

(November 29, 1913.)

## The Street Railway Situation in Toronto

BY MR. BION J. ARNOLD.\*

AT a special meeting of the Canadian Club on the 29th of November, Mr. Arnold said:

*Mr. President, Your Worship the Mayor, Members of the Canadian Club and Guests.*—Making a public speech is something I always avoid, if I possibly can. It seems to be one of the things that my calling requires me to do, so when the various situations warrant or seem to require it, the responsibility is not actually shirked. For that reason, when your President, or Honorary Secretary, rather, asked me to address this Club, I demurred, and tried to get out of it, but finally consented to do so at some future time. That is my way of getting out of it, but as in this case I always get nailed. (Laughter.)

Recently my time has been occupied with matters of this kind in Chicago, so much so that there has been absolutely no time for preparation, as I have been working for the last sixty days practically day and night. I have not had sufficient time to get the necessary amount of sleep, although I think I am awake now. That is my excuse. Consequently I shall have to speak extemporaneously, using such notes as my assistant and I have made dealing with the transportation question in Toronto, and later will answer such questions as you may put.

Briefly, on the general facts of the situation in this country and the States, I think what I may say may apply to this country as well as to the United States. The traction situation in almost every large city is more or less a political question, or rather the conditions arising out of the traction situation are political, consequently when I am put into a situation to analyze it, I analyze it to the best of my ability as a disinterested engineer, having in my analyses absolutely no politics, no axes to grind; but I try to find the truth and tell it, always aiming to do that regardless of the side it hits; some-

\*Mr. Bion J. Arnold is one of the foremost transportation experts in the United States. He has specialized in electric railway systems, being Chairman of the Chicago Traction Board. His visit to Toronto was particularly timely in as much as the proposal that the City should purchase the Toronto Street Railway then occupied the people's attention.

times it may be my own friends, but what I mean to do is to go down the middle of the road, and I have endeavored to do this in Canada. (Applause.) Unfortunately there are always political questions involved, but I want you to feel that what figures I have prepared in connection with the Toronto situation have been sincerely prepared. I believe there are those who construe figures their own way for political effect; this is one of the things I sometimes have to suffer for, but I generally am charitable enough to try to believe that adverse criticism is by those who do not understand my figures.

I want to make this point quite clear. The traction situation, especially in my own country, (and as I said, this applies to yours also), is in the condition at present in many of our larger cities of having certain amounts of money invested in the business, for which there seems to be no real property in existence. I mean no tangible property, physical property, something you can go out and find, but the fact remains that much more value exists than is represented by the physical property found,—it is the difference between what you can see and the value of the company, which difference is sometimes termed intangible value,—it may have been spent on tracks, cars, etc., which have worn out, and which have become obsolete,—it may be partly due to the fact that the capitalization is often over and above what the property ever was worth. Consequently when you speak of intangible value, it is necessary to define exactly what you mean. In a good many cases companies have banked too heavily on the expected future profits of horse car lines after being electrified. They figured that the receipts in the future would be about what they proved to be but they had not correctly estimated the increase in the operating expenses as they failed to include a proper amount for maintenance and depreciation or the depreciation proved to be greater than the owners at that time believed. It would be, consequently the net profits of the business have not been as great as the operators or proprietors then believed they would be. The increased gross receipts have almost invariably been realized, these increased gross receipts being due to the electrification of the properties, to the increased population, and also the increased riding habit of the people. For the past eleven years I have been engaged in endeavoring to get the railway and the municipalities together upon some reasonable basis of compromise so as to eliminate on some fair basis the "intangible value" above referred to, no matter how it happened to accrue. Those

that were in the electrical business years ago (and I was one of them), as well as city officials and citizens of municipalities are just as guilty for creating this situation as the railway companies themselves, because they caused franchises to be granted on very easy terms, and acquiesced in expecting that the net profits would be extensive. They permitted the issuance of securities to cover not only franchise values but often far in excess of the value of the properties and allowed these securities to be sold to the public; therefore many of us should not now too severely criticise these companies for we are partially guilty.

I am making no local application; but when you are trying to get a basis of relieving the situation, you must take into consideration the fact that you yourself are, or at any rate I myself am, partly guilty, because I was in those days engaged as an engineer in examining and building properties. The gross receipts came along all right, but none of us understood depreciation, and consequently none of us then prepared to take care of that depreciation. We ran along a number of years, allowing the properties to run down, and did not set aside a fund with which to renew them. Consequently many companies find that they have depleted properties today, and no cash with which to renew them, insufficient capitalization to pay for the renewals, and a state of public sentiment that does not allow of its increase. The result is that a number of traction companies are practically in a state of bankruptcy if required to give adequate service. That, however, is not the situation in Toronto exactly. It is for the purpose of relieving such situations as I have described that for eleven years I have been trying to work out some medium or fair ground upon which the municipalities and the companies could meet.

I want to be quite clearly understood; I have no prepared scheme of settlement to advocate here, I am not here to advocate the purchase of the Toronto Railway Company, or any other scheme, I am here simply to explain things that may not be understood in my reports. I am just as open to new suggestions as any other man. I have not made up my mind. With respect to the purchase of the Toronto Railway Company when his Worship the Mayor asked me if I recommended it, I replied that when I took into consideration the probable earnings, the present situation, the urgent necessity for some sort of a clean up, I thought, looking at it from the most pessimistic standpoint of the public, that the difference between the present actual value and the price asked for the property was not sufficiently great to warrant not

making the arrangement, provided certain contingencies were completely cleared up, so that the city could acquire a clear right of way, both physical and legal. (Applause.)

I have just been shown this morning the plan submitted by the Harbour Commission. I could not go into it thoroughly enough to formulate a definite opinion; I may say, however, that it appears to have some very excellent points. I believe that it should be thoroughly considered before taking action, (hear, hear)—how meritorious it is I am not prepared just now to say. It is possible that a co-ordination of that scheme with the present plan may work out something to suit all in the long run. (Applause.)

Your Honorary Secretary, Mr. Wilson, was kind enough to write me a letter, which reached me just as I was starting for the train, containing five questions, suggesting that if I spoke to these five questions, I would probably satisfy you to-day, so that I will confine myself as closely as I can to them.

The first question is,—

“On what do you base your estimate of the population in 1921. Please explain how you arrived at that figure, 705,000?”

Now in general I want to say that I have had quite an extensive experience in determining the probable future population of various cities. In 1902 the duty was placed upon me of making an exhaustive study of the traction situation in Chicago. I did the best I could with respect to this situation and wrote a book of 250 pages, analyzing many things, among others the probable future population of Chicago for fifty years in the future from that date. I want to say, that while the city had increased from 1837, the date of its incorporation, to 1902 at a rate averaging 8 per cent. per annum, my estimate for the future growth was somewhat lower than that. Since that date for a period of 11 years, the population increase has followed the curve based upon my estimates so closely that no material difference is discernible when based upon the Federal Census, and I estimated the gross receipts of the street railway company also so closely that the same has been the result. In like manner I have estimated the population and future earnings of several other cities, and the increases in population and receipts have followed my predictions with sufficient accuracy to warrant me in saying that I believe I exercised reasonably sound judgment. That may appear a little conceited, but it perhaps justifies my own belief in my reasoning for Toronto especially when my estimates

are substantiated by two or three other men, whose judgment is admittedly sound, and I believe that my reports should receive at least careful consideration before being turned down.

In Toronto I estimated the future increase in population and consequently the gross receipts of the street railway property, if owned by the city or by the company, in either case somewhat higher than I would in the case of other cities. If I recollect correctly, the population increase was estimated at 6 per cent. per annum, and the gross receipts of the street railway company were estimated to increase at the rate of 11 per cent. per annum. On that point I want to say that in the general analysis of the increase in population of probably twenty cities of the United States with which I have had to do (possibly not quite twenty but quite a number), analysis of the gross receipts of these companies shows that the increase of the street railway receipts is about as the square of the population, that is, if the population doubles, the traction gross receipts will quadruple. I have estimated your gross receipts in Toronto on a slightly lower basis than that.

Recently I made an analysis of the steam railway terminals at Chicago, where there are twenty-five railroads entering. It was necessary to estimate the future passenger growth of the city. I found that the increase of train movement and consequently the necessity for the increase of passenger terminal facilities would be practically the same as in the street railway business, i.e., as the square; and that the increase in passengers carried would be as the cube of the population increase. That is, while there would be four times the number of passenger trains when the population doubled, there would be eight times the people carried. This statement is merely an incidental thing so far as the Toronto situation is concerned but is based upon train capacity and passenger carrying capacity of principal cities in all the states of the United States, and then narrowed down to the Northern and Central States around Chicago.

Now the reason I think Toronto is going to go ahead is this,—and it is also the reason why you should not base the estimated increase in population of Toronto upon the increase in certain other cities of like population in the United States, i.e., with respect to their increase in population during the last ten or fifteen years; the reason is this: you have a great empire here before you; you are increasing at a very rapid rate, therefore you should compare yourself not with the United States as it exists to-day, with a population of ap-

proximately one hundred million, but with the United States of fifty years ago with a population of fifty million.\*

Now then, I think you will find my estimate for the growth of the population of Toronto very conservative, and I will give you a few figures to substantiate that reason.

In Philadelphia, from 1800 to 1900, the average increase was 3.2 per cent. per year; in New York, within the same period, 3.9 per cent.; in Chicago, from 1837 to 1892, the rate was 8.6 per cent.; from 1892 to 1902, 4.9 per cent. Now, considering the growth of the above three cities, when they were approximately the same size as Toronto now is, the following are found to be the facts. New York grew at an average annual rate of 6 per cent. between the time when it had 400,000 and when it had 700,000 population, that is, approximately the basis on which I have estimated the growth

\*The following statistics which were not used by Mr. Arnold when speaking are here given in order to amplify this statement.

The density of the population of Canada is very small in comparison with that of the United States and the population of the country as a whole is increasing at a very much more rapid rate. The population of Canada in 1911 was approximately eight million, while the total population of the continental United States is nearing the one hundred million mark. The density of population in the United States for the year 1910, was 30.9 per square mile, whereas in the same area in 1860 the density was 10.6 per square mile; in Canada the density of population for all the provinces in the year 1911, was 1.93 per square mile and that of the province of Ontario was 9.67 per square mile. In other words, the density of population in Ontario at the present time is approximately that of the United States in 1860.

A proper test, therefore, of the reasonableness of the rate of growth taken for Toronto during the next eight years as compared with the growth of American cities of approximately the same population requires a reference not to the rate of growth of American cities of the present day, but to the rate of growth of American cities of the United States, of fifty years ago, when the States were at substantially the same stage of development as Canada now is.

The development of the arts since that time, however, particularly those of transportation and inter-communication of different kinds tend to bring about a more rapid increase of what are at this time sparsely settled districts than was the case fifty years ago. The economic attraction of large cities like Philadelphia, Chicago and New York, with populations running from one and one half million to nearly five million interferes with the rate of growth of smaller cities; a condition to which there is no parallel in Canada so far as the magnitude of the city is concerned, for the reason that the city of Toronto, the largest English speaking city in Canada, has a population to-day of less than one half million, but if such a parallel should exist in Canada the city of Toronto would be benefited by it (if such is not already the case) for according to the 1911 Canadian Census the increase in population of all cities of the province of Ontario of over 1,000 population during the decade 1901 to 1911 was 41.93% whereas the increase in population of Toronto according to the same census is found to be approximately 82%.

of Toronto during the next eight years. Philadelphia grew at the rate of 16 per cent. between the time when its population was 200,000 and when it was 700,000. With respect to Chicago, between 1870 and 1880 the population increased 69 per cent. or an average of 6.9 per cent. per year. From 1880 to 1890, when the numerical increase was from 500,000 to 1,000,000, the increase was 218 per cent. or 21.8 per cent. per year. So when I say Toronto is likely to increase at the rate of 6 per cent. per year, I don't think I am very much over-estimating the future of this city. (Applause.)

One other point which bears upon this subject is that the movement towards the cities at the present time is much greater and much more rapid now than in the period for which the statistics I have quoted apply.

The United States census bulletin for 1910 shows that of fifty cities with a population of more than 100,000 thirty-four show a greater absolute increase in population in the decade 1900 to 1910 than in the preceding decade, and twenty-five show also a greater percentage of increase.

Now, take the increase in the cities of the United States, during the last decade Detroit increased 69 per cent., Los Angeles increased 211 per cent., Seattle 194 per cent., Portland 129 per cent., Kansas City 52 per cent. Taking all these things into consideration, and having in mind the great country filling up behind you, I think that my figures are reasonably conservative as to your future population.

With these figures I think I can leave this subject for it seems to me that I am safe in my prediction for Toronto's growth.

My assistant calls my attention to my report on page 38, where I show my estimate of the population of the city of Toronto, both in a table and by a curve, which indicates that during the last five years the average growth of Toronto has been 8.88 per cent. while during the preceding decade it had been 7.55 per cent. per annum. During the last five years, however, you have materially increased the area of the city by annexing outlying districts, in which districts there was considerable population. However, by assuming that all the population has been accumulated in the last twenty years, and that in 1891 the population of the outlying districts was practically negligible, the average increase has been 4.35 per cent. without this additional growth.

Bearing on that point, and assuming that I have been conservative in my estimate of the increase in population, I want to go back to the increase in earnings. As I said a while ago,

while this estimate of growth applies in general, it may not apply in every case because of local circumstances. But these would likely make an increase, rather than decrease, in the city of Toronto. With the vast water powers that exist near here, and consequently cheap power, having in mind the splendid location of this city, its tremendous harbour development, and the settling up of the western country, also the fact that its industries are only beginning to be established, everything would appear to be in your favor for the continuation of the rapid growth of Toronto.

But there is one further point: the increase in gross receipts and consequently in rides per capita does not alone depend upon the increase in population, but comes partly from the increased riding habit of the people. As cities increase, the riding habit of the people increases, so that as your communities grow up, you have a little community here and another here, another one over there; the actual exchange of business between these communities grows, so that the riding habit increases in greater proportion than the population. That is what makes what is known as the "law of the squares" hold with respect to traction earnings. In other words, if the population doubles, and the riding habit doubles, necessarily the gross receipts are four times as many. The increase in the gross receipts of the Toronto Railway Company has been remarkably constant, for the said increase has not been less than 11 per cent. per annum during the past fifteen years with two exceptions,—during the years 1907 and 1908, the years when our cities were affected by a panic, and in which years the increase over the previous year was in excess of 10-12 per cent. In other words, in the past seventeen years, the receipts of the Toronto Railway Company have increased 11 per cent. per annum in fifteen of them, and it should be further stated that the increase in the gross earnings was 11 per cent. in one year when the increase in population of the city during the same year was but 3 per cent. So when I say I think that the gross earnings of the Toronto Railway Company, which have been increased approximately 11 per cent. per annum for the past seventeen years, will continue to increase at that rate for the next seven and one-half years, especially when the entire mileage of the system is more than doubled, I think I am still conservative. (Applause.)

Referring now to the increase in traction earnings in other cities, particularly as to the increase in per capita earnings, the following statistics are given:

Take San Francisco: in 1900 it had a population of 342,700, and the receipts per capita were \$13.67; in 1912 with a population of 431,738 the receipts per capita were \$18.93; that is, with an increase in population of less than 100,000 or approximately 26 per cent., the receipts per capita have increased from \$13.67 to \$18.93 or 39 per cent. In Kansas City in 1897 the population was 197,516, the population in 1912 was approximately 353,820; the per capita earnings were \$9.02, in 1897, and in 1912 they were approximately \$16.50. In Chicago, when my report was made in 1902, the receipts per capita, were about \$10; to-day they are \$17.44. In Buffalo in 1900 the population was 352,387, the receipts per capita were \$7.84; in 1912 with a population of 437,981, the per capita receipts were \$14.23, that is, with an increase in population of less than 100,000 or approximately 24 per cent., the per capita receipts have increased approximately 82 per cent. In St. Louis in 1900, with a population of approximately 500,000, the per capita receipts were \$7.77; in 1912 with a population of 709,387, an increase of 209,000 or 41 per cent. the receipts were \$17.27 per capita, an increase of \$9.50 or 122 per cent. In Boston, with a population of 560,000 in 1900, the receipts per capita were \$18.20; in 1912 with a population of approximately 700,000, an increase of approximately 140,000 or 25 per cent., the receipts per capita were found to be \$23.60, an increase of \$5.40 or 30 per cent. In Toronto the population in 1900 was 205,887, and the receipts per capita were \$7.71; the population in 1913 is estimated at 442,550, an increase of 237,000 or 115 per cent. and the receipts per capita are now approximately \$13.66, an increase of \$5.95 or 77 per cent. This is exclusive of the receipts of the Radial lines inside the city limits and of the Civic lines, which receipts when added to the gross earnings of the Toronto Railway Company will be found to give an earnings of approximately \$14 per capita in Toronto at this time. This matter of per capita receipts is the substance of the second question. I hope that I have fully explained.

The third question regards extension to the system. "Your report covers this point to a considerable extent, but it does not seem to have been grasped by the public. Will you, therefore, let us know what provision you have made for the extension of the system, and how it is to be financed."

In my report of this year we made provision in estimated future receipts for the extension of the traction system from 147 miles, the present length, including the Radials inside the city limits, and the Civic lines, to 283 miles in 1921,

necessitating an increase in capitalization or the investment of approximately \$14,000,000 in new money. The exact locations of those lines which I thought should be built up to and including 1918 are all given in my report of 1912, together with specific reasons for them. I hope that answers the questions as to what provision is made for extensions.

I have gone into this in the valuation report although not to the same extent. I have made provisions for extensions throughout the period we are analyzing, not only for the surface lines, but on the assumption that the present owners ought to give the service I thought the population should have. (Applause.) Also in my report of 1912 I went into considerable detail as to a competitive system involving a line on Yonge street, including the civic system, on a plan showing how you could construct a system independent of the Toronto Railway Company in case you could not get together with that company.

As to how the new money necessary to build the extensions, or \$14,000,000 is to be financed, I did not make any attempt to tell the city how to finance its own affairs. I was not asked to tell the city anything as to its policy in handling this phase of the street railway situation. I simply estimated what amount would be necessary, where it should be spent, and about what year each line should be built, but did not attempt to tell you how to raise the money.

If I had been asked as to how to finance the extensions, I would probably have said that you would have to issue securities upon the property, if the laws allow you, or some sort of city bond or debentures at a low rate of interest, so as to enable you to build this property for less cost than it would take under a private corporation, because presumably you can borrow money at a lower rate of interest than a private corporation could (hear, hear); that is probably what I would have said had I been asked at the time. I do not think I am called upon nor should I attempt to tell you how to finance your own affairs. If you acquire the traction property, you will be able to work it, but you will have to worry out as to how to finance and build the city lines.

Coming back to the receipts per capita, my attention has just now been called to statistics from seventeen cities as given in the *Electric Railway Journal* of October 25, 1913, with their street railway receipts per capita per annum.

They are given as follows:—

Boston (Boston Elevated) .....	\$23.73
Winnipeg .....	21.51

San Francisco (United Railroads) .....	\$20.32
Detroit (Detroit United Railway) (estimated) ..	19.49
Los Angeles (Los Angeles Railway) .....	19.44
Mexico City (1911) .....	18.73
Omaha and Council Bluffs .....	18.55
St. Louis .....	17.82
Chicago (combined companies) .....	17.44
New York City (combined companies) .....	17.39
Denver .....	16.03
Minneapolis and St. Paul .....	15.59
Baltimore (United Railway and Electric) .....	15.35
Pittsburgh (Pittsburgh Railways) (estimated)....	15.24
Brooklyn (Brooklyn Rapid Transit, Coney Island & Brooklyn) .....	15.07
Memphis .....	14.77
Toronto .....	14.72

The receipts, you will note, run from \$23.73 down to \$14.72, the average being \$17.71 per capita for the seventeen cities.\*

\* Regarding these figures Mr. Arnold, in a speech to the Members of the Board of Trade later in the day, said:

"It should be stated with respect to these figures that most of the reports from which the statistics are compiled, are for the calendar year 1912, but a number of companies reported for the fiscal year June 30, 1912, whereas the population figures by which the gross receipts were divided in order to obtain the receipts per capita above given are those of the 1910 or 1911 census. This fact would tend to reduce the figures from five to ten per cent. The figures may contain other minor errors as the statistics were only called to my attention this morning and I have not had time to verify them."

*Subsequent Note:* After Mr. Arnold had had time to make a closer analysis of these data it developed that the per capita receipts for the city of Winnipeg, as given, include not only Street Railway fares but also revenue from Electric Light and Power, and that this complication also applies to some of the other cities listed; further, that in a number of cases, notably Boston, the population of the city proper has been taken rather than that of the Metropolitan District served by these companies. Obviously the latter is the correct basis for such comparisons. In the following table some of these have been re-computed:

#### EARNINGS PER CAPITA AMERICAN STREET RAILWAY SYSTEMS.

Based on Metropolitan Districts Served and 1910 Population and Earnings.

	Year ending.	Authority.	
San Francisco:			
U.R.R. ....	12-31-10	(Arnold Report)	\$18.85
All Companies.....	1911		20.00
Omaha.....	12-31-10	(McGraw)	17.21
Greater New York:			
Excl. Hudson and Manhattan	6-30-11	(P. S. Comm. 1st District Report)	16.98

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Now, as to the question of franchises, the question asked is, "Is the agreement which you have seen a real clean-up of all of the franchises or are the radials to continue to have rights of any kind within the present city or future extensions of the city resulting from increase of population and annexation. In other words, what will be the position of the radials under the agreement with Mackenzie and Mann?"

When Mr. Moyes and I were called upon to value the property of the Toronto Railway Company, we did so to the best of our ability. In our report we placed the value of the physical property at approximately \$10,000,000, and what we called the intangible assets at approximately \$12,000,000. That was the valuation which I desire to go into a little later on. Accompanying this valuation we wrote a letter to his Worship the Mayor, which we shaped up just as a sort of general guide, stating that there were several weaknesses in the tentative agreement which would have to be cleared up, as we pointed out in detail in the letter which we laid before him. It was our duty as experts, if we found anything in the tentative draft of the agreement between the Mayor and Sir William Mackenzie or in the whole proposition that was not clear, or did not seem right to us, that we should point it

	Year Ending.	Authority.	
St. Louis.....	12-31-10	(McGraw)	\$16.86
Denver .....	12-31-10	(McGraw)	16.84
Kansas City.....	1912	(Arnold Report)	16.53
Chicago.....	12-31-10	(Board Sup. Engrs.)	16.36
Los Angeles:			
(Excl. Pac. El. Ry.).....	1912	(Pub. Service Comm.)	16.20
Minneapolis-St. Paul.....	12-31-10	(McGraw)	14.30
Cincinnati*.....	6-30-11	(McGraw)	14.13
Memphis*.....	12-31-10	(McGraw)	13.75
Oakland:			
(Excl. Key Route and Pacific Local) .....	12-31-10	(McGraw)	13.55
Brooklyn-Queens .....	6-30-10	(McGraw)	13.09
Philadelphia.....	12-31-10	(Transit Report)	13.03
Boston (Metropolitan).....	12-31-10	(B. T. Comm. Report)	12.91
Pittsburg (District).....	12-31-10	(Arnold Report)	10.00
Cleveland*.....	12-31-10	(McGraw)	10.92
Average, 15 cities.....			\$14.55

NOTE.—Based on Gross Income.

From the above it appears that the average receipts per capita for the districts listed is considerably lower than for the cities proper, but that in general the newer metropolitan centres show the highest riding habit, especially the Western cities. Toronto appears to advantage in comparison with Brooklyn, Philadelphia and Boston, although below San Francisco, Omaha and Kansas City.

\* Not entirely authoritative, insufficient data.

out, and as his Worship the Mayor said, he would expect to have it pointed out. In our letter of September 20, 1913, we pointed out certain things we thought should be agreed upon and reduced to absolute language before any agreement was entered into. These points, as I understand, were placed before Sir William Mackenzie by his Worship the Mayor, and may be put in a few words as follows: That the absolute possession and right to all existing lines in the present city limits, both local street railway lines and radial lines, together with all franchises which they might carry with them, would become absolutely the property of the city of Toronto with no strings to them. (Hear, hear.) I am sure the language is strict, if not, it must be made so. If it did not mean that, I do not know how to use the English language. I am very certain that, if the arrangement should be made, his Worship the Mayor, and the attorneys of the city, would see that the language is sufficiently strict to be sure that the city acquired these rights with no strings on them. Mr. Moyes and I saw that, unless that point was to be guarded, a question might be left, so that the radials would have the right to run into the heart of the city over the city tracks and the city would be powerless to prevent them, and, therefore, would not get all the receipts it should, and it would not be the clean-up which I understand is the fundamental question here. (Hear, hear.) Our language is this: "The position taken in this report is that, if the Railway Company is paid an amount of money not less than the value of its property and intangible assets, in return the Railway Company shall turn over the property in its entirety, including all physical and intangible assets, granted to or possessed or held by or used in the prosecution of the street railway business, and all similar assets as may be the property of the radial lines used in operating under the light, heat, and power franchises." That is our language. I think it is broad enough to cover the point. We concluded by saying, "We earnestly advise you that these conditions be carefully considered."

The object was to place the city in such a position that the radials and any other company now operating railways in the city of Toronto would have no rights whatever; therefore in coming into the city they would have to take the matter up *de novo* with the city and negotiate the terms for coming into the city, and these terms should be absolutely just to the railways and to the city. (Hear, hear.)

As to the question of intangible values. Perhaps I used an unfortunate term when I said I would place the "intangible

value" at \$12,000,000. The term means many things; in Toronto we figured it to be simply the amount of money the Toronto Railway Company would make between now and 1921, if it continue to operate as it now operates. (Laughter.) Consequently also the value which we estimated in our recent figures is what we believe the city of Toronto, if it acquires the property and operates the property as efficiently as the present Toronto Street Railway is operating it (laughter), will make out of the same property during the same period.

Now, as to whether the city will operate it as efficiently, that question is entirely in your hands. I understand that if the property is acquired it is to be placed under a Commission, which will endeavor to operate it as efficiently as it is being now operated, in which case the figures I have given will, I think, absolutely hold because I have tried to present figures of results that ought to be realized.

"Intangible value" in the Toronto case means simply "swapping dollars" as one of your bright newspaper men made me say in an interview. In other words, you are paying the Railway Company for the dollars it will make during the remaining life of its franchise, as you are assuming you will be able to make the same number of dollars.

I want to tell you that street railways operated under proper commissions do make money. I do not want to blow my own horn too much, but we have had a similar commission in Chicago for the past seven years, of which it has been my good fortune to be chairman. It is absolutely non-political. I know the politics of but few of the board force of ninety or one hundred men. The properties so managed are operated under an agreement or franchise with the city, which provides that after 8 per cent. of the gross receipts have been set aside for depreciation, and not less than 6 per cent. have been spent on maintenance, and after an accident fund and operating expenses have likewise been paid, the companies shall receive 5 per cent. on their actual investment. The rest is divided into two parts, 55 per cent. of the remaining net profits going to the city, and 45 per cent. to the companies. As a result of this arrangement, the companies have made 7 per cent. on their capital; the city has had \$14,500,000 in cold cash paid into its treasury in seven years. (Applause.) A commission can run a railway.

My assistant asks me to call your attention to this fact,—that our present board is composed of three men, one appointed by the city, one by the companies, and the third a dis-

interested party, absolutely independent. The city and the companies have delegated broad authority to the board. We do not entirely manage the operation of the properties, but we have supervision over them, and we have the final say so on every question. So far as the supervision of investment, auditing of accounts and construction matters go, we are absolutely in control. Under that arrangement we have spent \$84,000,000 in seven years; we have put \$14,500,000 into the city treasury, and the companies have made 7 per cent. profit. I think that shows fairly satisfactory management. (Applause.)

The last question is that of tubes.

"Will you discuss the practicability of tubes in Toronto?" We believe you are especially qualified to discuss this question, and in view of the proposal which was submitted to the City Hall to-day by the Harbour Commissioners, do you think that the combination of a tube and surface lines proposed by them will be an adequate solution of the transportation problem?"

I can say offhand that I do not think the proposition as submitted by the Harbour Commission will be an adequate solution. I do think it is a very valuable suggestion. (Hear! hear!) It could be co-ordinated with the existing lines, and when that plan is analyzed thoroughly by competent authority, and you have had a chance to thoroughly digest the question, you will then have formulated, in my judgment, a system for the city of Toronto such as I think it ought to have, and one which I think you can support. I thank you. (Prolonged applause.)

At this point, as the hour of 2 o'clock had been reached, an opportunity was given for any who had engagements to withdraw, and after a few had done so, the opportunity was given of asking Mr. Arnold questions, which, with his replies, follow.

Mr. N. Ferrar Davidson, K.C.: "May we ask Mr. Arnold whether he was advised, as a matter of law, that the Toronto Railway Company would be entitled to the same sort of valuation at the expiration of the company's franchise as he is making now? I ask this, because there is a very wide impression among the people of Toronto that the Toronto Railway Company would be only paid on a scrap iron basis."

Mr. Arnold: "As I understand the franchise, the Railway Company would have to accept the valuation of its physical property then in existence, not necessarily as scrap iron, but valued as physical property then in existence. That would

not include any of these intangible values of \$12,000,000, for they would have earned them; but it would include whatever physical property it would have then."

Mr. W. F. Maclean, M.P.: "What it would cost to reproduce the property in its then state."

Mr. Arnold: "Exactly."

Mr. T. Stewart Lyon: "You said in the table you gave of seventeen cities in the United States, that the gross earnings per capita ranged from \$14.70 to \$23; were these cities on all fours with the city of Toronto, or were they what we know as nickel-fare cities? It seems to me that the estimate of the gross earnings should be given of cities with 3 1-8 and 4 1-6 cent fares, and not those with 5 cent fares. I know that Chicago, Boston, Buffalo, and one or two others are nickel cities. How many cities have fares approximately the same as in Toronto?"

Mr. Arnold: "It does not make much difference so long as Toronto is earning a higher rate. In other words, the riding habit of the people increases as the rate of fare decreases, so that the receipts per capita, or rather the gross receipts, are not so changed as it might seem. The rate of increase will be the same as in other cities."

Mr. Lyon: "Would it not be true that in Toronto, with a 3 1/8 cent fare, we would have to greatly increase the riding habits of the people to produce anything like as much as the nickel fare in these other cities?"

Mr. Arnold: "You can't say yes or no to that question. It depends upon the local situation. I am assuming that the fare would not be reduced below what it now is."

"Would that be true if you increase your system so as to give the people the service the city should have?"

"That would increase the riding habit, I think, so as to make up in value."

Dr. Thos. R. Millman: "What is your opinion as to municipal ownership of properties such as street railways, where they are managed by the municipality, managing them by a changing class every year, such as a Mayor, Controllers or Aldermen? If after your statement made about Chicago, have you a Commission that is entirely independent of the Mayor and Aldermen so that they can't interfere with you?"

Mr. Arnold: "I will answer the last question first. Our Commission in Chicago is absolutely independent of any city official or other political official of any kind. I mean that so far as the balance of power is concerned, we are independent. The city representative on the Commission is subject

to the Mayor and Council; he is appointed by the Mayor and approved by the City Council. The railway company's representative is appointed by and removable by the company. But the third man, the Chairman, was elected at the time the ordinance creating the Commission was passed; his name is written in the ordinance; he therefore holds office for twenty years, unless he gets crooked or does something else for which he should be removed. I have been busy at times keeping the board non-political, but we are purely a technical board, comprised of men who especially understand the business. When you get a Commission like that and allow it to do as it wants to do, you get results, because we think we have got them in Chicago. Usually a new administration attempts to antagonize the board, thinking probably it is very similar to other bodies created by law which are political. We usually have two years of trouble with a new administration; they think we should be amenable—when they are reasonable, we are amenable, but when they are not, we are not. (Laughter.) We have trouble like that for the first one or two years; then they realize that we are trying to do our duty, and they turn around and are our friends for the rest of their term. As indicative of the present feeling I might state that the council passed two weeks ago a merger ordinance, which put all the street railways under one management, under one head, by a vote of 57 to 7 in that council. Under that ordinance greater powers are given to this board."

Mr. N. F. Davidson: "Have you made any deduction for paying for these physical assets now, instead of paying for them eight years hence? Ought there not to be a discount on the physical assets because you pay the money now, and allow for the profits during the eight years?"

Mr. Arnold: "That is what we do exactly."

Mr. W. H. Orr: "Our trouble is here: we have too much difficulty in getting home between 5 and 6 o'clock. You are well acquainted with the transportation here in this city; what would you suggest in the way of immediate relief, so that within six or twelve months all that difficulty may be remedied?"

Mr. Arnold: "I would make some extensions, according to my 1912 report, right away, as quick as you can, more cars and more tracks." (Applause.)

A written question: "When you speak of gross receipts from railway traffic in Chicago as being \$18 per capita, does this include local steam railway traffic?"

Mr. Arnold: "It does not include steam railway traffic, simply surface and elevated, proper intramural traffic. It has no reference to steam or suburban railways."

Another written question: "When Mr. Arnold said the railway should be operated as efficiently as it is by the company, does this mean operated with the higher standard contemplated under civic control, or merely under the profit-producing system now in force?" (Laughter and applause.)

Mr. Arnold: "I think that was Mr. Fleming's question. (Laughter.) Our figures are based upon a proper service to the people. (Hear! hear!) An adequate system, adequate tracks, and adequate service. Now, as to how profitable it would be is for you to say. (Laughter.) Mr. Fleming is a good railway manager, I'll tell you that. (Applause.)

A voice: "He'll come, too."

Mr. Arnold: "Our scheme, as I have laid it down, is based on service first, profit second, and a proper operating ratio to get that. At the same time, so far as profit to the company or the city is concerned, I have not assumed that you are going to squeeze any company until you strangle it, or yourselves until you die." (Hear! hear!)

Another question: "Do you consider that 70 per cent. of the gross earnings provides a comfortable, convenient service in American cities, such as Toronto?"

Mr. Arnold: "I will read from the memorandum I recently sent to Mr. John McKay.

"I think it appears in his interim report; I am betraying no confidence, therefore, but I am perfectly willing to have anything I have written to him or any other man on earth made public.

"On Table II. there is given the operating cost in cents per car mile. The figures on this table have been obtained by dividing the various gross amounts shown on Table I. by the number of car miles operated by the traction systems in question during the year in which the given receipts or expenses were realized or incurred. From this table it will be noted that the gross receipts per mile in Toronto are comparable with cities having a five cent fare, rather than those in which a reduced fare is now prevailing, i.e., Cleveland. It will be noted from this table that the decreased cost of operation of the Toronto Railway Company is due primarily, in fact, almost entirely, to those items of expense which are fixed by franchise conditions, rather than by those dependent upon the efficiency of the management. The items to which this observation is applicable are those of Maintenance of

Roadway and Structures, and taxes. The Maintenance of Roadway is considerably less, as will be noted from Table II. in the case of the Toronto Railway Company, because of the fact that the track substructure and paving surface is installed and maintained by the city of Toronto. This constitutes the largest item of expense in the maintenance of the roadway of a traction company. Just what saving it means in the operation of the property is well shown by Table II., for it will be noted that the average cost of maintenance on all of the systems shown in this table is 4.15 cents per car mile, whereas the cost in Toronto is 2.92 cents per car mile, or a saving of 1.23 cents by 18,543,297 car miles, or approximately \$236,000 per year. That the saving in maintenance by the Toronto Railway Company is due to this provision is further brought out by the fact, as will be noted from Table II., that the Toronto Railway Company expends more per car mile on the maintenance of its car equipment than any of the other companies therein shown. The other large savings in the cost of operating the Toronto Railway due to ordinance provisions is that in the payment of taxes, for as will be noted from Table II. the payments of the Toronto Railway Company equal .31 cents per car mile, whereas the payment of the other companies herein given vary from 1.17 to 1.62 cents per car mile, the average for the four companies being 1.35 cents. Since the average payment of all the companies whose statistics therein given is 1.35 cents, and the Toronto Railway Company expends but .31 cents for taxes, its operating expense is therefore reduced 1.04 cents per car mile due to certain conditions of the particular franchise under which it operates, which reduction when taken with the reduction because of other franchise conditions affecting the expense of maintenance (or 1.23 cents) gives a total reduction of 2.27 cents per car mile. This additional charge would give a corrected operating ratio for the Toronto Railway Company comparable with all companies operating in the States under similar conditions of 61.8 per cent., or approximately the same operating ratio (as will be noted from Table I.) as exists in Kansas City, Pittsburgh and Buffalo.

"In other words, if you put 70 per cent. of the gross receipts into the operation of a street railway such as you have in Toronto, including maintenance, depreciation, and taxes, that would give you, in my judgment, an adequate service. That exceeds the actual amount we put in in most of our cities. But that is the position I have always taken, that 70 per cent. should include all operating expenses, and that is all that

should be asked of a company in order to give adequate service. In Chicago we do not put so much, for the reason that we have not sufficient tracks. That is the reason why for sixty days I have been studying the subway problem, and also the question of additional railroad terminals."

Mr. J. E. Atkinson: "As to the 70 per cent., did you estimate that before you estimated the intangible assets?"

Mr. Arnold: "That was estimated before I ever heard of this situation. We assumed that the city of Toronto is now spending—we took the same ratio as now, 56 per cent.; but you are furnishing part of that now. You would have to furnish it then; you add what you are now furnishing to the 56, and that would bring it up to 69 per cent."

"As we understand it then, whereas, in cities in the United States, usually the operating expenses are about 66 per cent., you have estimated them here at 69 per cent.?"

"Yes, for the figures I have given you."

Mr. W. F. Maclean: "I think you said that in the division of profits, in Chicago, 45 per cent. went to the city and the balance to the company?"

Mr. Arnold: "It is the other way round, 45 per cent. to the company, 55 to the city."

"Then, if Chicago had public ownership, it would give you the whole 100 per cent.?"

"Yes, sir, it would." (Applause.)

Mr. Mark H. Irish: "Would you be willing to prepare, and I think probably in pamphlet form, to hand out for distribution to the people, a synopsis of the appointment and the powers of the Chicago Commission?"

Mr. Arnold: "I should be very glad to. I can send the Mayor the complete ordinance. Could I give it to you now briefly?"

Mr. J. E. Atkinson: "Could any commission, such as you have in Chicago, operate our railway?"

Mr. Arnold: "I am sure it could, but I want to say that there has been considerable pleasant criticism of our actions, and some unpleasant criticism of the salaries paid us, therefore I can't tell whether you would stand by such a commission or not."

Mr. W. D. Gregory: "As I understand, the tangible assets are the profits the company would make. Do you think it would be in the interests of the city to incorporate in the agreement the provision that we should run this railway by an expert board if we took it over, and that instead of paying that \$11,000,000 now, we pay them annually through that term the profits we make?" (Laughter.)

Mr. Arnold: "I am not sure that I understand the question. I might say I have heard of public ownership and private management, but I never heard of private ownership and public management exactly."

Mr. Gregory: "Let me make myself clear. Some of us are doubtful as to whether the population and the earnings of the railway will increase as we have heard. In order to take no chances, but to make sure of all the profits the railway could get, all the profits that an expert board would get out of the system, do you not think it would be in the interests of the city to make such an arrangement, to pay an annual sum equal to what the railway would get out of it?"

Mr. Arnold: "If you put them in charge of it, all right."

Mr. Gregory: "But if you put it under an expert board?"

Mr. Arnold: "No, it would not be fair, for this reason: all my figures are based upon the definite proposition or assumption that you take the railway as it is, that you put so much money year by year into operating it efficiently and properly. I do not think that any railway company should be asked to have no voice in the management of its property and take a chance with any other body managing the system."

Mr. Gregory: "Is it right for the city to take the chance?"

Mr. Arnold: "It is all right; if you want to take the proposition, then take it, but don't make it a jug-handled affair. If you are going to make the deal, face the proposition; if not, then say so." (Hear! hear!)

A question: "Why does Mr. Arnold use the term 'intangible assets' rather than good will or franchise?"

Mr. Arnold: "It has nothing at all to do with good will. I don't regard a street railway company as having any good will. (Laughter.) I want to answer the question fairly,—I did not mean to be witty. I don't regard a railway company which has been granted a public right to operate in the streets has any good will except what the public gave it. But it does have a legal right to operate on those streets so long as its franchise permits, to its certain earning power. It is that legal right that gives it the chance to earn what I will call intangible assets.

"Our Chicago franchise has been practically adopted by Kansas City, where I have also been adviser for the Federal Court now in charge of the property, having prepared a valuation of the property and outlined a policy to lay before the people. We used such means as have occurred to me and others to make the ordinance an improvement on the Chicago ordinance, and it looks probable and likely that the ordinance

will be adopted. I gave a valuation of \$35,000,000 on the property. It was a large property to value, but the newspapers and others, including the Mayor, thought that there was not more than \$14,000,000 worth. The sum determined by me was considered honestly arrived at; they did not want to say that any dollar honestly invested should be lost, and at the same time said that, if shown that the value was there, they would recognize it. Well, they have recognized my valuation, for they have practically found vouchers for every dollar expended. They were surprised; they thought it could not be so high but the proof was there. The settlement, however, was finally based upon an allowed capitalization of \$30,000,000 at 6 per cent., instead of \$35,000,000 at 5 per cent., which amounts to the same net return to the company. They have a Board of Control there similar to the Chicago Board of Control, with a city representative, appointed by the city, and a company representative, appointed by the companies, while the third man, when needed, is to be selected by the State Public Utilities Commission.

"In conclusion I want to say that they were appreciative enough to choose my friend here (Mr. Philip J. Kealy) as one of the board. (Applause.)

"Now, gentlemen, I came unprepared, but I have endeavored to answer your questions, and I thank you for your attention." (Applause.)