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OUR HIGHWAYS

CANADIANS have grumbled about their roads for four hundred years, but that is not unique. People have been grumbling about roads ever since they started travelling from village to village.

Two hundred years ago the governor of Nova Scotia declared: "I am of opinion that this will be the most flourishing province in North America...nothing is wanting to forward it but money to make roads."

Today, the problem of highways has reached a new acute stage.

Many of our roads are out of date. They were made for slow-moving horse-drawn vehicles. They are old against the glitter of automobiles.

In the past few years the road builders, the provincial governments and the municipal governments, and lately the federal government, have been building and widening roads as quickly as they thought necessary, but they have not kept up with the growth in number of trucks and automobiles.

There are about three million registered passenger automobiles in use. They are trying to find travelling room on quaint, winding roads that were built to carry the vehicles of a more leisurely age, and to find parking space on streets designed for buggies and bicycles.

Roads in Canada

When communities began to replace the scattered homesteads of early Canadian settlers, we had the sort of road that started at the village store and strolled off somewhere till it lost its way and stopped. It climbed the hills in lazy loops, and paid a call on things that caught its eye along the way, and dodged old trees and gardens instead of hacking them down and running over them.

Roads built by the French in the St. Lawrence Valley were classified as *chemins royaux*, *chemins de communication*, and *chemins de moulin*. The first were the main roads or highways; the second were intended to

give access to farms not fronting on the royal roads; and the third were built at the order of the seigneur. Royal roads, says Professor G. P. de T. Glazebrook in a fascinating section of his book *A History of Transportation in Canada*, were supposed to be 24 feet wide with a 3-foot ditch at each side; communication roads were 18 feet wide, also with ditches, and mill roads were of unspecified width.

By the summer of 1735 it was possible to drive from Montreal to Quebec in four and a half days. In 1798 a stage coach was in operation between Newark and Chippawa, in Upper Canada, and communication between Lower Canada and Upper Canada by stage began in 1816 with a line between Montreal and Kingston.

Only in winter, when snow filled the ruts and ice made of the rivers a flat surface, could land travel be comfortable. The bad condition of the roads in Ontario in 1894 led to organization of the Ontario Good Roads Association; today the Canadian Good Roads Association is active in campaigning for improvement of roads and elimination of traffic jams.

Our National Main Street

In 1907, a little more than ten years after introduction of the first motor car, the total number of cars registered in Canada was only 2,130; by 1912 there were more than 50,000; today, more than three million.

How far we have come in dependence upon motor transportation is dramatically shown by construction of the Alaska highway as a war measure. Between 5,000 and 10,000 men worked on this 1,600-mile road, one of the world's great engineering feats. It passes through desert wastes and hundreds of miles of forest, over vast mountain ranges, across swamps, and over countless rivers and streams.

Today, Canada is busy building a Trans-Canada highway which will provide a scenic 5,000-mile Main Street, at least two lanes wide, with intervals of ferries, from the island of Newfoundland in the Atlantic to Vancouver Island in the Pacific.

When Ed. Flickenger, of Windsor, made the first trans-Canada motor trip in 1925, he had to put flanged wheels on his car to cover 850 miles by railway track. Twenty-one years later Brigadier Robert A. Macfarlane, D.S.O., and Kenneth MacGillivray ran the rear wheels of their car into the Atlantic at Louisburg and nine days later dipped the front wheels in the Pacific at Victoria.

It was not until December 1949 that parliament passed the Trans-Canada Highway Act, providing the machinery for agreement between the federal government and the provinces as to the former's contribution toward completion of a national highway. The federal government will pay 50 per cent of the construction cost of approved work, up to a total contribution of \$150 million. The target date for completion is 1956.

Besides its advantage for Canadian business and pleasure travel, the new highway is expected to attract tourists from other countries. In 1951, the latest year reported, there were 7,277,844 foreign passenger cars travelling Canada's roads, 2¼ million of them on travellers' permits.

The Rest of America

The United States of America has a network of improved highways reaching every part of its domain. They have been built, mostly, in the past thirty-five years.

At the beginning of the 1900's there were fewer than 250 miles of paved or surfaced roads outside the cities, and the United States family travelled about 200 miles a year: today, 51 per cent of the nation's three million miles of rural highways are surfaced, and the average travel per family by automobile is 10,000 miles a year. The story of this development, and of the parallel development in the automobile, are told in *The Road is Yours*, written by R. M. Cleveland and S. T. Williamson and published by Greystone Press in 1951.

Roads from Canada connect with roads in the United States, and extend away into the south over the Pan American Highway.

South of the Panama Canal the road stretches 12,500 miles into most of the countries of South America.

One other American highway should be mentioned, though it was built before the Christian era. The Inca Road of Peru, four thousand miles long and 25 feet wide, traversed some of the roughest, most mountainous country in the world. Mountain peaks were pierced by tunnels hundreds of feet in length; smooth pavements of stones were laid across hundreds of miles of burning desert; dykes were constructed across swamps and shallow lakes, and for much of its length this amazing highway was surfaced with asphalt. "Nothing we moderns have ever constructed in the line of arterial roads can equal or even approach this highway", said A. Hyatt Verrill in *Under Peruvian Skies* (1930).

Kinds of Roads

Roads mean different things to different people, according to where they live, the means of transport they use, their wealth, and the density of traffic. Even in the horse and buggy days a prosperous county was likely to have good stretches of macadam road, while the undeveloped or rundown county next door might have merely cowpaths.

Highways have a wide variety of traffic. There are farm wagons whose horses trudge slowly with their load of produce, and motor cars and trucks keeping up for mile after mile speeds of from 40 to 60 miles an hour.

To untie this physical and psychic knot, it has been proposed to build roads restricted to motor cars. Motorists day-dream of a time when the country will be criss-crossed by 120-foot highways, with the corners rounded and the surface smooth, without cross-roads, telegraph poles, hydro towers and roadside hot-dog stands. From these roads all other traffic except motor cars will be excluded.

Other suggestions are for controlled-access highways; or for expressways, which are divided highways with crossroads separated in grade, and full or partial control of access; or for parkways for noncommercial traffic. Ontario marked 1952 by completing the first of its post-war series of controlled-access dual highways, number 400, running from Toronto to Barrie.

Highways called "motorways" are reserved exclusively for motor vehicles. They form an exception, forced by conditions, to the ancient principle that the Queen's Highway is freely accessible to all citizens, whether on foot, on horseback, or in vehicles. The Queen Elizabeth Highway into the Niagara Peninsula is marked every mile or so: "Bicycles Prohibited."

Road Construction

And so we have come from a trapper's trail to a road and finally to a motor highway.

Construction of a modern road is based upon the weight it is anticipated will be carried by individual vehicles and the number of vehicles it is believed will use the roadway. The Romans varied the width of their roads to suit expected traffic: ordinarily they were 14 to 16 feet wide, to allow two marching legions to pass, but one road in Northumberland was 35 feet 9 inches between the kerbstones.

A driver has only to travel on a properly engineered road to realize the value of a surface that is cleanly finished and well preserved.

Many efforts have been made to achieve the ideal. People in the middle of the last century thought they had the answer. They built a plank road—the first on the continent—eastward from Toronto in 1835, and another from Longueuil to Chambly in 1841. Today's concrete or bituminous roads are merely the latest in a long line of experiments.

Maintenance was a heavy charge on plank roads and gravel roads. It is still a big item in provincial budgets. Close to \$125 million was expended by the Ontario Department of Highways in 1952 for maintenance, improvement or construction work on 10,523 miles of provincial highways and secondary roads and on 70,365 miles of municipal roads.

Good construction and good maintenance mean much to those who drive cars and trucks. Efficiency is not merely a matter of speed. It includes economy—economy of money and of time. Traffic blocks and potholes are enemies. They strain the purse and the car.

There is a colossal amount of gasoline and oil wasted every year. The continual wear and tear of stopping and starting is caused partly by the condition of the roadway and partly by inadequate travel-ways.

A British authority says that a single stop and start by a car travelling at 35 miles an hour uses up as much fuel as driving 300 yards, and causes as much wear to rubber tires as a mile of steady driving.

A United States' government committee found that the average cost of operating a car that travelled 8,000 miles a year was 6.22 cents a mile on earth surfaces, 5.62 cents a mile on gravel, and 4.63 cents a mile on pavement. Tire wear on gravel-surfaced roads was twice that on paved surfaces.

Highways and Railroads

A national system of mechanical transport needs both motor roads and railroads. The railways provide the most economical form of long distance hauling for heavy goods; trucks are indispensable accessories.

It is worth noting that railroads as well as motor roads have improved. In recent years research and testing have added 50 per cent to the life service of rail, more than doubled the life of crossties and made track stronger and smoother.

The Royal Commission on Transportation, under chairmanship of W. F. A. Turgeon, reported in 1951 on the need we have of railways to haul goods cheaply and efficiently and on the effect of motor traffic upon their welfare.

"Motor vehicles," said the report, "mostly under provincial control, constitute a most serious form of competition to the railways. It seems likely that this competition will increase in strength with the progress made in highway development."

The coming of the railroad set back highway development many years. Canada was just getting into the swing of roadway building midway in the nineteenth century when the railway came into practical use. Wagon roads deteriorated, and road transportation entered its Dark Age. The best that most roads saw in the way of maintenance was a stone boat dragged by a team of horses or a yoke of oxen.

Then, at the turn of the century, the development of the motor vehicle caused an upheaval.

Hard-surfaced highways have enabled the trucking industry to provide competitive rates and convenient service, though trucking did not compete seriously with the railroads until the past few years. In the parliamentary debate on freight rates which took place in 1925, nothing at all was said about the truck, but much about water competition.

When the Royal Commission was looking into matters twenty-five years later, it was estimated that at least \$50 million was being lost annually by the railways as a direct result of reductions made in freight rates intended to retain some of the traffic in competition with trucks. This loss was in addition to the direct loss of traffic.

While it is true that if the railways stopped running, the daily movement of workers from the suburbs to cities and the central business areas could not be handled efficiently by motor transportation, it is equally true that there are 14,000 communities in Canada which are chiefly dependent upon highway transportation for their very existence.

Regulation of Highways

In view of a situation in which everyone on a farm or in the city is in some measure dependent upon road and rail transportation, there are recurring demands for regulations of traffic and costs that will be equitable.

We have tried to limit the use of wheeled vehicles, to regulate their construction, to dictate the weight of their loads, and to say what sort of goods they may carry. Transportation has always plagued us. In 1709 Canada was so overrun by horses (there were about 5,000 of them) that a law was made limiting each farmer to two horses and a colt. In the following year Vaudreuil said young men were losing the art of walking, and it would be necessary to kill some of the horses.

Today, we are struggling to build our several means of transportation—railways, waterways, airways, highways and pipe lines—into a related system that will serve, each in its own way, the country's needs.

Difficulty arises because of the division of jurisdiction between the federal and provincial authorities. One suggestion made to the Royal Commission by the Canadian Manufacturers' Association was to the effect that the provinces should unite in enacting uniform legislation regarding trucking. The Canadian Congress of Labour went a step farther: it recommended that each type of transport be assigned to the task it can perform most economically, and that all transportation services be placed under control of the Board of Transport Commissioners. (This would require an amendment to the British North America Act.) Against federal control were the International

Brotherhood of Teamsters and the Canadian Automotive Transportation Association.

When the Supreme Court of Canada ruled that control of interprovincial and international road transportation was the responsibility of the federal government, the question was carried to the Privy Council and is still pending.

The Royal Commission thought that in so far as Parliament can regulate and control transportation, the object should not be confined to the rather negative work of correcting abuses, but should reach out to the positive constructive task of developing adequate and efficient transportation and of co-ordinating and harmonizing the service in the public interest. Bills introduced in Parliament in 1937 and 1940 for federal control of interprovincial and international trucking met strong opposition and were withdrawn.

The Turnpike

Evidence of the breakdown in traditional methods of financing highways is the reappearance of the toll-gate.

There has been favourable acceptance by motorists in many of the United States of this throwback to methods of a century ago. They are, presumably, willing to pay a charge ranging from one to one-and-a-half cents per mile for the relative comfort, speed and safety of the toll road over its parallel free road.

In a book *Toll Roads and the Problem of Highway Modernization* issued by The Brookings Institution in 1951, the authors remark: "If funds are not available to provide the free road, criticism of the toll road which provides a partial solution seems irrelevant."

Turnpikes have been tried often before. In 1805 an act was passed establishing the first turnpike road in Canada, and after the war of 1812 the example was widely followed. England, where turnpike roads had existed since 1346, closed the last one in 1895 after Parliament had condemned the system as being costly, inconvenient and injurious.

The first modern American long-distance highway for both passenger and commercial motor traffic was the Pennsylvania Turnpike, opened in 1940. The Maine Turnpike, opened in 1947, was the first modern toll road financed entirely through a public issue of bonds secured by the prospective earnings of the road.

The physical characteristics of a modern road which make possible savings in vehicle operating costs are not peculiar to the toll highway. Many miles of provincial highway provide a standard of service equal to or superior to that of a toll road. "The toll," says the Brookings Institution report, "is merely a financing device to get the road quickly now, rather than tolerate inadequate standards for an extended period while the route in question awaits its turn for improvement."

Highway Safety

The *Financial Post* published a startling statement four years ago. It said: "Ask almost anyone what country has the highest traffic accident record and they would say the United States. But they would be wrong. That grim record belongs to Canada. For every million motor miles driven in the United States last year 7.7 people were killed. The corresponding figure for Canada is just a shade under ten."

The most recent figures made public by the Dominion Bureau of Statistics show that the number of deaths resulting from motor vehicle accidents per 10,000 registered motor vehicles was 9.36 in 1951. The Bureau says that seven persons died every 24 hours on Canada's roads, and another 150 suffered injuries, while property damage amounted to \$150,000 per day in major accidents alone.

Safety on our highways and streets deserves more space than can be given it in a general article about Canada's highways, but one comment by the Dominion Bureau of Statistics should be quoted: "This means 548 accidents each day in the year, or two every five minutes, of which the majority would have been avoidable with the exercise of rational driving habits."

These grim statistics warn us of the increasing care needed in this new age of transportation. Had one per cent of these deaths occurred in a mine or factory or railroad accident, it would have been called a disaster, and a federal investigation would have followed as a matter of course. Are we so hardened to motor fatalities that reports of them are little more than unpleasant interludes in the news broadcast?

The majority opinion of representative Canadians who were polled in 1950 is that stricter law enforcement and more rigid drivers' tests will help to reduce the accident toll. No matter how good the highways may be that are built by departments charged with that duty, the human element will remain. Not until everybody has acquired road sense to a point where it becomes instinctive—and that is a sufficiently high aim to interest anyone—will accidents dwindle to where they should be.

Today's Traffic Confusion

All that has been written stands as an indictment of unbalanced development of our road transport system. It has run away with us. It is a confusion caused by congestion on our city streets and on our highways. A drastic overhauling of our transportation ideas is called for.

There are many plans in being, but some excellent roads are like the one that is "paved with good intentions"—and nothing else.

The job of giving Canada an adequate highway system will not be done in a few years, but an enlightened and vigilant public opinion can play a powerful part in making sure that the urgent need receives its proper measure of recognition and action.