some families say they never see their children because they are off in the car to some unknown destination.

School. The type of education the youth receives has been affected by the automobile. Road improvement and rapid transportation have made it easy for small rural schools to consolidate. This has made necessary a larger expenditure in taxes, and the standard of education has more nearly approached that of the urban centers. In educational returns for dollars spent, consolidation was much less expensive than the one-room school house. During 1940 there were 93,000 school buses in operation carrying 3,967,000 children to school every day.46

Church. Along with education the church has been changed by the use of the automobile. Many small country churches have been forced to close because their members preferred to go to a larger urban church. Outside interests such as fishing, golfing, picnicing, or driving in the ear, detract from interest in the church. On the other side of the picture is the small church congregation which cannot afford to support a minister. Two or more small churches together can support a minister who commutes between the churches and attends to the needs of his people by automobile. Perhaps the church did not lose members or the people become more ungodly because of the automobile. Views on religion have changed and the social stigma attached to non-church goers has been removed.

<sup>46</sup> Recent Social Trends, op. cit., Vol. II, p. 1358. Leighton and Nicholson, op. cit., p. 70.

Medical Profession. The medical profession was one of the first groups to recognize that the car was practical. The doctor had to travel over all kinds of roads and in all kinds of weather. Early he came to the conclusion that an automobile must have the following qualities: durability, power, ease of repair, light weight, and low cost. Many of the medical men warned against the dangers of riding in the early cars. The nasal passages would be infected from the wind currents and the ladies would be injured for life by riding in the jolting machines. The medical men have always pointed out the dangers of driving while under the influence of liquor. Since the rise in motor accidents, we have begun to use a medical aid, psychology, to find out why so many accidents occur. The doctor's practice has been modified by the patient going to the city doctor for treatment rather than to the country doctor. To counteract this loss of practice the medical men have combined into clinics and left the small town for the larger populated centers.47 This has been to the disadvantage of the rural community but the doctor has usually been able to make more money.

Change of Residence. The use of the automobile has induced many people to change their place of residence. Between 1920 and 1950. for example, while the old districts of Manhattan lost inhabitants, the population of Massau County (adjoining New York City on the Long Island side) increased 140 per cent.48

<sup>47</sup> Cohen, op. cit., p. 194-197. 48 Leighton and Micholson, op. cit., p. 66.

People have moved out on the edge of the urban centers to be away from the dirt and noise, but they still have the advantages of the city. Industrial firms are usually on the outskirts of the urban centers, and the only method the laborers have for reaching their work is by automobile or bus. The results of this dependence upon automobile transportation has been seen since World War II when the government has urged workers to use car pools. The people who worked in the city and lived in the suburban area were listed as 20.5 per cent of the population in the 1940 census.49 Other Transportation. Some methods of transportation have been impelled to change or have almost disappeared because of the automobile. The number of horses on farms has declined since 1900, and although work horses are still used, the horse and buggy have almost completely disappeared. The street car which was the turn-of-the-century method of city transportation has been replaced by the city bus. The motor bus had its beginning in 1910 when the fitney or pleasure car began to carry passengers for pay 50. Between 1934 and 1942, city and suburban bus companies increased their lines by 837,923 miles.51 In 1935 motor buses carrying passengers or freight came under the regulation of the Interstate Commerce Commission by the passage of the Motor Carrier Act. 52

<sup>49</sup> World Almanac 1944, op. cit., p. 461. 50 Wirth, op. cit., p. 554.

<sup>51</sup> Ibid, p. 860.

<sup>52</sup> U. S. Stat. at Large, Vol. XLIX, Part 1, p. 543.

Business and Industry. One of the greatest influences of the automobile has been upon business and industry. It has destroyed old businesses and made new ones. The livery stable has been replaced by the garage. In the small towns the general store which sold everything is disappearing because now the family can drive to the city to buy commodities from the department stores. Because they operate more economically with truck transportation, chain stores have often replaced the privately owned grocery store. The filling station has taken the place of the general store in many small towns. It offers oil, gasoline, tires, food, recreation, and is a gathering place for young and old. Enterprising merchants have taken advantage of the motoring public by advertising their articles on billboards along the highway.

When the manufacturers of automobiles began to produce a vast number of cars, purchasers had to be found. One method of promoting sales was by attractive advertising, but a more practical purchasing incentive was installment buying. This plan depended on extension of credit, or buying out of future income, and was most widely used by people with low salaries. A car was necessary to most people but often enough savings could not be accumulated to buy one. Installment buying began on the Pacific Coast in 1913, and by 1915 John Willys had made the practice successful. The General Motors Corporation established its own financing company, the Acceptance Corporation, in 1919. Ford,

<sup>55</sup> Encyclopedia of the Social Sciences (New York, 1930), Vol. II, p. 329.

Chrysler, and others soon followed with their financing corporations. 54 By 1941, more than 70 per cent of the cars were sold on the installment plan. 55 Other methods of financing the purchase of an automobile were the loan agencies and insurance companies which usually loaned money at a high rate of interest.

One of the industries greatly changed by the motor vehicle was the railroad, because trucks, buses, and automobiles took much of the railroad's business. In 1920, when the population of the United States was approximately 105,000,000 the railroad carried about one billion passengers: in 1937 when the population had grown to approximately 131,000,000 the railroad carried less than one half billion passengers. 56 The decline in railroad freight carrying was proportionate with that of passenger traffic. The truck took over much of the short distance hauling. The reilroads have tried to eliminate this competition by establishing their own bus and trucking lines. In the days when the railroad was the chief mode of transportation it served as an index to the business conditions of the nation. When the motor vehicle industry gained top rank it became the standard by which to judge the prosperity of the country. By 1927 three large companies, Ford, General Motors Corporation, and Chrysler-Dodge, controlled about four-fifths of the motor industry. 57 In 1928 General

57 Hicks, op. cit., p. 622

<sup>54</sup> Leighton and Micholson, op. cit., p. 67.

<sup>55</sup> Ibid., p. 71. 56 Eugene C. Barker and Henry Steele Commanger, Our Nation (Evanaton, Ill., 1941), p. 558.

Motors Corporation made a profit of \$350,000,000 before taxes were taken out.58 During the last depression the motor vehicle industry lowered production, but the sale of used cars remained at a high level while the sale of gasoline, oil, tires, and services was also high. During the depression, people thought they must have a car even if they did not have enough to eat and wear. When the United States began to recover from the depression in 1936, the automobile industry produced about the same number of cars as in 1928 and the steel industry was producing close to capacity.59

National Revenue. The motor vehicles produced in the United States furnish revenue for the state and national governments. The gasoline tax dates from 1919 when it went into effect in four states. By 1931 when it was in use in all states, the revenus collected was \$526,000,000. All the states in the Union had motor vehicle license laws by 1913. Combined receipts from motor vehicle registration fees, dealers licenses, and operators permits totaled about \$356,000,000 in 1930,60 In 1942 state motor vehicle receipts were \$448,968,000 and federal automotive taxes were \$625,430,892,61 Much of the money received from the motor vehicles by the states was used for the building and repair of roads.

The people in the United States drive more automobiles than

<sup>58</sup> Leighton and Micholson, op. cit., p. 63.
59 Fredrick L. Allen, Since Yesterday (New York, 1940), p. 226.
60 Recent Social Trends, op. cit., vol. II, p. 1358.
61 World Almanae 1944, op. cit., p. 510-511.

which caused the rapid use of automobiles since 1900 in the United States have been many. First the rapid increase in population from 75,994,575 in 1900 to 131,669,275 in 1940 created a larger demand for cars. The purchasing power of the people increased rapidly after 1914. Automobile manufacturers, beginning with Ford, began to make low priced cars within the reach of the common man and sales increased. Finally with the introduction of installment selling in 1915 the large low income group of American people was tapped. The car is no longer a luxury to be purchased after all the other needs are satisfied, but it has become a necessity and often a means used to satisfy the needs of our present civilization.

<sup>62</sup> Cohen, op. cit., p. 140.

## ACKNOWLEDGMENT

Appreciation is expressed to Professor A. B. Sageser, major instructor, for his time and effort in directing this report; and to Associate Professor Verne S. Sweedlun for his suggestions and valuable help.

## BIBLIOGRAPHY

## GOVERNMENT DOCUMENTS AND STATISTICAL MATERIAL

Statutes at Large of the United States. Volume XXXIX.

Part I. December, 1915-March, 1917. Volume XLIX.

Part I. January, 1935-June, 1936.

United States Department of Agriculture, 1940 Yearbook of Agriculture.

United States Department of Commerce. Statistical Abstract of the United States 1943.

World Almanac and Book of Facts. New York, 1944 and 1945.

#### PERIODICALS

Leighton, George R. and Nicholson, Joseph L. "Has the Automobile a Future?" Harpers Magazine. Volume CLXXXV.

#### BIOGRAPHY

Simmonds, William Adams. Henry Ford. New York, 1928.

#### MONOGRAPHS

Cohen, David L. Combustion on Wheels. Boston, 1944.

#### SPECIAL REFERENCES

Encyclopedia of the Social Sciences. Volumes II and VIII. New York, 1930.

Report of the President's Research Committee on Social Trends. Recent Social Trends of the United States. Volumes I and II. New York, 1933.

#### GENERAL REFERENCES

Adams, James Truslow and Vannest, Charles Garrett.
The Record of America. New York, 1935.

Allen, Fredrick L. Only Yesterday. New York, 1931. Since Yesterday. New York, 1940.

Barker, Eugene C. and Commanger, Henry Steele. Our Nation. Evanston, Illinois, 1941.

- Beard, Charles A. and Mary R. Rise of American Civilization. Volume II. New York, 1928.
- Eastman, E. R. These Changing Times. New York, 1927.
- Faulkner, Harold Underwood. American Economic History. New York, 1943.
- Harlow, Ralph Volney. The Growth of the United States. New York, 1941.
- Hackett, Homer Carey and Schlesinger, Arthur Meier. Land of the Free. New York, 1944.
- Sullivan, Mark. Our Times. Volume I. New York, 1928.
- Wirth, Fremont P. The Development of America. New York, 1939.
- Wish, Harvey. Contemporary America. New York, 1945.