

## ECONOMIC LIMITATIONS UPON THE DEVELOPMENT OF TRANSPORTATION BY ELECTRIC RAILWAYS.\*

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The evolution of electric railways from the horse cars, cable cars and steam dummies of the late 80's has produced many changes in our social and industrial life. The man who formerly had to locate his home near a steam railroad line that he might go to the city each day with certainty and comfort while his family enjoyed the benefits of suburban life can now locate almost anywhere within a reasonable distance and be served safely, cheaply and expeditiously by the electric street railway. This has produced a complete change in the distribution of the suburban population of our cities and has added greatly to the value of land which was hitherto comparatively inaccessible, and the electric transportation system has become so indispensable to every large city that the loss of its service would be a public calamity which would paralyze a large part of the city's industries. Electric transportation has, in fact, become so closely interwoven in our social and economic fabric that any attempt to adjust its financial or administrative problems is far reaching in its effects and provokes vigorous opposition. It is as when one touches a spider's web; the spider is sure to rush from a dark corner to devour the disturber.

It has been generally realized for a number of years that, while some favorably located street railway properties have made a satisfactory return on the capital invested in them, many are on the border line, so to speak, while others again would show an actual deficit if their accounts were carefully analyzed and all reserves provided; yet so fearful are we of public opinion, so willing to let sleeping dogs lie, that little active and concerted effort has been made to adjust such cases and to put the properties upon a firm financial footing.

The electrical traction business was an unknown field when the horse railroads were electrified, and it has grown so rapidly during the past twenty years that its promoters and operators did not realize that in the enormous extensions of track and mileage and improvement of service they were giving the public quite another commodity than that which had been furnished by horse car lines. Settlements were made beyond the ends of lines, which soon required further extension, and the process was repeated; so, step by step our city systems have extended out into the country until, in some cases, they reach to a distance of 10 miles from the centre.

At the beginning most of the patrons of these lines lived near the city, but as the territory gradually built up the centre of density kept moving toward the outer end, constantly increasing the average haul. Further than this, the people were not satisfied with being carried to the centre of the city; they demanded that they be carried to any portion of it that they might elect; that is, that they be given transportation from any part of the system to any other part. In many cases, however, this service was traded for something else or was a wholly voluntary concession on the part of the street railway. This demand was met by the free transfer, which introduced a condition which did not exist to any considerable extent in the old horse car days and which has contributed more than almost any other single factor to the increasing cost of operating

our city roads. With all these changes there has been no change in the rate of fare.

**The Increase of Haul and the Transfer.**—The pushing out of the centres of population and consequent increase of average haul at a fixed rate of fare and the universal transfer are the most subtle and most difficult factors to isolate and to which assign a value—much more so than mere over-extension of trackage.

It is evident that all these changes must have increased relatively the expenses of operation, but this increase has been somewhat obscured by improvements which have been made in engines, generators, motors and, in fact, in all street railway apparatus, which have tended to reduce the cost of operation and maintenance. While the operating ratio of individual companies may have shown considerable variation over a period of years, there has been no marked change in the average ratio of all companies.

This evolution in the service has also, of course, necessitated corresponding increase in the equipment, so that the investment has grown rapidly, more rapidly, in fact, than have the earnings.

The attitude of the public toward the transportation companies has changed as their service has become irrevocably established. In the beginning the agency which furnished transportation so much more rapid and for so much greater distance than had previously been possible was courted and favored. Every inducement was offered to attract anyone who was ready to electrify an existing system or to build into new territory. Small communities vied with each other in their efforts to attract extensions which would put them within easier reach of the larger sections. Almost any sort of construction and almost any sort of service was accepted gratefully and under this stimulus lines were built long before they should have been from a sound business standpoint; and the deficits that have thus accumulated must be met either by the public or by the investor who fails to receive a fair return from the beginning. The public, however, has withdrawn from the old partnership, leaving its partner to pay the debts of the concern while it retains considerable jurisdiction over the assets, upon which it proposes to base a new deal.

The efforts of the public service commissions and of the legislatures have been to secure more and more for the public, which means less and less for the transportation company. Such an attitude is but natural in light of their conception of their duty to protect the public and to advance its interest solely, while the railroad is left mainly to defend itself and its investors. It is unfortunate that many people seem to think that a public service corporation is subject to economic laws which are different from other lines of business. Now, an electric railway property is not an eleemosynary institution; it is a business enterprise. In the last analysis it is a manufacturing concern. Its product is transportation and its customers are the people who ride upon its cars. It is governed by the same economic laws as any other line of manufacture. In order that any growing business may prove a commercial success its earnings must be sufficient to pay the operating expenses and maintain the property in good condition, to meet taxes and similar charges, to replace worn-out or discarded equipment and to yield a return on its capital which is of sufficient amount and sufficiently stable to attract such additional investment as is required by the growth of the business. If all these conditions are met over a period of years, the business will prosper. If one or more of them cannot be met, the success of the whole enterprise is in danger.

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