

A HISTORY of the SCOTTISH PEOPLE

TRANSPORT AND SCOTTISH SOCIETY 1840-1940

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This is Chapter 9 of 10. The others are:

Summary of Economy & Society, Education, Employment, Health, Housing, Income, Leisure, Migration, Religion

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1. THE IMPORTANCE OF TRANSPORT TO THE ECONOMY

Transport is central to the growth of the economy and to the development of society. The more efficient a transport system the greater the volume of trade, as previously inaccessible areas both at home and abroad are opened up. This not only enlarges the size of the market, it also makes it more sophisticated as new products and ideas become more freely available. However, the impact is not only economic, it is also social and cultural. Efficient transportation systems bring people together to share experiences and ideas. The ability to think in national, or even global, terms rather than purely locally is enhanced by this process. Without a quick and efficient transport system the idea, for example, of a national newspaper or postal service would be unthinkable. Thus by reducing time and distance efficient transport systems not only cheapen the cost of distributing goods, they also encourage the idea that we are part of a culture larger than our immediate locality. However, because they involve vast sums of

money, transportation systems are slow to develop. In Scotland, as in the rest of the UK, transport has developed in three stages from the 18th to the 20th century. Firstly, it relied on a combination of road and water transport, with the latter the more dominant and efficient. Secondly, there was the age of water and rail, with the railways proving the most efficient. Lastly, there was the more modern combination of rail and road, with road proving the more dominant in the long run.

2. THE AGE OF ROAD AND WATER 1760-1840

2.1 ROAD TRANSPORT

In the 18th century the most common forms of transport were by sea and road. However, the development of the coal and iron industries called for a form of transport which would allow for the movement of bulky and heavy goods. One possibility was by road with horses and carts, but roads in Scotland in the mid-18th century were primitive and in places non-existent. In the countryside tracks of clay and gravel were all that was available. On important routes there was usually a stone or gravel causeway in the middle of the track to enable horses to travel in wet weather. But regardless of the condition of the roads there was a limit as to what could be carried on them. Packhorses and horse-drawn sledges - the most common means of transporting goods by road - were wholly unsuitable to carrying bulky and heavy goods. This meant that in places as important as Glasgow the sea was the only means of connecting with other parts of the UK.

In contrast to the poor situation in the Lowlands, parts of the Highlands enjoyed a network of roads far superior to anything in the UK at this time. However, the object of the road building programme was military rather than economic. The pacification of the Highlands after the 1745 Rebellion involved the government in constructing 800 miles of road and 1,000 bridges. In spite of this extensive construction programme, large parts of the Highlands remained inaccessible. It was obvious to contemporaries that the road system was in need of major improvement. Turnpike trusts were set up to build and maintain roads in Scotland and the rest of the UK. The costs involved in the construction and maintenance were recouped by charging tolls for travellers and goods. Even so, the improvements were slow in coming and it was not until 1787 that JL MacAdam developed a satisfactory method of road building.

By the 1840s a road network was established linking most parts of Scotland. On the best roads a speed of 10m.p.h. could be achieved and this considerably reduced journey times. Before this date if a Glaswegian wished to travel to London by land he or she had to take a 12-hour coach journey to Edinburgh, before enduring another 13 days from there to the metropolis. But by 1840 Edinburgh was only four-and-a-half hours by coach from Glasgow, and London could be reached by Glaswegians in 72 hours. Edinburghers could do the same journey in 42 hours and 33 minutes. The improvements also had a knock-on effect on the transport of goods as by this date something like 300,000 tons of coal were reaching Glasgow from the Lanarkshire coalfields by road.

2.2 CANAL BUILDING

In the Lowlands, merchants were to the fore in demanding improvements in internal transport. This led to the building of the canal network in Scotland. The first canal was that between Grangemouth and Dalmeir, built in 1768. This was followed 22 years later by the Forth-Clyde Canal which linked Edinburgh with Glasgow. The Caledonian Canal which was opened in 1810 in effect linked the Highlands with the Lowlands, at a cost of £1m.

2.3 EARLY TRANSPORT PROBLEMS

In spite of the success of these improvements in the transport system there were still major disadvantages in sending goods by either water or road. Roads were really only complementary to the canals in shifting bulky and heavy goods. Moreover, the turnpike trusts suffered from mismanagement which led in places to high toll charges in order to reduce large debts. For example, the Cambuslang to Muirkirk road had 12 tolls in a 55 mile journey. Furthermore, turnpike roads were of variable quality and there were many gaps in the system. The canals had problems too. They were slow, cumbersome means of transport and, because they were not strategically planned, they were all of different widths and depths. This had an impact on what could be carried on them. In addition, unloading and loading was a time-consuming business, particularly since the materials to be transported had to be brought to the canal by horse-drawn transport. It was obvious that something more efficient was needed to ensure the continued growth of the economy.

3. THE AGE OF THE RAILWAY

The railways had a number of important advantages over other forms of transport for the Scottish economy. Firstly, they reduced the cost of transporting goods because they could move them faster than could the canal boats. Secondly, rail competition forced canal owners to lower their charges and this benefited industry as a whole. Thirdly, the nature and cost of construction of the railways encouraged growth in the iron and engineering industries. Finally, the fact that coal was the main fuel for the engines boosted the output of the coalmines of Lanarkshire and thereby increased the amount of coal produced. Moreover the fact that the railway could reach into the heart of the city or the place of business by the use of sidings and branch lines cut loading and unloading times. All this was in addition to the direct and indirect employment the railways provided and the wages they paid, which boosted demand in the economy.

3.1 ORIGINS OF THE RAIL NETWORK

The first railway lines to be constructed were purely for the transport of minerals, mainly coal. Indeed, all but one of Scotland's railways opened before 1835 were laid to carry coal. At first they were simply wagons which ran on wooden rails drawn by horses. Even when iron rails were preferred horses were still used to draw the wagons; engines were only used on steep downhills or

inclines. It was not until the 1840s that the steam locomotive was in common use. The first modern railway in Scotland was the Monklands - Kirkintilloch line opened in 1826, which immediately halved the price of coal from 12s per ton to 6s. Within less than 10 years a network of trunk lines had been established in the south-west of Scotland.

The authorisation of the Glasgow, Paisley, Greenock Line in 1837 completed the network. In the east the rail network began with the Edinburgh - Dalkeith railway line in 1831. Between 1838 and 1842 town-to-town lines were laid down, and in the period 1845 to 1850 rail links were established between Scotland and England. Edinburgh and Glasgow were linked in 1842 by English money and know-how, reducing the east - west travelling time to two-and-a-half hours, and both cities were linked with London in 1848 (the travelling time being twelve-and-a-half hours). However, it took until 1850 for Edinburgh and Glasgow to be linked with Aberdeen.

As town links were established passengers began to be carried in large numbers. Already, passengers using the eight mile Garnkirk - Glasgow line had increased from 62,605 in 1832 to 282,000 in 1845. Within two years of opening, the train service between Edinburgh and Glasgow was being used by over a million passengers a year. The original fares were 8s (40p) for first class, 6s (30p) for second, and 4s (20p) for third. The greater economic stability of the railways encouraged the growth of the system. Initially, speculation in railway shares led to a great wave of plans to construct rail lines. Railway companies mushroomed but many enterprises ended in bankruptcy. The large turnover in companies saw a drive to end wasteful competition and by 1866 of the 48 railways controlling 2,244 miles of track in Scotland, 45 were either leased or worked by five firms - Caledonian, Glasgow and South Western, Great North of Scotland, North British and Highland.

3.2 THE SOCIAL IMPACT OF THE RAILWAYS

Conditions in trains were initially awful for the second and third class passengers. The latter had to stand in what were little better than cattle trucks, while the former had a roof over their heads but no protection from the cold winds that swept through the unglazed windows. In spite of these spartan conditions, the rise of passenger services encouraged the growth of trips to the seaside. The Clyde coastal resorts of Rothesay, Dunoon, and elsewhere began to develop to provide entertainment for the away-day trippers from Glasgow. Further north the extension of the railway opened up the Highlands to tourism. Oban, for example, became a popular holiday resort and by 1880 it had fifteen hotels in addition to lodging houses and temperance hotels. The development of the railway system also allowed for a shift in population as labour became more mobile. Residential patterns were affected too, as the construction of suburban lines made it possible for increasing numbers of the better-off to escape from the decaying inner cities to the suburbs. The railways made possible the phenomenon known as 'commuting' to work.

3.3 THE FINAL PHASE OF DEVELOPMENT

During the frenetic building period of the mid-1840s - popularly known as 'railway mania' - lines were opened to the north of Scotland. The Scottish Central Railway reached Perth in this decade. However, after 1850 the frenetic pace of railway construction slowed. Plans to link Aberdeen to Inverness were not realised until the 1880s. While major construction projects floundered, many local and branch lines were laid down after this period. Some major building projects were initiated though, such as the building of the Forth and Tay rail bridges in the 1870s and 1880s. The Forth bridge did away with the need to break the journey south or north by taking the Granton to Burntisland ferry.

3.4 THE ECONOMIC SIGNIFICANCE OF THE RAILWAYS

For a number of decades historians have debated the economic significance of the railways. In the past the railways were seen as having a profound impact on economic growth. Much of this reasoning was influenced by research carried out in the USA. Because of the vast terrain involved in the USA canals were impractical. The railways were therefore afforded a crucial role in opening up the American west. By pushing westwards the railways established in their wake new towns and industries, and allowed for the full exploitation of the natural resources of that previously isolated part of America. The UK, however, was different.

British railways were not constructed with the intention of opening up new territories, or creating new towns and industries, but with existing traffic in mind. What the railways did was to move that traffic far more cheaply and more efficiently than other forms of transport. Coal was an obvious example, but agriculture and fishing also benefited. By 1880 fish landed at Aberdeen were sold 24 hours later in the Billingsgate fish market in London. But even here certain bulky goods, such as live cattle, remained cheaper to move by canal or sea than by rail. Railway development did not lead to the development of new industries. However, it did affect the coal industry since the prospect of a new line often led to the sinking of a new pit. The importance of the railways was that their coming led to a reduction in transport costs across the country and, for a short period of time, they gave a welcome boost to the economy in the form of increased demand for coal, iron and machines.

4. THE AGE OF THE CAR 1885-1940

4.1 THE ORIGINS OF MOTOR TRANSPORT

The first successful petrol-driven motor car was constructed in Germany by Karl Benz in 1885. However, it took another 10 years before the first UK-built motor car appeared. Part of the reason for the time-lag was the result of legal restrictions on the use of self-propelled vehicles on public highways. Under the terms of the 'Red Flag Act' of 1865 a speed limit of 2 m.p.h. was imposed in towns and 4 m.p.h. in country areas. A man carrying a red flag had to walk 60 yards ahead of the vehicle to warn pedestrians of its coming. The other reason was the state of the roads. In summer they were covered by a heavy layer of dust

and in winter they were turned into quagmires. Such was the slow development of the UK motor car industry that in 1900 the French sold two hundred times as many of their cars in Britain than the latter did in France.

The problem of the condition of the roads was addressed by Purnell Hooley of Northampton, who invented 'tarmac'- a road surfacing process which mixed ironstone slag with tar and was much more water-resistant than the old tar and stone process. This process was gradually taken up throughout the country and its implementation was paid for out of taxes on cars and fuel, rather than by tolls as had been the case in the 18th century. Moreover, new legislation did away with the old legal restrictions. As a result cars and other vehicles were allowed to travel at faster speeds without the necessity of having a man with a red flag going before them. These improvements allowed the market for cars to grow and a number of firms sprang up to satisfy the new demand. The Daimler Motor Company was formed in Coventry in 1896. A year before this the Mo-Car Syndicate Limited was set up in Glasgow by Sir William Arrol. Scotland claimed two other major manufacturers - the Argyll and the Albion car companies - and in 1907 production reached a peak of 11% of UK output.

By 1914 these three companies accounted for 82% of Scottish output. However, in spite of the growth of production it would be true to say that prior to 1914 'automobilism as a sport was mainly for rich men'. Only 34,000 motor vehicles of all types were produced in the UK in 1913, and of this total 11,000 went overseas. The commercial use of motor vehicles was even slower to develop than the pleasure side of the industry. As late as 1913 commercial vehicles only accounted for one-third of total production. Most were buses or taxis. The noisy clatter of Victorian motor vans put off shopkeepers and shoppers alike. Horse-drawn vehicles were still preferred to motorised ones, particularly by railway companies. There was also the high wear and tear on tyres. Solid rubber tyres were expensive to buy and did not have a very long lifespan. It was only in 1916 that a satisfactory pneumatic tyre was introduced by Dunlop in the UK. The new tyre lasted four times longer than its predecessor and cut costs by a significant margin.

4.2 THE INTER-WAR BOOM IN PRIVATE MOTORING

Motor transport did not take off in a major way until after the First World War. The industry experienced a short boom in passenger car sales until 1920 when the market collapsed. Scottish firms suffered badly in the slump and never recovered. Albion went into commercial vehicle building and lasted until 1950 when it was taken over by Leyland; Argyll collapsed in 1914 and subsequent attempts to revive it failed. Finally, Arrol/Johnston moved its plant from Paisley to Dumfries to be nearer the English market but it too failed and closed its doors in 1929. English firms survived the slump by drastically dropping the price of their cars, in some cases by nearly 50%, and the market survived. The number of private cars in the UK grew from nearly 110,000 in 1919 to 1,056,214 in 1930, before doubling again in the next eight years. In spite of the fall in price a mass market for cars did not develop in Britain until the 1950s and 1960s. While in 1940 Britain private car ownership represented one car for every twenty-three persons, the figure for America was one for every five persons.

The failure to realise the potential of a mass car market in the UK can be put down to the cautiousness of the manufacturers. It was assumed by the Society of Motor Manufacturers and Traders in 1926 that only persons with an annual income of £450 or more could be considered possible car owners. Therefore, even as late as 1939 car ownership was mainly confined to the middle and upper classes. Nevertheless, there was a popular enthusiasm amongst those in the wage earning class for owning a motor cycle. This meant that individual mobility was no longer the sole preserve of the wealthy. Sales of motor cycles in the UK peaked in the 1920s, growing from under 300,000 in 1920 to over 700,000 in 1930. From then on motor cycling became less popular with just over 400,000 on the roads in 1939. Much of this was the result of the growth of a thriving second hand market in cars which had emerged in the inter-war years. Motor cyclists traded their two wheels for four in increasing numbers.

4.3 THE DEVELOPMENT OF PUBLIC TRANSPORT

Public transport catered for those who could not afford a car or a motor cycle. By the late 19th century most major cities had an electric tram service, although not a motor-bus service. Edinburgh's first privately-run motor-bus service was introduced in 1898. However, its lack of success led to the Town Council introducing its own service in 1914. After 1918 this kind of transport began to boom, with the number of buses and coaches in the UK more than doubling between 1919-25 and the size of bus companies growing dramatically. Scottish Motor Traction Co. Ltd. (SMT) was the largest private bus company in Scotland, operating in its own name and through its ownership of W. Alexander and Sons, Central and Western SMT.

By the 1930s it had around 2,500 buses. Local services were supplemented by long distance travel and by 1930 11 regular services were established between London and Scotland. Although road travel took longer than rail, the fares were lower. The beginnings of bus and coach services were marked by cut-throat competition in which profit margins were extremely tight. This led to an abundance of buses at peak times and very few at off-peak hours. Safety was sacrificed for profit. This competitive mad-house was brought to an end with the Road Traffic Act of 1930, under which all bus and coach operators and routes had to be licensed. Greater regulation increased the attractiveness of this kind of travel.

By 1933 the number of passenger bus and tram journeys in the UK was running at 9,450 million a year. By 1937 it was estimated that road passenger transport of all kinds had lost the railways 250-300 million journeys a year. Commercial transport also experienced a boom after the end of the 1st World War. This threatened and eventually undermined the dominance of the railways. In 1919 there were 62,000 lorries and vans. By 1939 there were over 500,000. The majority were operated by manufacturers to carry their own goods; only 20% was in the hands of professional hauliers. As road haulage was cheaper than rail, it dominated the traffic of goods over distances of not more than 75 miles. Although the volume of goods going by motor transport was never measured in this period, some indication of its impact on the railways can be gauged from the fact that the latter experienced a fall in revenue from goods traffic of

around £50m between 1920 and 1938. Like the railways, the motor car had a role to play in the standardisation of dress, speech and social customs.

Remote parts of the country could now receive daily newspapers almost as quickly as their urban counterparts. Visits to town for shopping and the cinema became more frequent in rural areas. The traffic, however, was not all one way as towns-people flocked to the countryside at weekends and on public holidays to enjoy the fresh air and scenery. The roadside cafe emerged to cater for this growing trade. Nevertheless, there were social costs to pay for the development of road travel. The problems of pollution and the destruction of the environment to make way for roads were recognised at an early stage. There was also the question of public safety. From 1918-39, 120,000 people were killed on roads in the UK and another 1,500,000 were injured. Such carnage brought forth measures such as pedestrian crossings, stricter speed limits in built-up areas, driving tests, and so on, but the death rate remained at around 6,500 per year.

5. THE ORIGINS OF AIR TRAVEL

The other important innovation in transport was the introduction of air services after the First World War. Civil aviation was permitted by the Air Navigation Act of 1919. The first regular daily service was introduced that year linking Manchester, Southport and Blackpool. A London to Paris service was opened the following year. However, costs outweighed profits and all UK air services ceased operating in February 1921 and were only resumed when the government agreed to subsidise them. In spite of the subsidies, few airlines made a profit in the 1920s. Much of the failure of civilian air travel in the 1920s could be put down to the unreliability of the aeroplanes.

Early aircraft technology was primitive and difficult to maintain. A typical civilian aeroplane had a single engine of 500 h.p., a top speed of 115 m.p.h., a normal range of 300 miles and seating capacity for six passengers. Bad weather led to cancelled flights - a problem which affected Scotland disproportionately to the rest of the UK - and the termination of flights in progress. For shorter distances rail and road were cheaper and more reliable. The slow development of air transport meant that as late as 1930 there was no regular air link between London and the industrial north. It was only the introduction of airmail services in 1934 and night flying that made air transport a paying proposition. Air travel, therefore, only became a more popular mode of travel in the 1930s. By 1935 UK domestic air services were carrying over 120,000 passenger and routes were established throughout Britain, reaching the Highlands and Islands of Scotland. In spite of solid progress, the day of the aeroplane was still some way off.

6. CONCLUSIONS

The revolution in transport had an impact on nearly all aspects of economic and social life in Scotland as well as the rest of the UK. Economically, the cheaper transportation of goods did much to lower costs in manufacturing, as well as open up remote areas of the country. The volume of trade thus increased both within and without the UK. By the 1930s transport was also providing

employment for around 7% of the working population. Socially, the country, and, indeed the world, became a smaller place. New ideas, fashions and organisations reached the farthest parts of the UK as the speed of communications was greatly improved. Daily newspapers and post became common-place, as did fresh food and vegetables. Seaside holidays and away-day trips became part of the national culture, a phenomenon which led to the growth of tourism and other leisure industries. Although the importance of transport to the economy and to the quality of life cannot be denied, the social costs of its development have to be taken into consideration. The scarring of the countryside, the level of air pollution, the number of casualties, the urban congestion, are all important consequences of our desire to move faster and more cheaply. Moreover, they represent intractable social problems which are far from a solution even today.

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