

**THE RAILWAY
PROBLEM, 1870: A
SERIES OF PAPERS**

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The Railway Problem, 1870: A Series of Papers by John Hill

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JOHN HILL

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THE RAILWAY PROBLEM, 1870.

I.

THE POWER OF RAILWAYS, AND THEIR EVILS.

It is probably not an exaggeration to say that upon a majority of the English population, railways exercise a more immediate influence for personal comfort or discomfort, for pecuniary ease or uneasiness, than any single cause except health, the weather, or the price of food. To the enormous middle class residing a few miles from their place of business, it is a consideration of the utmost importance whether the mode of transit between their home and their office is rapid, cheap, and not accompanied by circumstances which make it insalubrious. The proximity of the station, the convenience of the suburban neighbourhood at the one end, are of not less importance than the ease of access from the terminus at the other. The price of every commodity supplied at the villa is influenced by the goods tariff of the line, while the passenger fares regulate how often the wife can afford to shop or visit in town, or the youngsters be treated to the Polytechnic or the play. To a still larger contingent of the middle class the exorbitant charges of the Railway Companies are prohibitive, and thousands of children sicken and fade in the close rooms of the town, because landowners have been greedy and directors corrupt. The working classes, whose thews and sinews have made the line, and built its stations, and continue to fabricate its rolling stock, and maintain its permanent way, are no inconsiderable body, nor small is the army of engine-drivers, stokers, firemen, porters, guards, and signal-men, who work seven working days in the week, with the fear of a conviction for manslaughter

ever before their eyes, and earn a pittance, the more scanty because dividends are small and shareholders clamorous. The great body of the working classes trudge many a weary mile because fares are high, and spend many a weary day of unwilling idleness and want because trade is contracted by dear carriage, or driven away to other localities, or, worse still, to foreign countries, by a conspiracy to defraud the public, which is commonly known as an agreed tariff. To the richer classes who can afford to pay for the extreme of luxury and safety, it is still a matter of uncertainty whether they shall be invited into a first-class compartment to become the sole victims of a lunatic or a Müller, or share with their fellow-travellers one common lot of fire and slaughter; and even those whom use has made forgetful of the perils of railway travelling, and who no more fear the chance of a collision than an average Irish landlord dreads a wayside thicket, yet find in the appointments, the punctuality, the steadiness of the train enough to excite the liveliest emotions of pleasure, or in its oscillation, lateness, or sluggish movement, an equal source of annoyance.

What other agent in modern civilized life exercises so potent and constant an influence for good or for evil over the personal comfort of so many human beings? The landlord and the tax-gatherer confine their attentions to the head of the household, and to him their visits are at intervals that are counted by months. The butcher and baker, if they supply the table badly, or are caught too often demanding payment of paid bills, can be changed, but who can afford to change his railway for slight offences? To change your railway is to change your Lares and Penates, to pay double house rent till you can find a tenant to submit to the inconveniences you flee from yourself. To change your railway is to pay a tremendous fine to your upholsterer for the privilege of obtaining better or cheaper locomotion,—with what guarantee that it will continue better or cheaper? Witness the conduct of the directors of the London, Brighton, and South Coast Company, who as soon as a large population has listened to their seductions, and settled on their line, reduce the number of their trains, and raise their fares. What body is there which can exercise so despotic a sway over property as a railway board? A jobbing director will get a station opened to forward some land speculation of his, and his acres, previously worth £25, are immediately raised to £300 each, while as no court has yet held that an easement in a railway station can be obtained by length of usage, it is open to this irresponsible body, at any time, to close a station and depreciate the value of the surrounding property 50 per cent. at least—

a thing which has been done in several instances, and threatened still oftener, in order to drive a bargain with a neighbouring land-owner. By regulations of their tariff the directors can make or mar the fortune of any town they come near. Let them raise the rates to the maximum allowed by law, and the trade of the place is ruined; let them reduce the rates to their minimum, and plenty smiles with an ungrudging hand upon the favoured district. The old kings who granted charters to municipalities distinguished for their loyalty, wielded no power to be compared to that of a railway board. What is the privilege of returning a member of Parliament worth in comparison with that of returning a director? Conscious of this, how often have municipalities given a director an easy access to Parliament, less in the hope that he might represent them at Westminster, than that he might stand their friend in the board-room.

While these gigantic potentates thus lord it over the districts where they possess that "territorial" sway for which so many a ruinous battle has been fought in the committee-rooms of the Lords and Commons, they exercise a spell of a different kind, scarcely less awful in its power, not confined by local limits, but reaching to the remotest nooks and corners of Europe, wherever English-speaking persons reside. Few are the middle-class homesteads in which there is not some tale of pinching and distress caused by the depreciation of railway property. Prudent fathers of families laid by their savings in the form of debentures which they were taught to consider as good as freehold mortgages. They reckoned without their host, nor thought of the perils of over-issue, nor of the impossibility of foreclosure or sale. More sanguine investors took Lloyd's bonds in plenty, believing that a certificate of indebtedness, under the seal of the company, must have some virtue amongst honest men. They reckoned without their host, nor dreamt that directors would create these things, not merely as certificates of past indebtedness, in which case they are valid, but as means of contracting fresh loans, in which case they are a mere waste of good paper and sealing-wax. People who would have resented the accusation of being speculative, bought railway shares as a source of permanent investment. They little surmised the reckless powers which Parliament would grant to enable directors, by the purchase of branch lines, and by endless borrowing, to ruin property once honestly remunerative; and little heeded they of the bedevillments of Preference Shares, of A Shares and B Shares, Extension Shares, Debenture Stock, Guaranteed Stock, and all the other abominations whereby the original proprietors of a valuable partnership have been financed out of their property.

To all these countless thousands of shareholders and creditors, every turn in the railway market is a message of hope or of agony. Powerless as a huge flock of sheep, they listen to the yelping of the wolves in their fold, each wondering whether his turn is to come next, and whether it will please their tormentors to leave them torn and mangled as they are, or to exterminate their existence at once. Is there any one trade in the country that directly affects so many households? Is there anywhere such a gigantic business as this carrying-by-railway partnership, taken as a whole? Man, endowed by nature with a restless activity, seems in his last development of civilization to have become absorbed in the pursuit of moving himself and his property with the utmost possible speed from point to point on the earth's surface.

The cost of constructing the permanent way and buildings which are the scene of this enormous business in the United Kingdom, has been, as appears by the returns of the Board of Trade for the year 1867, £502,263,000, or at the rate of £35,253 per mile, there being 14,247 miles of railway (since reduced to 14,414). The receipts from the railway traffic in 1867 were £39,480,000, or £119,636 per day (allowing to each year 330 working days). In each year 287,688,000 railway trips are made, being equal to 871,781 trips each day, each trip being $12\frac{2}{3}$ miles in length. Of goods (including coal and other minerals), 148,253,800 tons are carried every year, being at the rate of 449,250 tons every day, and each ton being assumed to be conveyed upon an average 25 miles. The number of trains started every year is 6,328,490, equivalent to 19,177 for every day, and the locomotive travels 148,542,827 miles per annum, or 450,129 miles each day.

Yet all this gigantic business—the most boasted growth of the foremost country in the enlightened nineteenth century—is found to be a mass of rotteness. Shareholders are ruined, debentureholders unpaid, passengers overcharged, trade checked by almost prohibitive tariffs, while nobody flourishes but the directors, their *employées*, and their patentees.

For thirty years and upwards the cry has been that railways are nests of jobbery, that shareholders are victims, and the public interests are disregarded for the benefit of the few. It has been repeated again and again, in language more or less caustic, and in terms which, if applied to other public abuses, would seem exaggerated and inflated, but which, so far as we have observed, has never overstepped the truth, but, on the contrary, has failed in portraying the depth and strength of the evil. Palliative measures have been from time to time attempted, but with the most miserable results. At one time Commissioners of Railways were appointed, com-

prising men of great ability and experience ; but only a few years afterwards they were relieved of their duties, and such powers of supervision as could be imposed on railways were committed to the Board of Trade. These powers are useful so far as they go, but they are extremely limited. Occasionally a few legislative checks have been imposed on the companies when they came to Parliament for further powers (as the London and North-Western Railway and its incorporated branches have done two hundred times); but all these have been merely slight and illusory make-shifts. The evil has gone on increasing with the most fearful rapidity ; but at last the feeling that this state of things must cease has become too strong to be resisted any longer.

In all great reforms, the first element of successful action is to keep clearly in view the specific nature of the evils which exist, and to trace those evils to their source. It does little good to repeat the general outcry that railways are mismanaged, that directors (who are poorly paid for the trouble they undertake) are commonly surmised to make up for their slender stipend by illicit trafficking in the lands which the companies are about to purchase, in the iron which they must buy, or in the patents which they are recommended by the Board to use. Instances like those of Mr. Hudson, who is said to have realized £300,000 by one transaction, speak for themselves ; but mere general suggestions that there are hosts of useless secondary and third-rate offices connected with every railway company, which seem to exist only for the purposes of nepotism, are, of course, indignantly denied, and produce no practical result when stated in a vague and general sort of way. The reformer must lay his thumb on some specific blot, and direct to it for the time the exclusive attention of all who desire to produce a better state of things, if anything more is to come of this attempt at reform than a temporary outcry, followed by an illusory palliative.

Railways do not pay,—that is the great burden of complaint ; they are ruinous to their proprietors, and very expensive to their customers. Foreigners manage to get cheap railway travelling, and still to make railway property remunerative ; yet foreigners are well aware that they have not yet reached the perfection of the art of locomotion, and they are active and intelligent in the march of improvement ; nor let it be supposed that in contrasting their systems with our own, we mean to imply that by simply following them we shall rectify the evils of which we complain.

Those evils may be most usefully considered under two heads : first, material evils, or those directly concerned with the permanent way, and rolling-stock, and stations ; secondly, personal evils,

which directly arise out of the present system, by which the persons who administer the affairs of railways are chosen.

Contrary to what has hitherto been the general opinion, we think that the material evils are far the greater; and as they lie more at the root of the present disasters, so they are certainly far more difficult to remedy. To transfer railways to the State, and to pension or buy off the directors and managers, were a less arduous undertaking to a Government whose credit is such that it can borrow any amount of money at little more than 3 per cent. interest, than to make the railways work profitably after they have been purchased; and, as things now are, a considerable and effective retrenchment in fees and salaries is far easier for a company to accomplish, than so to economise traffic expenses as to make traffic cheap without unreasonably sacrificing speed or convenience.

The root of the evil has been competition, which has led every railway to outbid its rivals in the matter of speed. The consequence of this has been to compel the construction of carriages of increased size and weight, locomotives of gigantic proportions to draw the huge conveyances, and rails and road of strength sufficient to resist the increased wear and tear caused by the rush of such tremendous masses of matter. Originally the first-class carriages weighed only $3\frac{1}{4}$ tons, their bodies were 15 ft. long, 6 ft. 6 in. wide, and 4 ft. 9 in. high. The wheels weighed 17 cwt. Now carriages are increased to 7 tons in weight, their length to 20 ft., their width 7 ft. 6 in., and their height 6 ft. 3 in. or more. The wheels weigh upwards of 30 cwt. If all this increase were merely what is necessary for the accommodation of a larger number of passengers, it might be unobjectionable, but the fact is otherwise.

A similar increase has taken place in the waggons for the conveyance of goods. The original waggons were simply a platform about ten feet long, on four wheels, with sides. They weighed about two tons, and carried two tons of goods. Various of the older Acts of Parliament required the carriages or waggons not to be of greater weight (including their cargo) than four tons, but in 1842 an Act was passed which, after reciting that experience had shown that it was in many cases more conducive to safety to use a heavier description of carriage or waggon upon railways than was originally contemplated, abolished the clauses of the previous Acts which limited the weight to be carried or borne at any one time, in any carriage or waggon upon any railway (including the weight of such carriage or waggon) to four tons. At the present day, a truck weighing four tons when empty, and carrying nine tons of goods, is no uncommon vehicle.

It must be confessed that this increase of weight has not been an unnatural result of the circumstances under which railways have been promoted, and that, in fact, while it has been considered that increased speed has worn out the old carriages too quickly, and suggested the increase of weight, that again has led to the larger strength and size of the locomotive, which, again, reacting on the carriages, require all of them to be of increased strength to resist the concussions with the engine, and with the other carriages and trucks in the train. Thus the matter has proceeded in a vicious circle, the heavy carriages requiring heavier locomotives, and the heavier locomotives requiring again heavier carriages to resist the shocks of increased weight. The consequence is that light carriages are not merely little used, but are actually driven off the road because they would not stand the concussion of thirty heavy trucks of an aggregate weight of 390 tons, exclusive of the locomotive, so that in the result if goods are to be conveyed by a slow train, for which a light carriage would be sufficient, a power of haulage and conveyance must yet be applied sufficient for the heaviest load at the utmost speed, because it is possible that at some part of the journey the light carriage might be crushed in being shunted with fifteen loaded trucks of thirteen tons weight each at either end of it.

If the whole of the trucks were usually filled, the waste caused by this excess of strength might be less, but in the result the best evidence concurs in stating that not a single goods train is loaded up to one-fourth of its capacity. One most important problem of railway reform is how to reduce this waste.

The solution must be found in two things, a reduction of speed, and the prevention of unnecessary stoppages. It is the pace which kills not merely the rolling-stock, but the permanent way, and which has compelled the costly substitution of steel rails for iron; but this rapid pace is, in truth, wholly unnecessary in a goods train if it could always be going. Ten miles an hour would then be an ample speed for every kind of goods, except possibly fish, milk, and meat, when coming from a great distance. The difficulty now is that so much time is lost by the goods trains being shunted and kept waiting for express and other passenger trains to pass, that time must be made up when it can, at whatever expense of wear and tear both to rolling-stock and permanent way. In effect, the owner of the goods now pays for having his goods conveyed at the rate of forty miles an hour from London to Manchester, and cannot pay for less. He ought to pay for having them conveyed at the rate of ten miles an hour, except in case of express goods requiring immediate delivery, and which might be paid for accordingly.