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THE ECONOMIC EFFECT OF THE TRAMWAYS ACT OF 1870.¹

THE Tramways Act of 1870 has now been in operation for thirty-one years, and has never been amended. It is therefore possible to attempt an estimate of the economic effect of this peculiar legislative experiment. I believe it to have been, on the whole, the most disastrous legislative experiment which has been attempted in England during the last half century, and I shall try to give reasons for this opinion.

I desire to say at the outset that I am not in any sense an opponent of what is sometimes called Municipal trading. I believe that the supply of water and even of light is usually better managed by a municipality than by a company. The public necessity in those cases is so pressing and self-evident that no elected body can safely be negligent in supply. Success in management depends mainly on the engineers, and corporations are as likely to have good engineers as companies. The duties of the supervising committee—be it a committee of a town council or a board of directors—are mainly to check expenditure and to prevent or remove causes of public complaint, and these duties are generally performed rather better by a municipal committee than by directors.² There are many things besides water and light which can be very well supplied by municipalities, and I am even of opinion that in the matter of tramway management there is little to choose between the best municipal and the best

¹ A paper read before the Economic Section of the British Association, 1901.

² Municipal socialism is in England sharply distinguished from state socialism in two respects. The council through its committee exercises a direct supervision which is much closer than that which the parliamentary ministers exercise over their department, and the committees in turn are more directly controlled by the council than ministers by Parliament, there being no "administration" theory to shield incompetence. In the second place the position of the town clerk (who has a much more direct personal responsibility than any single government official), gives opportunities for individual initiation and distinction usually lacking to the official of the central government.

private management. Any reflections which I may have to make on the Tramways Act of 1870 are not those of an anti-municipal bigot. I would go so far as to contend that even from the point of view of the ardent municipaliser the Tramways Act was a mistake.

I. History and Effect of the Act.

In the year 1862 it was decided in the case of the *Queen v. Train* that the laying and maintaining of a tramway in a street without the authority of Parliament, though under agreement with the local authority, was a public nuisance, even though the tramways might be for the convenience of the public generally. The decision did not chiefly rest upon the mere breaking up of the streets during construction, but rather upon the nuisance supposed to be caused by the skidding of vehicles on the lines. It was at variance with the decisions of the American Courts, which have in most States taken the broader view that inasmuch as the road is dedicated to the public for the purpose of passage, anything like a horse tramway which facilitates passage may be authorised by the municipality in whom the road is vested. But *Reg. v. Train* is the law of England, and since this decision nobody has been able to lay a tramway here without Parliamentary authority. A horse tramway is a very simple and inexpensive affair, and even a steam tramway was not usually long enough to require very heavy capital expenditure. The cost of obtaining a Bill was therefore excessive in proportion to the total expenditure, and the primary object of the Tramways Act of 1870 was to facilitate tramway construction by reducing the cost of obtaining Parliamentary authority. The Act substituted Provisional Order for Bill—a change which was supposed to be likely to bring about uniformity of drafting and substantial economy in costs.

The legislative authority to construct a tramway was, however, hedged round with conditions:—

(1). No land can be taken compulsorily for street widening or any other purpose under a tramway provisional order.

(2). No tramway in a town can be authorised by provisional order to be so laid that for a distance of thirty feet or upwards a less space than nine feet and six inches shall intervene between the outside of the footpath on either side of the road and the nearest rail of the tramway, if one-third of the frontagers object.

(3). No provisional order can be granted unless both the local

and the road authority for two-thirds of the length of the tramway consent.

(4). The franchise cannot be perpetual, and in normal cases the local authorities have a compulsory power of purchase at the end of twenty-one years, and, if not previously exercised, at the end of each successive period of seven years, on paying "the then value (exclusive of any allowance for past or future profits of the undertaking, or any compensation for compulsory sale, or other consideration whatsoever)."

It may be mentioned that the Act did not prevent the promotion of tramways by Bill, but such applications were discouraged, and the Bills, under the operation of the Standing Orders of the two Houses, were usually made to conform to the general law.

II. *The Vice of the Departmental Method of Legislation.*

The departmental method of legislation is in itself vicious. It saves little or nothing in costs except in House fees. The House fees are a form of taxation analogous to Court fees, and it would be perfectly easy for Parliament to reduce those fees in all cases and not only in the cases where legislation proceeds by delegation. The departmental order carries with it so little respect that it has to be confirmed by Act of Parliament, and the confirming Bill may be opposed before committees in both Houses. It was believed that a saving would be effected by the holding of a local inquiry, which would satisfy reasonable opponents, and the Board of Trade are empowered to hold such an inquiry. But there is no more unsatisfactory form of judicial proceeding than a local inquiry by a Department. The Board of Trade are not itinerant like the Judges of Assize. They send down an inspector. The inspector listens to all the evidence, and takes a careful note of it. He may even look at the road. But the one thing he cannot do is to decide. He reports to the Board, and the Board decide. Who "the Board" is for this purpose nobody exactly knows, but it must be somebody in London who has neither heard the evidence nor seen the road. It is creditable to the sense of humour of the Board of Trade, that of recent years local inquiries under the Tramways Act have been comparatively seldom held. Usually the provisional order is made without any pretence of hearing the parties. The opponents send in their objections in the form of a letter to the Board of Trade. The Board send on the letter to the promoters for

their observations. The Board consider whether on the letters a case has been made out, and, if satisfied, make the provisional order. Naturally a decision so arrived at has no weight, and any strong opponent, such as a railway company, is usually advised to carry the opposition before a Parliamentary committee. Thus save in House fees, the promoters practically save nothing by the procedure by provisional order.

It may be suggested that the departmental method has at least the advantage of securing uniformity in drafting. Uniformity is very dear to the heart of the permanent official. The electrical department of the Board of Trade have carried their love of it so far that where a lighting order is transferred from a local authority to a company by agreement, they refuse to insert in the deed of transfer any provision for a lower maximum price than that prescribed by the original order. Thus, when the local authority have secured, as a condition of transfer, a boon to all the consumers of electrical energy in the district, they have to resort to a private agreement, which may not be very easy to legally enforce, because the Board, out of their love of printed forms, do not consider the matter fit to be dealt with in the formal deed of transfer. Uniformity, in this and many other cases, is a rather doubtful legislative virtue. It may nevertheless be admitted that there is some value in model clauses, and that it is convenient both to lawyers and to the public that constantly recurring difficulties should be dealt with in the same carefully considered words. Gas and water pipes, for instance, have to be interfered with in constructing all tramways, and it is convenient that there should be a standard clause for the protection of their owners which will not be varied save in really exceptional cases. In the procedure by Bill this uniformity is secured, so far as is desirable, by the benevolent despotism of the Lord Chairman of Committees in the House of Lords and his counsel. It is at least curious that in the case of tramway legislation it has been better secured in Bills than in Provisional Orders. There are more bad precedents and more unintelligible clauses in tramway provisional orders than in any other part of the Statute Book. Thus, even the dull merit of uniformity must be denied to this particular kind of departmental legislation.

It may be said, broadly, that the first essential for any successful legislation by delegation in local and personal matters is that there should be a commission or tribunal consisting of men of position or authority who should themselves hold the local inquiry and have power themselves to decide. Such an inquiry

will usually satisfy opponents that they have been fairly heard, and prevent them pursuing their opposition further, even if an appeal to Parliament be allowed. It will be possible to leave to such a tribunal a wider discretion than Parliament would be likely to confide to a department. There is no kind of local legislation for which such a wise delegation is more useful than the authorising of tramways, involving as it does minute questions of interference with frontagers' amenity or other matters which can be better decided after viewing the street than after days have been spent in London hearing evidence and looking at plans. But the local inquiry is obviously useless unless the people who hold it are the people who decide. This essential condition has been complied with in the Light Railways Act of 1896, and in the Scotch Private Bill Procedure Act of 1899, and in both cases with satisfactory results.

It would not be fair, however, to put down the failure of the Tramways Act merely to the inherent vices of the departmental method. Parliament has very strictly limited the powers delegated to the Board of Trade, and has thus made the working of the Act at once departmentally simple and economically ineffective. The main vices of the Act are the excessive deference paid to adjoining landowners and to local authorities.

III. The Want of Compulsory Powers for the Taking of Land.

It is notorious that English roads are often narrow, tortuous and irregular. Save for the roads made by turnpike trusts, they are usually either old highways of immemorial antiquity, or new roads laid out by landowners when developing their property for building. Both are bad, but the new roads are usually, for the purposes of rapid intercommunication, the worse of the two. The cost of roadmaking is the heaviest part of the expenditure incurred by suburban landowners. They economise it as much as they can, firstly, by making the roads as narrow as the bye laws of the local authorities will allow; secondly, by making them curve or zigzag so that no part of their properties (usually of irregular shape) shall be left unavailable for profitable development; and, thirdly, by giving as little advantage as they can to adjoining landowners. Their object is to secure as much quiet and as much frontage as the law will allow. Roads so laid out cannot always be suitable for tramways without alteration. Under the Tramways Act land cannot be taken compulsorily for

widenings. Promoters tried to get over this difficulty by single lines, by awkward curves, by choosing roundabout routes and by other devices. All these engineering tricks merely led to the construction of bad tramways. There are very few English towns in which it is possible to make a good tramway suited for electric traction without some road widenings. In many places, especially near London, the best and cheapest plan would be to construct a new main road for tramway purposes, as has been done, for instance, in Thanet, under the Light Railways Act. In other words, for nearly all good tramway schemes it is still necessary to go to Parliament direct, or to proceed under the Light Railways Act. Under the Light Railways Act, though the land may be taken compulsorily, there is unfortunately no power to exempt from Section 92 of the Lands Clauses Act, that is to say, if a small slice of a front garden be taken, the owner can compel the promoters to buy his whole premises. But by Provisional Order under the Tramways Act no land can be taken compulsorily under any circumstances. If procedure by Provisional Order be an advantage to promoters—and it is an advantage, at least to the extent of the freedom from House fees—the legislature thus discourages good schemes and encourages bad. This is one of the reasons why, though we have so few tramways, we have so many which are of no public utility.

IV. *The Frontagers' Veto.*

The frontagers' veto is another legislative restriction which has had the most ridiculous results. The law provides that if in a town for more than 100 feet there be less than 9 feet 6 inches intervening between the outer rail of the tramway and the kerb, one-third of the owners or one-third of the occupiers of premises abutting can absolutely veto the tramway. It is doubtless right that the amenity of adjoining owners should be considered, and it is also right that tramways should not be constructed in very narrow roads without widening, if widening is possible at reasonable cost. But an absolute veto based on a mere rule of measurement, while it makes the work of legislation a very simple and almost arithmetical matter for officials in Whitehall, has had most unfortunate practical results. There are often short lengths of street, important for the linking up of a through system, which cannot be widened save at enormous cost. Whether the frontagers' opposition should or should not be overruled in those cases depends on the nature of the street

and the balance of public convenience. Obviously, for instance, it is more important for a shopkeeper than for the occupier of a £20 villa to have room for a carriage to wait at his door. The straightness of the street is almost as important as the width in considering whether a line should be authorised in a narrow street.

The Board of Trade were relieved, however, from all exercise of discretion by the mere legislative rule of thumb. It therefore became necessary for the tramway engineer to get round the Act as best he could. He noticed in the first place that the test was not the width of the road but the distance from the outer rail to the kerb. His first trick was therefore to adopt a narrower gauge to get him out of his difficulty. It was possible to save nearly three feet on a double line by adopting a 3 ft. 6 in. gauge instead of the standard 4 ft. 8½ in. Hence it comes that there are varieties of gauge which make urban intercommunication very difficult. The engineer's second alternative was to adopt a single line where a double line was required to deal with the traffic. He would put long lengths of single line, with passing places fixed not by considerations of convenient working, but so as to front on premises supposed to be owned or occupied by people who liked tramways. These single lines were generally commercially unsuccessful, for the very good reason that they could not give either a rapid or a regular service. Nor was even the comfort of the frontagers secured. A tramcar in motion following the line of the traffic is not much in anybody's way even on a narrow road, but a tramcar stopping to wait till the car in the opposite direction passes is an obstruction even on a road of fair breadth. The Parliamentary rule of thumb has prevented many tramways being made which would have been very useful, and has forced engineers to lay out lines which might have been useful in such a way that they have been at once a nuisance and a waste of capital. There is nothing to be said for the rule except that it saves officials the trouble of exercising a reluctant discretion.

The veto of the frontagers does not apply when the promoters go to Parliament direct,¹ but

¹ This is one of the reasons why of recent years so many promoters have chosen to promote Tramway Bills rather than Provisional Orders. Local authorities have taken the same course, usually putting their tramway proposals, with other proposed changes of the law, in a general or "omnibus" bill for the locality. There is no sort of frontager's veto under the Light Railways Act, but all persons affected (and not merely frontagers in narrow places) have a right to be heard before the Commissioners.

V. *The Veto of the Local Authorities.*

applies under the Standing Orders of Parliament as much as under the Tramways Act. No tramway can be constructed without the assent of the local and road authorities for two-thirds of the length. This means in London both the County Council and the Borough Council, either of whom may veto the project, and elsewhere the Borough or District Council¹ save where the road is vested in the County Council, in which case the assent of the County Council also must be obtained. There are excellent reasons why the local authorities should be consulted as to whether a tramway should be authorised, and probably most Councils exercised the power vested in them on good public grounds. But in many cases the power has been grossly abused. Many Town Councils consider it their duty to get as much out of the tramway company, in the interests of their constituents, as they can. Sometimes they ask for widenings which are not required, sometimes for royalties,² sometimes for wood paving or electric lighting on a country road. The local authority need give no reason for refusing their assent, and there is no appeal. Promoters have generally to resort to canvassing and other more objectionable methods to "work" the councils. Sometimes they intervene in the local elections; sometimes they go as near bribery as the law allows. The best class of capitalist is averse to this kind of promotion. He often finds himself unable to compete with a rival who offers terms recklessly, because the rival has no thought of risking his own money, but intends to sell his concession to a company. The scheme which is laid out broadly to serve a big district is often less likely to obtain the assents than a petty scheme of no public utility.

It may, I think, be said that the cases of flagrant abuse of veto are not so frequent as in the early days of tramways. There is a higher standard of public conduct, and the general desire for improved means of locomotion makes it sometimes unsafe for town councillors to oppose improvements. But the veto has undoubtedly had very serious results, in preventing tramways

¹ In rural places the vetoing local authority is the parish council under the Tramways Act, the rural district council under the standing orders of Parliament.

² The policy of Parliament has been to discourage royalties for the use of the streets for any public purpose. It is open to argument whether this has not had the effect of driving some corporations unwillingly into tramway construction as the only means of intercepting for the ratepayers the inevitable profits of tramways in the town. In Dublin and elsewhere royalties are in fact, however, paid, being secured by agreement, usually without parliamentary sanction.

being made on any comprehensive plan, in overweighing them with conditions, and in helping to drive the soundest capitalists out of tramway enterprise.

At the moment it is operating injuriously in another way. There are many cases, especially in or near London, where tramways are opposed from the dislike of better means of communication, bringing, as they would be likely to do, a larger working class population. For a veto based on this sort of selfishness there is nothing to be said.

There is no probability that the abolition of the veto would lead to the authorisation of many tramways to which the local authorities had a *bona fide* objection, but it is essential that there should be some power to overrule the opposition if it is merely factious or incivic. Under the Light Railways Act there is no formal veto, but very few lines have been authorised to which the local authorities had any substantial objection. What has happened is this. Local authorities have professed to oppose and sent in formal objections, but these objections, when tested in a public inquiry, have often turned out to be mere matters of clause, capable in many cases of adjustment, and in others proper for decision by an independent tribunal. The same thing would happen if local authorities could not prevent the passing of tramway schemes by a mere formal dissent.¹

VI. *The Purchase Clause.*

The principal novelty in the Act of 1870 was the Purchase Clause. It was based on what at first sight would seem good reasons. The tramway promoter asked leave to use the public street for the purpose of laying down grooved rails of which he would have the exclusive use for vehicles with flanged wheels. The gas promoter and the water promoter also asked leave to break up the street, and also obtained a virtual monopoly of

¹ It is very remarkable that both the veto of the frontagers and the veto of the local authorities have existed in America without preventing tramways. In nearly every state the assent of the local authority is made, either by statute or the constitution, an absolute condition, which there is no power to override. In most states the assent of a majority of abutting owners—not merely frontagers in narrow places—is required, though there is in some states a power to override the refusal. The fact that similar regulations have worked so much more injuriously in England must be attributed to (1) the greater desire for residential quiet, (2) the less developed sense of the importance of time, (3) ‘gigmanity’s’ objection to tram rails, (4) the view that ‘if the thing is to be done, the Corporation should do it,’ and (5), generally, to the less progressive tendencies of the people, and especially of the suburban residents.

the right of supply, but once they laid their pipes in the *solum* (which does not belong to the local authority), they did not interfere with the surface save for the purpose of repair. Even in their case, local authorities had felt it a grievance that they could not purchase the undertakings save by obtaining a special Act and paying a price which included an allowance for goodwill due largely to the mere increase of population. As the tramway would permanently occupy part of the roadway dedicated to the public, it was thought right to give a power of public resumption at the end of a fixed period on payment of a price which would return to the promoters their capital expenditure less deterioration.

This was a complete innovation in English Parliamentary practice. In some countries, there is a public right to resume railways at the end of a certain period, justified sometimes on the mere ground that the companies obtain state assistance in compelling landowners to sell their land, sometimes on the ground that they obtain a virtual monopoly of a service which is of public necessity, and sometimes on the ground that they have received financial assistance from the State. In England and America, however, railway property is as permanent as any other property. There is only one case in England in which the compulsory acquisition of a railway has been authorised, and that was a peculiar case in which powers to construct a railway were really being used to block a through route. There is no precedent for State resumption even for misconduct. Indeed railway property is so jealously guarded that a railway cannot be sold by mortgagees who do not receive their interest.

In the case of gas undertakings there are a good many precedents for compulsory acquisition by the local authorities, but

- (1) The purchase requires a special Act of Parliament.
- (2) The Company opposing the Bill have almost always been successful where they could prove that they have performed their statutory duties adequately; and
- (3) The price has always been the full market value, arrived at on the same basis as when other property is compulsorily acquired by Act of Parliament. Thus it includes goodwill, and is based not so much on the cost of the company's works as on the profits which the shareholders have enjoyed and are likely to enjoy. It also includes an allowance for compulsory purchase. This allowance in the case of lands is usually ten per cent., but is not so great when the property is represented by shares. It is

a sum sufficient in the arbitrator's opinion to cover the cost of reinvestment.

Parliament has sought to control gas companies rather than to facilitate their extinction. Thus under the auction clauses, the capital must be put up for sale to the highest bidder, and the money thus received on the best market terms must be applied in supplying gas. The dividends were from a very early period limited to a certain maximum percentage. This has been varied by allowing a company to divide a larger sum in profits, according to a sliding scale, when the price of gas is reduced, thus giving the company a motive for economy and efficiency.

Water being a necessary of life, Parliament has in many cases of recent years allowed the local authorities to compulsorily acquire Water Companies' undertakings without any substantial complaint as to the service, but save in this respect the practice as to purchase has been the same as in the case of gas companies.

The Tramways Act was therefore, as I have said, a complete innovation. In one respect it may be said that this innovation has now been so generally accepted that it would be useless or merely academic to discuss its advisability. That is to say, most people now agree that the local authorities should not have to seek a special Act of Parliament before purchasing tramways, but should be enabled to buy at the end of some fixed period. The power of expropriation on any terms and at any time must mean a certain increase of difficulty in raising capital—as was admitted by London County Council witnesses last session on the Tube Bills—but it would be practically hopeless for any one now to propose to lay a tramway in an English town without giving the local authority power to buy him out at some time.

The features of the Tramways Act purchase clause which may be considered open to profitable economic discussion are three :—

- (1) The shortness of the period at the end of which purchase operates,
- (2) The method of valuation, and
- (3) The power to break up an undertaking among the several local authorities of the areas served.

On the last point it seems only necessary to say that there is no possible justification for the present state of the law, which permits local authorities to break up an undertaking into sections, without any provision, save by special Act of Parliament, for mutual running powers, or even for facilities. There is no power at

present in anybody to order a through fare over the tramway so divided.

The period of purchase under the Act is twenty-one years from the date of the authorisation of the tramway. This means in practice eighteen or nineteen years from the date of opening for public traffic. The method of valuation, as afterwards interpreted by the House of Lords,¹ is, firstly, to calculate what would be the cost at the date of purchase of constructing the line, secondly, to take off from this hypothetical cost an allowance for deterioration due to wear and tear or to neglect, and, thirdly, to add the amounts actually paid by the promoters for street widenings and improvements. Each local authority can purchase the section of line within its area without making any provision for working the system as a whole, and whether or not other local authorities exercise their power of purchase.

Mr. Shaw-Lefevre, who was the minister in charge of the Tramways Bill, said, in defending his proposals, that as there was no provision for the limitation of profit he did not think capitalists would be discouraged by the purchase clause from investing their money in tramways. He supposed, in other words, that they would look to recoup themselves by a high profit for a few years for the limitation on the capital value of their investment. It cannot be said that this prophecy was not at first justified by events. During the first ten or twelve years after the passing of the Tramways Act there was a great crop of promotions. The gentlemen who obtained the powers did seek to

¹ It was no part of the purport of this paper to discuss the decision of the House of Lords, which to lawyers is not open to question. From the point of view of the economist, however, the construction given to the purchase clause of the Tramways Act is not without interest. Parliament said that the company were to get the "then value," but that in calculating the then value no allowance should be made for past or future profits of the undertaking. Puzzle: What then is the value, and how is it to be calculated? According to the economist (Walker, *Pol. Econ.*, p. 85), "value is, briefly speaking, purchasing power, or power in exchange," price "the purchasing power of an article expressed in terms of money." The main and almost the only factor to which any ordinary purchaser would look in fixing the price of a tramway would be its profit-earning capacity. Yet Parliament directed the arbitrator in fixing the price to leave profits out of account. The arbitrator could only conclude that Parliament, in its wisdom, had used the word "value" in some other sense, hitherto unknown to economists, lawyers, or men of business. The "Bramwell award," upheld by the House of Lords, was probably the best possible guess under the circumstances at the meaning of Parliament, but it fixes the price at something which is quite different from the value in the non-parliamentary sense. Under the Light Railways Act, the purchase clause usually adopted gives "the fair market value as a going concern." To the economist the word "market" may seem superfluous. It merely makes clear the intention to once again use "value" in its ordinary signification.

make their profits as quickly as they could. The more careful managed to secure the best streets in big towns, and sat down to earn big profits. They said that there was no proper business motive under the Tramways Act for extension into growing districts, where the tramways would not pay for some years, and they did not make any extensions they could help. The majority of tramway promoters took a more adventurous line. They noticed that the Board of Trade not merely did not limit the dividend, but did not limit the capital of tramway companies. They obtained their powers, capitalised them at whatever figure they thought the public would stand, floated their company, took their profits, and cleared out. As a matter of course, only a few of these gentlemen were able to carry out this operation to their own complete satisfaction. Sometimes the public altogether refused to come in. The better-instructed investor has always avoided tramways; only those who did not understand the Act looked upon tramway shares as a steady permanent investment. Thus there were a whole host of abortive schemes which could never be financed, and which had to be abandoned. In other cases the flotation was half successful, the contractor was partly paid in paper, and the line was badly constructed.

The great feature of tramway promotions, as distinguished from most railways and the vast majority of gas and water undertakings, was that the original promoters generally cleared out as quickly as they could, looking for their profit to an inflated capital, rather than to a steady investment yield.

The favourite argument for municipal as against company construction of tramways is that a corporation can get the money so much more cheaply. As things stand this is undoubtedly true. But if the comparison be between railways and corporation stocks the comparison is not so favourable to the corporations. The railway companies can borrow at about the same rate as the corporations. They have raised their ordinary capital on terms which probably have given, as an average yield, little if at all more than corporations have had to pay for their loans. The railway investor is content to buy at a price which gives him little over three per cent., because he hopes to get an enhanced yield from the company's future success. The hope of the investor; often disappointed by the failure of his own calculations, nevertheless springs eternal, and balances (from the point of view of the economist who wishes to see capital for reproductive works obtained on the easiest terms) the security of the municipal mortgagee.

But what the investor wants is to get a fair run for his money. He thinks a line from A to B must pay in the long run, and he takes shares on the faith of that belief. If, before the line has really matured, it is bought at an old-iron price, he feels cheated of the ultimate result of his business foresight, and he consequently avoids the class of investment open to such risks. The more careful investors never would touch tramway shares. Those who touched them almost invariably suffered when the purchase clause was put into operation, and the recollection of their misfortunes still renders tramways an unpopular investment with the kind of man who looks for an immediate three to four per cent. and the hope of improvement. One would not be far wrong if one said that investors can now only be tempted to support tramway enterprise by receiving four per cent. on debentures, as against three per cent. on railway debentures, five to five and a half per cent. on the preferences as against three and a half to four per cent., and an anticipation of at least six per cent. on the ordinary. And yet there ought to be no more stable and regular business than that of carrying passengers along main lines of communication in big towns. The difference must be ascribed, not to any inherent risk, but to an artificial legislative insecurity.

The discouragement and demoralisation of tramway enterprise might have been a matter of small concern but for the application of electricity to street traction. Neither the horse tramway nor the steam tramway has any enormous mechanical superiority to the automobile on a good road. But it so happened that about sixteen or eighteen years after the passing of the Act of 1870, electrical discovery pointed out a means of using the tramway which gave it a great advantage over the automobile.

Electricity can neither be profitably generated in a moving vehicle nor economically stored there, but means were found, by the overhead wire or the conduit, of supplying it to the tramcar as it went along. This immediately reduced the cost of locomotion by a half, while also increasing the speed and pleasantness of street transit to a degree never before possible in a public vehicle. Seventy passengers can be carried a mile for sixpence in working cost, and they can be carried to the precise spot to which they want to go.

There is no country in the world where this discovery should have had a readier welcome than in England. When it was made, England was still the greatest steel-producing and engineering country. It could still claim the largest experience in the best

railway construction, other than street railways. In no other country was there so large a contiguous urban population as in London, Lancashire, and the West Riding. In no other country was the difficulty of housing the people within reach of their work so keenly felt. Nowhere else was there so large an amount of accumulated capital seeking profitable investment. In ordinary course England should have been the pioneer in the construction of electric tramways, the English manufacturers the first to gain experience, the English working man the first to receive the boon of cheap transit to more airy homes.

It is needless to say that this has not been the course of events. So far as I am aware, prior to the passing of the Light Railways Act in 1896, only about twenty miles of electric tramway had been constructed in England and Scotland, as against considerably over ten thousand in America. At this moment there are some forty miles of electric tramway in operation in the United States for every mile in the United Kingdom, though the urban population of the latter is very nearly as great as the urban population of the former. As far as I can calculate from the latest trade returns, the total route length of tramway operated by electricity in Great Britain is still under 500 miles. This figure is positively ludicrous for an urban population exceeding 25,000,000. And indeed one-seventh of the meagre figure for the United Kingdom may be put down to Ireland, which is free from the operation of the Tramways Act. The social, economic, and industrial loss which Great Britain has suffered through being, for the first time in her history, behind other countries in adopting a new invention of first-class importance, is literally incalculable.

The Hon. R. P. Porter, formerly U.S. census director, estimates the total cost of constructing the 20,000 miles of electric tramways in the U.S. at £300,000,000. Part of this has been spent in rails, and the electrical street roads have probably contributed more than the railroads to the development of the steel industry during the past decade. A very large part has been spent, to even greater national advantage, in employing the highest skilled labour and developing a technical industry of the greatest social value. England has lost all this, though the recent advances made by English electrical manufacturers tend to show that if they had got the chance earlier they would have done at least as well as the Americans. Even more important is the loss of health and efficiency in the general population by being denied the means of access to healthier dwelling places.

I venture to attribute this loss primarily and principally to the purchase clause of the Act of 1870. At the time when the discovery was made, the companies were nearing the period when their undertakings could be bought for less than the cost of the material left *in situ*. Were they under these circumstances to scrap their horse and steam equipment, relay their permanent way, and spend something like £10,000 a mile on electrical reconstruction? They were in many cases already in difficulties. Their directors realised that the date was approaching when the undertakings must be dissolved, and the shareholders paid off at a discount. They felt no possibility of permanence in their own position, and the human element cannot be neglected in any industrial affair. Some few endeavoured—usually in vain—to make terms with the local authorities, but most of them prepared as best they could for a quiet and painless death.

Parliament gave them no assistance. The only legislative change made was to facilitate the working as well as ownership of tramways by local authorities, and thus to make it more difficult for the companies to secure new leases.

The local authorities, when they did acquire the tramways, were in most cases naturally reluctant to try experiments at great cost to the ratepayers. Glasgow, even, ordered a new horse equipment long after electric traction was in other countries an assured success. Other corporations could not be expected to be more adventurous than Glasgow. Even to-day, with comparatively few exceptions, English towns lag very far behind the extension of electric lines in proportion to the population which private enterprise has carried out in America or in Dublin.¹ The fact is that corporations are more careful of the

¹ The comparison between Glasgow and Dublin is a very instructive one. Glasgow is about the most progressive town in the United Kingdom. Dublin is a rather sleepy town, with a residential rather than an industrial population. In most new things Glasgow is far ahead of Dublin. Electricity supply, for instance, which in both cases is in the hands of the Corporation, is much better done in Glasgow than in Dublin. The population of the Glasgow district, including neighbouring towns, is about a million. The population of Dublin and its suburbs is little over a third of a million. The Glasgow Corporation came into possession of the town tramways, which had been constructed by the Corporation and leased to a company, at the end of 1895, on the expiration of the company's lease. The lease did not contain anything to compel the Corporation to acquire the company's obsolete horse plant, and the Corporation were thus in an unusually favourable position for adopting at once an electrical equipment, such as was being already installed in Dublin. They nevertheless bought a new obsolete equipment, and spent some years in inquiries before they had the courage to try electricity. At present there are in the Glasgow district only 88 track miles of electric tramway, as against 102 in the Dublin district. Even when all the Corporation's proposed extensions are completed the mileage per 1000 of population will be less than half

ratepayers' money than directors are of the money of their shareholders', and municipal socialism in England means the development of assured successes rather than the trying of novel and expensive experiments.

Outside the big towns the work of supplying electric tramways has, in some cases, been undertaken by companies, who have been able, after enormous difficulties, to secure the requisite powers. It may be said, broadly, that they have never been able to proceed unless the Tramways Purchase Clause was modified. The Tramways Act, so far as private enterprise is concerned, merely remains on the statute book as a beacon to warn the promoter of the danger of financial ruin. In almost all cases, nevertheless, the promoters have had to give terms which would be exacted in no other country. This means smaller profits, fewer extensions, and a less adequate service. Again, they have generally been unable to obtain access into the big towns, and while the omnibus can run into the centre, the company-owned tramcar must stop in the suburbs. And, lastly, it is an open secret that, even though the Tramway Purchase Clause may be no longer applied, the recollection of past losses prevents investors from feeling any security in tramway enterprises, and many perfectly honest and profitable schemes would have failed but for the aid of American capital.

It only remains to consider whether the evil is in the shortness of the period before purchase or in the method of valuation.

A similar Purchase Clause was inserted by Mr. Chamberlain in the Electric Lighting Act of 1882. In 1888 it was found necessary to alter the clause in order to induce capital to come forward, and the alteration made was to extend the period from twenty-one to forty-two years. The change did undoubtedly produce a remarkable effect. Electric lighting shares have become a favourite investment with the best class of investors; those who look for the lowest but steadiest return. But it has been found necessary in the more recent Electrical Power Acts

that of Dublin. The Dublin company pays £14,000 a year in royalty to the local authorities, the payment to the "common good" from the Glasgow tramways is £12,500. The Glasgow Corporation has halfpenny fares for very short stages, but the penny stages in Dublin are longer, and in Cork very much longer, than in Glasgow. Finally, when districts outside the city boundary of Glasgow required a service of tramways, the Glasgow Corporation would only make them on getting a perpetual tenure—without any purchase clause whatever—and this the Corporation, by reason of their strong position as owners of the central lines, were able to exact. The receipts per mile are very much higher in Glasgow than in Dublin. This will usually be the result of a limited enterprise, only laying tramways on a few picked routes.

to put in no Purchase Clause at all, so as to attract capitalists to undertake supply over large areas. The public interests have been secured by reverting to the old gas policy of maximum dividends. It will only be when electric lighting companies are nearing the purchase period that we shall be able to judge whether the fear of purchase at an inadequate price will operate to check improvement even in smaller areas.

Personally I take the view that the method of valuation is the more important point. The size of a town, and the prospective inevitable value of a tramway concession, should be taken into account when the powers are granted, and proper conditions should be imposed, such especially as cheap fares and extensions into less paying suburban districts. But it is in the long run much better that when the concession is granted, it should only be resumed on paying to the concessionaires the actual value of the concession. This should include a payment for goodwill. Goodwill, in the case of a tramway, means the value of the anticipation that the old customers will continue to use the tram. This depends on the number of customers, and the number of customers depends in great measure on the efficiency of the service. If goodwill is not to be paid for there is no motive for running the service at a loss to develop a suburb, no sufficient motive for any broad view of enlightened self-interest. If goodwill is to be paid for, there will be a motive for immediately adopting every invention which is likely to increase the company's profits, if the capitalised value of the increase of profits exceeds the loss on the plant scrapped.

It may indeed be contended that, on the average, municipalities have actually lost in mere money by being able to acquire tramways at an artificial rather than a real valuation. In some cases, where a few miles of tramway ran through very populous towns, they have been bought at prices which yielded immediately a very large profit. But in most cases the property which they acquire is worth as a going concern nothing at all. The lines are in bad repair, and have to be immediately taken up when adopting electric traction.¹ The business, as a business, is practically non-existent, for directors have long been discouraged from introducing the slightest improvement which was not immediately profitable, and have found it difficult to keep good managers in a service which might only be temporary. In

¹ The question may be asked : Why then does the arbitrator award that they are of any value? Simply because "value" in the Act of Parliament does not mean value, but cost less an allowance for depreciation.

other words, because the corporation could buy without paying for goodwill there has been no goodwill created. They might have had to pay five times as much for properly equipped tramways, reasonably developed, and yet have made a better bargain. Thus there has not even been a ratepayers' gain to set against the national loss. Under the Light Railways Act it has become customary to allow purchase only on paying the fair market value. In Parliamentary Bills and Provisional Orders the term of purchase is now generally longer than twenty-one years and the method of valuation is sometimes varied. But the confidence of investors will not, for many long years, be restored, the backwardness of English electrical manufacturers—due to want of opportunity—will take at least a decade to make up, and for ten years English working-class children have remained in crowded courts when they might have been in the healthier suburbs, if Parliament had not thought fit to try a disastrous legislative experiment.

VESEY KNOX.

POSTSCRIPT.

The rules of the British Association do not encourage the discussion of proposals for future legislation. The paper is therefore inconclusive in not containing the author's suggestions for legislative reform. He would propose :—

- (1) that the Tramways Act should be entirely repealed ;
- (2) that the powers of the Light Railway Commissioners should be increased, and the Commission strengthened by, *inter alia*, the transfer to them of the tramway department of the Board of Trade, so as to enable them to deal with all questions concerning street railways—authorisation, running powers, mode of construction, &c. ;
- (3) that the orders of the Light Railway Commissioners should be final, subject to an appeal, in the case of legislative orders, to a joint committee of the two Houses of Parliament ; and
- (4) that a Street Railways Clauses Act should be passed establishing as the model clauses for all street railways the clauses, including the purchase clause, now usually inserted in Light Railway Orders.

V. K.