

A HISTORY OF  
INLAND TRANSPORT  
AND  
COMMUNICATION  
IN ENGLAND

BY  
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## PREFATORY NOTE

DESIGNED as the introductory volume of a series of books—by various writers—dealing with our “National Industries,” the present work aims at telling the story of inland transport and communication from the earliest times to the present date, showing, more especially, the effect which the gradual development thereof, in successive stages, and under ever-varying circumstances, has had alike on the growth and expansion of trade and industry and on the general economic and social conditions of the country.

The various phases of inland transport described in the course of the work include roads, rivers, canals, turnpikes, railways, tramways, and rail-less electric traction; and the facilities for communication of which accounts are given comprise packhorses, waggons, stage-coaches, “flying” and mail-coaches, private carriages, posting, hackney coaches, cabs, omnibuses, cycles, motors, motor-buses, commercial motors, and aeroplanes. Reference is (*inter alia*) made to most of the English rivers and to many inland towns; the origin, achievements, and shortcomings of canals are traced; a complete outline of the turnpike system is given; a short history of tramways comprises the leading points therein; the story of the rise, development and prospects of the motor industry is related; while the evolution and development of the railways and their position to-day both as a means of transport and communication and as constituting in themselves a “National Industry” are treated in such a way as to afford, it is hoped, a comprehensive idea of the railway system from its very earliest origin down to the strikes and the con-

troversy following the close of the Royal Commission of Inquiry in the autumn of 1911.

Incidentally, also, allusion is made to the rise of Bristol, Lynn, Liverpool, and various other ports; the early history of the textile industries, the cutlery trades, the iron trade, the salt trade, and the coal trade is briefly sketched, while the facts narrated in relation thereto should enable the reader to realise the bearing, throughout the ages, of State policy towards the general question of transport. Finally, the present situation and the future outlook are brought under review.

Even as these pages are passing through the press new developments are occurring which confirm the suggestion I have made, on page 470, that "in the dictionary of transport there is no such word as 'finality.'"

While it is still true that the electrification of the London suburban railways has not been generally adopted by the trunk companies, yet the scheme in this connection announced, on November 18, 1911, by the London and North-Western Railway Company (see page 507) supplementing the action already taken by the London, Brighton and South Coast Railway Company in regard to some of their suburban lines, is significant of a growing determination on the part of the great railway companies to defend their own interests by competing, in turn, with the electric tramways, which have absorbed so much of the suburban traffic of late years.

Following closely on this one announcement comes another, to the effect that a new company is about to set up, in the Midlands, works covering thirty-four acres for the construction of a type of petrol-electric omnibus for which great advantages over the earlier motor-omnibuses are claimed. (This, presumably, is the vehicle which the Tramways Committee of the Edinburgh Corporation, as mentioned on page 470, propose to watch in preference to deciding at once on a system of rail-less electric traction.)

In commenting on the former of the announcements here in question, "The Times Engineering Supplement" of November 22, 1911, observes :—

It is of importance to realise what this decision portends. The history of the matter is that the steam railways were inadequate to fulfil the requirements of the suburbs, and that an opening was thus afforded to municipalities to provide tramways of their own. It was a crude method of dealing with the problem ; it robbed the main roads of every vestige of rural character, and it added new dangers and checks to street traffic. Nevertheless it was a necessity, and it served its purpose, first, by providing facilities that were always cheap to the travellers, even if they were occasionally dear to the taxpayers ; and, secondly, by stimulating the railway companies to adopt means to get back their lost traffic. Now that the railway companies are fully alive to the opportunities offered to them by electrification, the general aspect of the problem is changed, and additional support is given to the belief that electric railways and motor-omnibuses will carry an increasing proportion of London traffic, and that from some roads at least tramways may even disappear altogether.

In other directions there are reports of individual agriculturists who are constructing light railways of their own to secure direct communication between their farms and the nearest main line railway, sympathetic local authorities having offered them practical encouragement by making only a nominal charge for the privilege of crossing the public roads where this is necessary. A new era in agricultural transport and cultivation is further foreshadowed in the announcement that it is quite reasonable to believe that resort to rail-less electric traction will serve as a means of introducing electrical supply into rural areas for agricultural purposes ; while in the House of Lords on November 22, 1911, Lord Lucas, replying for the Government to some comments made by Lord Montagu of Beaulieu on the first report of the Road Board (dealt with on page 481), said that body considered the most important thing at present was to improve the surface of the roads ; but

“they had borne in mind the fact that it would be necessary for them before long to undertake larger operations, involving heavier expenditure.”

Still further developments occurring, maturing, or under consideration when the text of the present work was already in type include—

(1) A projected alliance between the tube railways and the London General Omnibus Company, following on the conspicuous success obtained by the latter in substituting motor for horsed vehicles for the 300,000,000 passengers it carries annually.

(2) The issuing of “Minutes of Evidence taken before the Departmental Committee of the Board of Trade on Railway Agreements and Amalgamations” [Cd. 5927], containing some notable expressions of opinion by railway managers concerning the future of the railway system, together with much important information on the general subject.

(3) The publication, on December 1, of the Fourth Annual Report of the London Traffic Branch of the Board of Trade [Cd. 5972], which deals with various matters already touched upon in my last three chapters, including the effects of improved transport facilities on the migration of population from the inner to the outer suburban ring; the further widening of the motor-transport delivery radius, to the advantage of urban, but to the disadvantage of suburban traders; the steady substitution of mechanical traction for horse-drawn vehicles of every type—the Report predicting, on this point, that “if two-wheeled horse cabs continue to diminish at the rate of the last two years, they will disappear before the end of 1912”; the improbability of further material extensions of the tramway system, and the assumption that “the competition of promoters for the privilege of constructing tube railways has come to an end”; while the Report also discusses the merits of a scheme for the provision, at an estimated cost of between £20,000,000 and £30,000,000, of about 120 miles of great

arterial roads across London for the accommodation of the increasing traffic, and of still another scheme, put forward by a Departmental Committee of the General Post Office, for relieving the streets of London of a good deal of mail-van traffic by the construction of an underground electric railway,  $6\frac{1}{2}$  miles in length, and costing £513,000, across the centre of London from east to west, for the conveyance of Post Office matter, the Report further suggesting that this particular system might be found equally applicable to other forms of enterprise which require the use of carts for the frequent conveyance of goods in small consignments between fixed points.

(4) The passing by the House of Commons, on November 22, of a resolution expressing the opinion that a meeting should take place between the parties on whose behalf the Railway Agreement of August 19, 1911, was signed (see p. 448), "to discuss the best mode of giving effect to the Report of the Royal Commission"; the acceptance by such parties of Board of Trade invitations to a conference, in accordance with the terms of this resolution, and the holding of a conference which began, at the offices of the Board of Trade, on December 7, under the presidency of Sir George Askwith, Chief Industrial Commissioner, and resulted, on December 11, in a settlement being effected.

(5) The prospective increase, from January 1, 1912, of certain season, excursion, week-end or other special-occasion fares (many of which now work out at a rate of a halfpenny or a farthing, or even less than a farthing, per mile) as a means of assisting the railway companies to meet advances in wages, such increases in passenger fares (distinct from any increases in merchandise rates, for a like reason, as foreshadowed by the Government undertaking of August 19, 1911, alluded to on pp. 448 and 511) being already in the option of the companies, provided the latter do not exceed the powers conferred on them by their Acts, and subject to the condition that on fares of over a penny the mile Government duty must be paid.

(6) The reading, by Mr. Philip Dawson, at the Royal Automobile Club, on December 8, of a valuable paper on "The Future of Railway Electrification," in which—after detailing what had already been done in the United States, in Germany, and, in this country, on the suburban systems of the Lancashire and Yorkshire, the North Eastern and the London, Brighton, and South Coast railways—he showed the practicability and the advantages of applying electric traction (single phase system) to main-line long-distance traffic; announced that the surveys and calculations in connection with a scheme for electrifying the whole of the L.B. and S.C. Railway Company's services between London and Brighton were already far advanced; mentioned that such a transformation would allow of a 10 to 15-minute service to Brighton and of the 52-mile journey being done by non-stop trains in about 45 minutes, or by stopping trains in about 60 minutes; and declared that "the equipment of this line if, as he hoped would be the case, it were carried out, would be epoch-making in the history of British railways."

Thus the whole subject of inland transport is now so much "in the air" that the story of its gradual and varied development, as here told—and this, too, for the first time on the lines adopted in the present work—should form a useful contribution to the available literature on one of the most important of present-day problems.

EDWIN A. PRATT.

*December 12, 1911.*

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# A HISTORY OF INLAND TRANSPORT AND COMMUNICATION

## CHAPTER I

### INTRODUCTORY

THE gradual improvement, throughout the centuries, of those facilities for internal communication which reached their climax in the creation of the present system of railways has constituted a dominating factor alike in our industrial and in our social advancement as a people.

Until transport had provided a ready means alike of collecting raw materials and of distributing food supplies and manufactured articles, industries of the type familiar to us to-day were practically impossible ; and until convenient and economical means of travel were afforded, England had to be considered less as a nation than as a collection of more or less isolated communities, with all the disadvantages, social and moral as well as economic, necessarily resulting ; while the social and moral progress facilitated by improved means of communication reacted, in turn, on the industries by creating new wants for manufacturers and workers to supply.

To the right understanding of the position occupied by our National Industries, it is thus necessary that the special significance of internal communication and its development should, at the outset, be clearly realised from the point of view, not alone of present-day circumstances, but, also, of conditions that either preceded the industries themselves—so far checking their growth that industrial development in Great Britain came at a much later date than in many coun-

tries on the Continent of Europe—or else aided materially in the expansion of industries as the disadvantages and drawbacks began to disappear.

That industries existed when internal communication was still in a primitive stage in this country is true enough ; but they were “ domestic ” rather than “ national,” and it was not until the advent of better means of transport that it became possible for them to begin to pass from the one stage to the other, and, at the same time, to exercise so important an influence on our advancement as a nation. It is no less true that British commerce, conducted by ships obtaining ready access to foreign ports by traversing ocean highways, had made much greater progress at an early period in our history than industries dependent on inland highways that were then either non-existent or scarcely passable ; yet, though navigation might advance still further, and though navigators might discover still more new countries, commerce could not hope to attain to the expansion it subsequently underwent until the industries whose operations were to be facilitated by improvement in land communication supplied the merchants with the home commodities which they required for sale or exchange in the markets of the world. Whatever, again, the natural resources of a country—and such resources have certainly been great in our own—they may be of little material value until they can be readily moved from the place where they exist to the place where they can be used ; and even then it is necessary that the cost of transport shall not be unduly high.

Transport and communication by land and water have thus become what Prof. J. Shield Nicholson rightly calls, in his “ Principles of Political Economy,” “ the bases of industrial organisation ” ; and it is to industrial organisation that a country such as ours has been indebted in a pre-eminent degree both for its material prosperity and for the position it occupies to-day among the nations of the world. But just as British engineers long regarded the subject of road construction and road repairs as beneath their notice, and left such work to be done by any parish “ surveyor,” subsidised pauper or “ Blind Jack of Knaresboro’,” who thought fit to engage in it, so have most writers of history, while zealously recording the actions of kings, of diplomatists, of politicians, and of warriors who may have made a great stir in their day but who took only a very

small share in the real and permanent progress of the British people, bestowed only a passing reference—and sometimes not even that—on questions of trade and transport which have played a far more important part in our social and national advancement.

The history of railways has already been told by various writers. But the history of railways is only the last chapter in the history of inland transport and communication ; and, though that last chapter is of paramount importance, and will here receive full recognition, it is essential that those who would form a clear idea of the position as a whole should begin the story at the beginning, and trace the course of events leading up to the conditions as they exist to-day.

## CHAPTER II

### BRITAIN'S EARLIEST ROADS

It has been assumed in some quarters that, because the main routes of travel in this country did not have to pass over lofty mountains, as in Austria and Switzerland, therefore the construction of roads here was, or should have been, a comparatively easy matter. But this is far from having been the case, the earliest opening of regular lines of communication by road having been materially influenced by certain physical conditions of the land itself.

The original site of London was a vast marsh, extending from where Fulham stands to-day to Greenwich, a distance of nine or ten miles, with a breadth in places of two or two and a half miles. The uplands beyond the Thames marshes were covered with dense forests in which the bear, the wild boar, and the wild ox roamed at will. Essex was almost entirely forest down to the date of the conquest. Nearly the whole expanse of what to-day is Sussex, and, also, considerable portions of Kent and Hampshire, were covered by a wood—the Andred-Weald, or Andreswald—which in King Alfred's time is said by the Anglo-Saxon Chronicle to have been 120 miles long and 30 miles broad. Here it was that, until even these great supplies were approaching exhaustion, the iron industry established in Sussex in the thirteenth century obtained the wood and the charcoal which were exclusively used as fuel in iron-making until the second half of the eighteenth century, when coal and coke began to be generally substituted. Wilts, Dorset and other southern counties had extensive woodlands which were more or less depleted under like conditions. Warwickshire, Northamptonshire and Leicestershire all had extensive woods. Sherwood Forest extended over almost the whole of Nottinghamshire. In Derbyshire, as shown by the Domesday Survey, five hundreds

out of six were heavily wooded, and nineteen manors out of twenty-three had wood on them. "In Lancashire," says Charles Pearson, in the notes to his "Historical Maps of England During the First Thirteen Centuries," "if we distinguish forest from wood, and assume that the former was only wilderness, we still have official evidence for believing that a quarter of a million acres of the land between Mersey and Ribble was covered with a network of separate dense woods."

Altogether, it is calculated by various authorities that in the earliest days of our history about one third of the surface of the soil in the British Isles was covered with wood, thicket, or scrub. Of the remainder a very large proportion was fen-land, marsh-land or heath-land. "From the sea-board of Suffolk and Norfolk," says the Rev. W. Denton, in "England in the Fifteenth Century," "and on the north coast almost to the limits of the great level, stretched a series of swamps, quagmires, small lakes and 'broads.'" A great fen, 60 miles in length and 40 miles in breadth, covered a large proportion of the counties of Cambridgeshire, Huntingdonshire, Northamptonshire, Lincolnshire, Norfolk and Suffolk. A great part of Lancashire, Mr Denton further states, was a region of marshes and quaking mosses, while "from Norwich to Liverpool, and from the mouth of the Ouse at Lynn to the Mersey, where it falls into the Irish sea, a line of fen, uncultivated moors and morasses stretched across England and separated the northern counties from the midland districts, the old territory of Mercia."

Much of the surface, again, was occupied by hills or mountains separated by valleys or plains through which some 200 rivers—many of them far more powerful streams than they are to-day—flowed towards the sea. As for the nature of much of the soil of England, the early conditions are further recalled by Daniel Defoe who, in describing the "Tour through the Whole Isle of Great Britain" which he made in the first quarter of the eighteenth century, speaks of "the soil of all the midland part of England, from sea to sea," as "a stiff clay or marly earth" for a breadth of 50 miles, at least, so that it was not possible to go north from London to any part of Britain without having to pass through "these terrible clays," which were, he says, "perfectly frightful to travellers."

It was under conditions such as these that Britain obtained her first roads ; and it was, also, conditions such as these that were to affect more or less the future history of inland communication in England, adding largely to the practical difficulties experienced in making provision for adequate transport facilities.

Inasmuch as a great number of chariots were used by the Britons in their attempt to resist the invasion of Cæsar, it may be assumed that there were even then in this country roads sufficiently broad and solid on which such chariots could run ; and though evidence both of the use of wattles in the making of roads over clayey soil and of a knowledge on the part of the early Britons of the art of paving has been found, the British chariot-roads were so inefficiently constructed that few traces of them have remained.

The earliest British roads were, however, probably of the nature of tracks rather than of durable highways ; and they may have been designed less for the purposes of defence against invasion than in the interests of that British trade which, even then, was an established institution in the land.

Writing in "Archæologia," vol. xlviii (1885), Mr Alfred Tylor expresses the view that the civilisation of the Britons was of a much higher character in some respects than has till recently been supposed. From the fact that Pytheas of Marseilles, a Greek traveller who lived B.C. 330, and visited Britain, described the British-made chariots, he thinks we may assume that the Britons had discovered the art of smelting and working tin, lead and iron, and that they used these materials in the making both of chariots and of weapons. But they produced for export, as well as for domestic use. Tin, more especially, was an absolute necessity in Europe in the bronze age for use in the making of weapons both for the chase and for war, and the metallurgical wealth of Britain afforded great opportunities for trading, just as it subsequently gave the country the special importance it possessed in the eyes of the Roman conquerors.

To the pursuit of such trading the Britons, according to Mr Tylor, were the more inspired by a desire to obtain, in return for their metals the amber which, as the favourite ornament of prehistoric times, then constituted a most important article of commerce, but was obtainable only in the north of Europe.

The early importance of amber in Europe is proved, Mr Tylor says, by its presence in many parts of Europe throughout the long neolithic age, and, therefore, long prior to the bronze age ; and it was mainly to facilitate the exchange of metals for this much-desired amber that the Britons made roads or tracks from the high grounds which they generally chose for their habitations (thus avoiding alike the forests, the fens and the marshes), down to the ports from which the metals were to be shipped to their destination. Mr Tylor says on this point :—

“ The first British tin-commerce with the Continent in prehistoric times moved, either on packhorses or by chariots, in hilly districts, towards Essex, Norfolk, and Suffolk, that is, in the direction from west to east ; then by sea from the eastern British shipping ports, of which Camulodunum on the Stour, close to the Thames (Colchester) is a type, to the Baltic. Thus at first the ‘ tin ’ used to find its way partly by land and partly by sea from Cornwall to the mouths of the Elbe and Vistula, there to meet the land caravans of the Baltic amber commerce from the north of Europe to the south. . . . When the land route throughout Gaul was established the tin had to go across the English Channel, not to Brittany, across the rougher and wider part, but to Normandy. The Isle of Wight was nearer Normandy, and a suitable entrepôt for the coasters meeting the fleets of ocean trading ships.<sup>1</sup> . . .

“ Iron and lead were, also, valuable British productions, and could easily reach the Isle of Wight by coasting steamers or by the British or Roman roads via Salisbury or Winchester. . . .

“ All ancient roads to British shipping ports were, of course, British. . . . Without roads it would be impossible to get over the low, often clay, grounds, or to reach the seaports in chariots, as the seaports were constantly in the clay. . . . It was impossible to reach the shipping-ports, which are all at low levels, without roads, as the clay and sand would be impassable for chariots. Of course packhorses could travel where chariots could not, but if the main roads were made for chariots they would be equally good for packhorses.”

Mr Tylor thinks there is the greater reason for assuming that a considerable trade had thus been developed between

<sup>1</sup> Mr Tylor argues that Brading, in the Isle of Wight, was the favoured point of shipment.

Britain and the Continent because Tacitus alludes to a British prince who had amassed great wealth by transporting metals from the Mendips to the Channel coast ; but our main consideration is the evidence we get of the fact that Britain's earliest roads appear to have owed their origin to the development of Britain's earliest trade.

Two, at least, of the four great roads to which the designation " Roman " has been applied followed, in Mr Tylor's opinion, the line of route already established by the Britons under the conditions here indicated. Certain it is that, although the Romans always aimed at building their roads in straight lines, and troubled little about ascents and descents, they followed the British plan of keeping the routes to high and dry ground, whenever practicable, in order to have a better chance of avoiding alike the woods, the bogs, the clays, the water-courses and the rivers.

Skilled road-builders though they were, the Romans shrank, in several instances, Pearson tells us, from " the tremendous labour of clearing a road through a forest where the trees must be felled seventy yards on either side to secure them from the arrows of a lurking foe." Thus the great military roads marked in the Itinerary of Antonine always, if possible, avoided passing through a forest. The roads to Chichester went by Southampton in order to avoid the Andred-Weald of Sussex, and the road from London to Bath did not take the direct route to Wallingford because, in that case, it would have required to pass through twenty miles of forest in Buckinghamshire and Oxfordshire. Later on, however, as the Roman rule became more firmly established, the making of roads through forests became unavoidable, and much destruction of timber followed, while the fact that the trees thus felled were left to rot on the ground alongside the roads helped to create the quagmires and " mosses " which were to be so great a source of trouble to road-makers in future generations.

As regards the routes taken by the Roman roads, Mr. Tylor says :—

" The Romans made a complete system of permanent inland roads to connect the Continent with the military posts, London, York, Colchester, Chester, Uriconium, Gloucester, Winchester, Silchester, Porchester and Brading, and chief