

THE INDUSTRIAL COMMISSION ON TRANSPORTATION.

WITH the endless making of books it is possible that the authority of the printed page has so far suffered diminution that the individual author who chooses to trifle with his reputation can do so without any very reprehensible violation of obligations voluntarily assumed. But however slight may have become the responsibility attaching to private authorship, reports prepared and published at the expense of the government of the United States still seem, to a vastly preponderating majority of citizens, to bear a federal certificate of accuracy. The nineteen volumes which report the labors of the Industrial Commission have been printed in a large edition¹ at public expense and widely distributed without cost to the recipients.

The concluding volume, which is mainly descriptive and a part of which is the subject of this paper, will be read during long winter evenings in thousands of farmhouses and in innumerable homes of mechanics and professional men. It will be quoted as an authority in the editorial columns of hundreds of newspapers of influential rank, by partisan speakers in many future campaigns, by public lecturers and in the discussions of countless agricultural and labor organizations. Teachers in universities, colleges and secondary schools will refer their students to its pages with suggested confidence in its reliability. Relatively few of its readers will have any adequate knowledge of the personnel of the commission, and to many of them the fame even of the experts in its employ will be but a vague and colorless impression. Few, however, will fail to have an exalted conception of the government of the United States, and far

¹ 10,682 full sets have already been ordered and many of them distributed. A resolution is now pending in the Senate which, if adopted, will provide for another edition of 15,000 full sets and for 30,000 additional copies of vols. xvii and xix.

too unanimously they will have unquestioning faith in the substantial inerrancy of whatever may emanate from its bureaus of investigation and publication.

The final report on transportation¹ is a document of 226 pages, of which the last four consist of recommendations for legislative action. The student would naturally expect to find in its pages a concise and logically arranged summary of the salient facts established by the testimony on the topic which was taken by the commission² during its life of more than three years, this summary constituting at least a formal basis for the recommendations with which it closes. As a matter of fact, the recommendations appear not to have been written by the author of the rest of the report, and the latter has no definite or distinguishable connection with the evidence in the earlier volumes. It seems scarcely possible that the author of the recommendations ever carefully read the comprehensive review of the railway industry by which they are immediately preceded;³ and this review contains very few references to the testimony, while many of its statements are so erroneous that it seems certain that they must have been formulated in a spirit of entire independence of the declarations of competent witnesses. The absence of a logical nexus between the recommendations and the rest of the report is most evident in the treatment of the subject of railway agreements for the division of competitive traffic, commonly known as pooling contracts. Twenty pages of the review are devoted to the discussion of

¹ Report of the Industrial Commission, XIX, 259-484. Washington, Government Printing Office, 1902. Further references to this portion of vol. xix, in this paper, will give the page only. The review of the evidence is understood to have been drafted by Dr. W. Z. Ripley of Harvard University, who was employed as an expert in transportation by the commission, and to have been subsequently revised by the commission. The commission never announced the original authorship of the review, but Dr. E. Dana Durand, its secretary, did so in a footnote to an article in the *Quarterly Journal of Economics* for August, 1902, p. 572.

² This testimony occupies 1873 pages in vols. iv and ix of the report.

³ Dr. Durand states the case rather euphemistically as follows: "... the reader must often search with considerable care in the long reviews to find the arguments in behalf of the proposals; and his mind may be full of unanswered queries as to the actual application and working of the policies proposed." — *Quarterly Journal of Economics* (August, 1902), p. 574.

the nature and consequences of these arrangements, and the subject is frequently alluded to in other places. Yet no word among the recommendations indicates that there is an anti-pooling clause in the Interstate Commerce Law, or that the Anti-trust Law has been construed as applicable in a most drastic manner to railways, or that there is before the American people any such problem as whether railway corporations shall again be permitted freely to contract among themselves. There is no allusion in any recommendation to the restrictions imposed by these statutes, although the review of the railway industry clearly shows that they should be removed and that pooling under proper federal supervision should be permitted, and many witnesses, including at least one member of the Interstate Commerce Commission, testified before the commission that the restrictions in question are the principal present source of rate demoralization.¹ The absence of a recommendation concerning pooling is so certain to attract the attention of readers of the report, and it is so apparent in this and in other respects that its recommendations are not actually supported by the review of the industry, that most persons, even among those to whom the fact of its governmental origin seems a most unquestionable guarantee of reliability, will probably pay little heed to the specific legislative proposals with which the report concludes, but will seek to form their own opinions concerning the measures that are desirable from the body of the report. The general public will not have time to peruse the voluminous evidence and will place little reliance on the obviously unsupported recommendations, but will accept with little hesitation the statements of fact and the conclusions therefrom in the final review of the railway business.²

¹ Testimony of Hon. Martin A. Knapp, Report, IV, 138.

² In regard to the omission of a recommendation concerning pooling, Dr. Ripley said in an authorized interview which was published in the *Railway World* of March 8, 1902: "The failure to recommend specifically a repeal of the present prohibition of pooling contracts was as great a surprise to me as it must have been to the *Railway World*. In my judgment it was a decidedly unfortunate move on the part of the commission. It is absolutely out of harmony with the review of evidence presented in the final volume. I am unable, in fact, to account for the omission of such a recommendation respecting the repeal of Section 4. Up to

How then does that portion of the document which is probably to exercise a great influence upon popular opinion and

within a very few days of publication, such an item occupied a prominent part in the recommendations as drafted. For some unknown reason it was eliminated at the last moment, leaving the recommendations as they stand, with no mention whatever of pooling. No greater error could have been committed by the Commission." Being asked how he could account for the failure of the commission to recommend the repeal of the prohibitive clause, Dr. Ripley said: "I can account for it on no other ground than that it was in response to the unreasoning popular prejudice against so-called *combinations*, whatever form they may assume. The existence of this prejudice is certainly most unfortunate for the advancement of salutary railroad legislation in the United States." On the same subject Dr. Durand said, in the *Quarterly Journal of Economics* for August, 1902: "The first drafts for these reviews in the final report were prepared, for the most part, by expert agents of the commission The commissioners spent three or four months, however, in going through these reviews in detail and statements or arguments which did not commend themselves to the majority were modified, sometimes very radically . . . the signatures of the commissioners apply to the recommendations only and . . . no particular member is necessarily committed to the statements or reasoning in the reviews One result of the method of procedure described is that the recommendations . . . are not always consistent with the immediately preceding reviews The most conspicuous illustration of such discrepancy . . . is with regard to railway pooling. The discussion in the review drafted by Professor W. Z. Ripley had been considered with unusual thoroughness by the Commission in fairly well-attended sessions, but was finally left by them largely as submitted. It was a strong argument in behalf of permitting pools, subject to the supervision of the Interstate Commerce Commission as to rates. A brief paragraph to the same effect was contained in the original draft of the recommendations, but during the discussion later it was bodily omitted without any modification of the argument in the review. It is curious to note, as indicating the rather slipshod methods of such bodies in their deliberations, — for similar occurrences are not uncommon among Congressional committees, — that several of the members of the Commission who were present when the recommendations of transportation were being discussed, declared, after the publication of the report, that they had not been aware of the omission of the paragraph, and that they still believed a majority of the members favored pooling." The author of this paper is permitted to quote the following from a personal letter addressed to him on March 14, 1902, by Hon. J. L. Kennedy, one of the members of the commission: "I was not in favor of legalizing pooling. I believe that to recommend it would be a work of supererogation. To my mind the question of pooling is a vanishing one. It has been vanishing rapidly since the Supreme Court's decision under the Sherman law. That law has forced the condition legally which it was set up to make unlawful. Combination and merger are doing most effectively the work which makes so-called legalized pooling unnecessary. Many railroad men have admitted this to me. Believing it myself, and having that belief reinforced by expert opinion, I should consider myself weak indeed if I had accepted —'s opinion and indorsed it as a legislative recommendation to Congress."

perhaps upon legislation bear critical inspection? If the answer is dependent upon the accuracy of the statements of fact, it cannot be very favorable. A few only of the errors will be specified. The report states¹ that the average revenue per ton per mile of the Illinois Central Railroad during the fiscal year which ended with June 30, 1900, was 0.935 cent, and specifies in detail the average figures for wheat, flour, sugar cane, soft coal, stone and sand, furniture and merchandise. None of these figures is correct. The Illinois Central does not make public its average receipts from particular commodities, but its general average for the year named was 0.650 cent² per ton per mile, or 30.48 per cent less than the figure given in the report. It is not true that, as stated,³ the Erie Railroad is the only important one which, in being reorganized after the panic of 1893, escaped dismemberment. One scarcely needs to have been especially interested in the making of recent railway history to recall that the Baltimore and Ohio, the Norfolk and Western and the Southern Railway passed through the same process without reduction in mileage. The same paragraph asserts that the reorganization of the Union Pacific resulted in the loss of its control over the Oregon Short Line; but that is not the fact,⁴ as will quickly occur to any one who recalls that through its control of the latter the former was able to transfer to it a large portion of the financial burden entailed by the purchase of the stock of the Northern Pacific which preceded the speculative panic of May 9, 1901. The Pennsylvania Railroad does not operate the Western New York and Pennsylvania by virtue merely of "the control of a majority of its stock,"⁵ but under a lease executed after the purchase of substantially all the outstanding shares.⁶ The Allegheny Valley Railway, of

¹ P. 275. None of these averages is to be found in the testimony as applicable either to the Illinois Central or to any other railway.

² The Interstate Commerce Commission, Thirteenth Annual Report on the Statistics of Railways, pp. 386-387.

³ P. 305.

⁴ The Union Pacific owns about ninety-nine per cent of the capital stock of the Oregon Short Line. See Poor's Manual of Railways for 1901, p. 591.

⁵ P. 307.

⁶ On December 31, 1900, the Pennsylvania Railroad owned Western New York and Pennsylvania stock having a par value of \$19,402,686.50 out of a total issue

which the next sentence declares that the Pennsylvania secured control "two months later," was leased by the latter on July 14, 1900, for a period of twenty years, beginning with August 1 following; but it had long been controlled through ownership of its capital stock and had been for many years an integral part of the Pennsylvania system, although maintaining a separate operating organization.¹

In treating of certain recent railway combinations the report says that the terms of the purchases "did not differ in principle."² The facts of the cases referred to are as follows:

The control of the Central Railroad of New Jersey was obtained by the Reading Company by the purchase, during February, 1901, of shares having a par value of \$14,500,000, or fifty-three per cent, out of a total of \$27,213,800. The purchase was paid for in cash, which was obtained by issuing collateral trust bonds to the amount of \$23,000,000, with interest at four per cent per annum, secured by the deposit of the shares bought and certain other securities having a total par value of \$1,935,000.³ The Reading Company is not an operating corporation, but controls the Philadelphia and Reading Railway through the ownership of its stock. In 1898 the New York Central and Hudson River Railroad, which is an operating concern, obtained substantially all the stock of the Lake Shore and Michigan Southern⁴ by exchanging therefor its collateral trust bonds bearing interest at the rate of three and one-half per cent per annum.⁵ The Burlington was purchased during 1901 jointly by the Northern Pacific and Great Northern, which paid for it at

of \$20,000,000. The road was originally leased to the Pennsylvania for two years from August 1, 1900, the stipulated annual rental being the net earnings. See Poor's Manual of Railways for 1901, pp. 691, 705. The lease has been renewed for one year.

¹ Poor's Manual of Railways for 1901, p. 696. A majority of the capital stock and about one-fifth of the outstanding bonds of this company were owned by the Pennsylvania on June 30, 1889. See The Interstate Commerce Commission, Second Annual Report on the Statistics of Railways, pp. 146-147.

² P. 310.

³ Poor's Manual of Railways for 1901, pp. 75, 143, 145.

⁴ On June 30, 1901, it owned \$45,280,200 in par value, or 90.58 per cent of the total of \$50,000,000. See Poor's Manual of Railways for 1901, p. 126.

⁵ *Ibid.*, 1898, pp. 567-568.

the rate of \$200 per share, or double its par value, in their joint collateral trust bonds bearing four per cent interest, or, to the extent of forty per cent of the amount purchased, in cash at the option of the vendors. The underwriting syndicate agreed to take all of the stock offered, and by the end of October had accumulated ninety-six per cent of the total outstanding.¹

Thus it appears that in the case of the Central of New Jersey the control was bought for cash at 165 per cent of par, and only barely enough shares to afford such control were taken, leaving a compact and substantial minority interest; that no general offer to accept all stock tendered was made; and that the control was obtained by a company which does not operate a railway, but controls a great railway system as well as extensive mining properties through its stock holdings. On the other hand, in both the Lake Shore and the Burlington purchases all stock offered was taken at double its par value; but in the one case the payment was wholly in bonds, and in the other at least sixty per cent was so paid. In the Lake Shore case the purchase was by an operating railway corporation, and in that of the Burlington it was the joint act of two such corporations. Whether from the point of view of the public or of the vendors or vendees of the properties affected, these differences appear substantial and important.

There is no such railway as the "New York, Lake Erie and Western," which is declared² to have been acquired by the New York Central system. The road formerly operated under that name was reorganized on November 30, 1895, as the Erie Railroad.³ It was never controlled by the New York Central or any of the affiliated corporations, or by the Vanderbilt family or any of its members or business associates; and in attempting to secure such control Commodore Vanderbilt experienced the most crushing defeat of his career.⁴ The Pennsylvania Railroad

¹ *Railway World* (October 26, 1901), p. 1210.

² P. 306.

³ Poor's Manual of Railways for 1901, p. 94.

⁴ The reference in the report is probably to the Lake Erie and Western, a much less important line, which is controlled by the Lake Shore and Michigan Southern. Poor's Manual of Railways for 1901, pp. 273, 279.

never leased the Chesapeake and Ohio for 999 years¹ or for any other period, and its only legal relation to the latter is through the ownership of much less than a majority of the capital stock. The Chesapeake and Ohio has never been leased to any corporation. The statements² that "the New York Central owned 91.5 per cent of the stock of the Lake Shore and Michigan Southern road prior to its absorption" and "at the same time owned eighty-six per cent of the stock of the Michigan Central" are both contrary to well-known facts. The New York Central owned none of the shares of either company as late as June 30, 1897,³ although both had been operated as parts of the Vanderbilt system for many years. The only connection between these three corporations prior to 1898 was that each was under the domination of the Vanderbilt family.

The Joint Traffic Association ceased to exist many years ago, and the winding up of its affairs began immediately after the adverse decision of the United States Supreme Court in what is known as the Joint Traffic Association case;⁴ yet the report declares⁵ that "it continues to perform many functions of a coöperative character." The legality of railway pooling was never directly passed upon by a United States court, prior to the enactment of the Interstate Commerce law which forbids it, and it has been sustained in England,⁶ where such contracts are regularly resorted to, as most students of transportation are aware. The report, however, states⁷ that "pooling contracts have frequently been held illegal by United States and English courts." Competitive folly has led to many strange things, but it has not yet committed the costly absurdity of running "three passenger trains every hour during the day between Chicago and Omaha over three rival routes."⁸ There are five instead

¹ As intimated on page 311.

² P. 313.

³ Poor's Manual of Railways for 1898, p. 568. After the "absorption," it appears from the same authority that on June 27, 1898, the New York Central held but 89.86 per cent of the Lake Shore stock and but 76.05 per cent of that of the Michigan Central.

⁴ Decided on October 24, 1898. 171 U.S. 505.

⁵ P. 335.

⁶ Hare vs. Railway Company, 2 Johnson and Hemming's Reports, 80.

⁷ P. 338.

⁸ P. 346.

of three routes which seek passenger business between the cities named, and the total number of west-bound passenger trains leaving Chicago for Omaha on week days is fifteen, instead of seventy-two, or an average of three each twenty-four hours for each line.¹ The laws of Minnesota are no more liberal toward railway leases than toward railway consolidation accomplished by other means; but the contrary is the only possible inference from the statement concerning the development of the Great Northern system that appears on page 311. "Hopper" cars "to carry 40 to 50 tons" are not necessarily of pressed steel, as declared,² but are frequently made of structural steel or of steel and wood combined. Again, it is not true, as alleged,³ that the traffic director of the "Harriman" lines together with a like official for the northern or "Hill" lines (who in fact has never been appointed) would between them "control absolutely the entire traffic policy of all the transcontinental lines in American territory." The Atchison, Topeka and Santa Fe has no connection whatever with either system, and at the time the report was written the Chicago, Rock Island and Pacific was being extended to a connection with the Southern Pacific at El Paso, which has now been effected. The latter road is now engaged in transcontinental business; and thus, if we include the Canadian Pacific, which, although located in Canada, accepts business from and to American territory and is always an active competitor with the domestic routes for such traffic, there are now three routes that are not in any degree under the control of either Mr. Harriman or Mr. Hill, as against five which they control. It is also well known that the Chicago, Milwaukee and St. Paul is ready to build to the Pacific coast whenever its interests demand such an extension, and this potentiality strongly influences the situation.

A further study of the report suggests the reason for the appearance of such readily avoidable errors. Apparently the commission permitted methods which did not involve either

¹ The Official Guide of the Railways and Steam Navigation Lines of the United States, Porto Rico, Canada, Mexico and Cuba, April, 1902.

² P. 293.

³ P. 328.

reliance upon the testimony collected or careful scrutiny of the data utilized. This slackness of method is illustrated by the incompleteness of the treatment of many of the subjects. Thus the table which gives railway tonnage classified by commodities¹ would have been much more significant had the similar data from the censuses of 1880 and 1890 been utilized in connection with it; the table on page 276, credited to the McCain Report on Transportation Rates,² and including statistics down to 1892 only, might have been completed by correspondence with the author of that report or with the officers of the Trunk Line Association; and the table on page 330, which stops with the first half of 1899, might have been extended through the subsequent years from the records of the Central Traffic Association. Again, the report³ compares the receipts per ton per mile of certain railways in 1900 with those in 1901, and then declares that the comparison, to be of value, "should be instituted between the years 1899 and 1901"; but the author does not make the comparison. An equal disregard of the obligations of public authorship is shown in the treatment of railway capitalization.⁴ The figures for 1890, as stated by the statistician to the Interstate Commerce Commission in his report, are employed, without deducting current liabilities, in a comparison with the figures for 1900, when current liabilities were deducted; and this in spite of the express recognition of the fact that such neglect impairs the value of the comparison.

From the point of view of transportation theory the report is equally disappointing. For example, one reads⁵ that "another criterion of the economy of railroad operation is the ratio of operating expenses to earnings from operation." This expresses a belief long current among investors but now pretty thoroughly discredited. Its superficial logic has misled many investors and resulted disastrously to many railway properties. Operating

¹ P. 266.

² Wholesale Prices, Wages, and Transportation. Report of the Committee on Finance of the United States Senate, Senate Report No. 1394, 52d Congress, 2d session, pp. 397-658.

³ P. 284.

⁴ P. 400.

⁵ P. 297.

expenses represent repairs and renewals of property as well as the cost of doing current business; and while a very low ratio may mean extremely economical methods, it is at least as likely to mean that current depreciation is not being offset by repairs and renewals; in other words, that the capital invested is being impaired or withdrawn. This possibility is now generally appreciated, and it is fortunate that the influence of the Industrial Commission is not likely to be sufficient to cause a recrudescence of discarded opinions on this point. Again, it is generally known that many railway expenditures, including payments on account of capital as well as some of those required for operating purposes, are made on the joint account of all or many of the transportation services performed, and that, in consequence, they do not increase in proportion to the increase in traffic movement; but it is grossly misleading to assert that "from two-thirds to three-fourths of the expenses of railroad operation are *entirely independent* of the amount of traffic moved."¹ Even fixed charges, although they respond sluggishly to changes in the volume of traffic, are pretty certain to be affected sooner or later by increases or decreases which are great enough to suggest the investment of further capital or the withdrawal of some of that already employed. Such expenses as those for maintenance of way and equipment and for signalling, usually and properly regarded as not susceptible of apportionment among different services, are very plainly affected by the volume of traffic, although it may be exceedingly difficult to perceive or measure the effect of a particular increment.

Nor is the report more satisfactory when attempting to apply the conclusions of economic philosophy to the facts of transportation. It contains but one statement that is strictly within the domain of theoretical economics:

A railroad presents one of the clearest examples possible of an industry subject to the law of increasing returns — that is to say, an industry in which the total cost of operation increases less in

¹ P. 277. The italics are not in the original. The statement is repeated in almost identical terms on page 286.

proportion than the amount of business transacted. This means, conversely, that the net returns increase more rapidly than the expansion of traffic.¹

An industry or an enterprise is in a state of conformity to the law of increasing returns when the average productivity per unit of an additional increment of labor or capital would be greater than that of the labor or capital already employed. The increment of labor or capital would be measured as so many hours or days of work or as so many dollars of capital (more accurately perhaps, as so many machines or other special forms of capital goods), and not by the amount paid as wages or interest. Similarly the "returns" referred to are not gross receipts from the sales of product or net income from business, but units of product. The law of increasing returns asks nothing concerning cost of production, as the latter is popularly and unscientifically measured, in dollars and cents, and affords no conclusion concerning the rate of profit. It relates to the technique of special industries, as expressed in the physical relations of capital and labor to production, and it really belongs, with the complementary laws of constant and diminishing returns, among the postulates rather than the principles of economic science. It implies diminished cost of production per unit when the increased productivity is not wholly offset by changes in wages or interest rates; and it implies increased profits when the increased productivity is supplemented by a demand sufficient to maintain prices at the old level, or at least to prevent their falling so low as to balance the decreased cost. The first sentence of the statement quoted above misstates, therefore, the law of increasing returns by assuming that it necessarily involves decreased money cost, and even further by regarding it as referring to but one kind of cost, that incurred for operation. The second sentence is even worse. It carries along the baseless assumptions of the first, and completes the error by adding the unreasonable presumption that prices will remain substantially unchanged after the new product is put upon the market. The law of increasing

¹ P. 286.

returns is thus transformed into one of increasing profits, and the subsequent discussion is controlled by this erroneous generalization. No student of economics will fail to see how seriously the acceptance of such a statement of the law of increasing returns would restrict its field and decrease its value. Its consequences are now studied in their relation to wages rates, interest rates and prices, but the acceptance of the Industrial Commission's interpretation would complicate the law itself with every incident that may affect either wages, interest or prices, and would remove it from its position among the early and fundamental generalizations concerning production to a much less useful place among the most complex problems of distribution.

The railway industry, as generally conducted, does conform to the real law of increasing returns, although not nearly so universally as is commonly supposed. American railways can generally produce additional transportation without proportionate additions to the labor or facilities employed. Their business does not conform, however, to any such law as that formulated by the Industrial Commission. They cannot sell additional transportation without reducing their rates; for the market for railway services, like any other market, will take but a certain quantity at a fixed price, and in order to augment sales prices must be reduced. There can be no reasonable doubt that the difference between operating cost and revenue per unit of railway transportation has been very considerably diminished within the last decade as an incident of increasing volume of traffic.¹ The progress of the railway industry has recently involved the rapid substitution of capital cost for labor cost. Improved roadbeds and heavier rolling stock mean greater capital expenditures for the sake of securing increased labor efficiency. They unquestionably decrease the cost of

¹ The data on next page relate to the Pennsylvania Railroad and all roads directly operated by it. The division of expenses between passenger and freight service is statistically unsound, worthless and misleading, but taking the data together they throw some light on the subject under discussion. The figures are from Poor's Manual of Railways for 1901, pp. 681, 682. Those for 1865, 1870 and 1875 are in currency.

producing the average unit of transportation or they would not be incurred; but the aggregate decrease is much less than the amount which would represent the difference between operating expenses under the old and under the new method. Capital charges are a part of the cost of producing transportation which must not be ignored. Yet following the incorrect and misleading statement of the law of increasing returns that has been quoted, the report continues at considerable length to attempt to prove that "an increase in the volume of business upon a railroad does not involve a corresponding expense in cost"¹ by data showing that operating expenses have not recently increased as rapidly as gross receipts. It is difficult to imagine what would be the net result, in legislative folly, of the general acceptance and application of such theory as this.

It is desirable to take up some of the principal topics discussed in the report and to ascertain what, if anything, has been contributed to the solution of the problems that they present. Among the most important subjects treated are (1) pooling, (2) the progress of rates, (3) discrimination in rates, (4) consolidation, (5) competition and (6) capitalization.

(1) Pooling is accurately and clearly presented, and the discussion leads inevitably to the conclusion that pooling, if under

YEAR.	PASSENGER SERVICE.			FREIGHT SERVICE.		
	Receipts per Passenger per Mile.	Expense per Passenger per Mile.	Difference.	Receipts per Ton per Mile.	Expense per Ton per Mile.	Difference.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
1865	2.748	1.855	0.893	2.715	2.347	0.368
1870	2.568	2.125	.443	1.503	.983	.520
1875	2.573	1.799	.774	1.126	.709	.417
1880	2.222	1.674	.548	.918	.540	.378
1885	1.950	1.466	.484	.695	.460	.235
1890	2.077	1.504	.573	.655	.463	.192
1895	1.953	1.591	.362	.563	.397	.166
1900	1.980	1.465	.515	.540	.364	.176

¹ P. 286. Probably the word "expense" in this clause is a misprint for "increase."

proper official supervision, would greatly relieve the present railway situation. One reads that

the primary purpose of the Act to Regulate Commerce in 1887 was probably the elimination of discrimination in freight rates. No other feature of railroad business, except possibly mistrust as to over capitalization and exorbitant charges, occupies so prominent a place in the public mind;¹

and again, that since 1887, when pooling was first prohibited, the strife for traffic has frequently produced

. . . periods of abject demoralization characterized by rate wars almost as severe as at any time in our history . . . these contests among railroads . . . always involve personal discriminations of the most iniquitous form.

It is declared that the "plain issue involved, in short, is of stable as against fluctuating rates";² and in another place that

so long as all shippers pay the same amount for equal service, and so long as rates are steady, so that contracts may be confidently based upon them, the absolute amount paid, be it high or low, is of relatively small importance to the shipper . . .³

When, therefore, these declarations are supplemented by the definite statement that personal discriminations can be abolished only by the removal of "unreasonable and unreasoning competition" — which is assigned as their direct cause⁴ — and that pooling, which would remove such competition, would relieve the railways from the "incubus" of shippers' dictation in such matters as the mileage rates to be paid for private cars,⁵ the net result of the argument appears extremely favorable to pooling. These are the high points of the discussion, and the view which they afford approves itself to those best informed.

On the other hand, it is unfortunate that the report contains no definite expression concerning the only serious and genuine evil attaching to pooling, *i.e.*, the incentive which it offers to the overproduction of railway facilities. The existence of a powerful and profitable pool enables those who would blackmail industry by the construction of unnecessary lines to address

¹ P. 349.

² P. 344.

³ P. 365.

⁴ P. 366.

⁵ Pp. 362-364.

their demands to a compact group which can usually better afford to concede something than to permit the inauguration of a struggle. This danger must be guarded against, so far as practicable, if the pooling privilege is ever legally restored.

Again, there is no possible excuse for discussing under the maliciously misleading title of "Railroad Pools Since 1887"¹ the railway associations that have existed since the enactment of the Interstate Commerce law. The evidence collected does not pretend to show that a real pool of traffic was ever attempted by more than one of the associations named, and it is admitted that even in this instance the agreement was never fairly in operation.² The great majority of the associations named existed merely for conferences concerning rates and regulations, the promulgation of rate schedules and the collection of traffic statistics. So far as the Interstate Commerce law is concerned, their legality was never questioned; and until the Sherman anti-trust law was applied to them in 1897 by the decision in the Trans-Missouri Freight Association case, their plans had received the uniform approval of the federal courts.

(2) The progress of freight rates is summarized in the statement that while from 1870 to 1900 there was, on the whole, "a substantial and very widespread reduction,"³ which, however, was much less marked in connection with local than with through or competitive business, this steady downward tendency was interrupted in the year last named, when there was "a marked advance in the published rates."⁴ Subsequently it is declared that the advance in "*published* freight rates in 1900 upon all the railroads of the country" was "probably not less than twenty-five per cent"⁵ and that the evidence of the ton-mileage rates indicates that the advances since 1899 had been "substantial and general."⁶ It is admitted that the claim that rates have advanced twenty-five per cent is not supported by the average earnings per ton per mile of the individual roads whose rates could be compared when the report was

¹ Pp. 334 *et seq.*

³ P. 280.

⁵ P. 285.

² P. 335.

⁴ P. 281.

⁶ P. 285.

written, and that the figures in many of these cases show decreases;¹ but it is alleged that these averages are generally vitiated by including in the divisors by which they are controlled large amounts of "company freight," which moves free. The movement of this class of freight was exceptionally heavy during 1900 and 1901, in comparison with earlier years, and it is claimed that its inclusion diminished the averages so that they are not comparable, as representing rates paid, with those of earlier years.² The only trouble with this argument is that it is not based on a correct premise. "Company freight" is not included in the ton-mileage used to divide into freight receipts to determine the average rates per ton per mile. No important railway employs this deceptive method. The instructions for filling the schedules filed annually with the Interstate Commerce Commission have the effect of excluding ton-mileage of this class of freight from the averages reported.

The assertions in the following extract are at least sufficiently direct :

There can be no question of a substantial increase of *published* freight rates all over the country. Our data establish this beyond question. If, then, the ton-mile revenue reported by the roads indicates a very much less percentage of increase, *the inevitable conclusion is that a great deal of freight is moving at less than the published rates.*³

It is necessary, however, to compare the foregoing with two subsequent statements that are equally explicit in terms. Only fifteen pages further along in the report it is declared that

... rates are not only higher, but by reason of harmonious action of the various roads they are being actually maintained. In other words, *rate-cutting is less prevalent than for many years.*⁴

And in another place the following appears :

It is the universal opinion both among shippers and in railroad circles that the general rate situation in 1901, so far as rebates and

¹ P. 284.

² P. 285. "Company freight" consists of rails, ties and other railway supplies when carried over the lines of the companies to which they belong.

³ P. 285. The italics are in the original.

⁴ P. 300. The italics are not in the original.

discriminations are concerned, is more satisfactory than at any time in the history of railroading in the United States. *With very few exceptions the published rates seem to be observed on all kinds of business.*¹

Leaving this manifest and flagrant contradiction without comment and returning to the statement that published rates have increased fully twenty-five per cent, it is important to discover exactly what evidence is relied upon for its support. Fortunately the report is very explicit on this point. It declares that

The peculiarity of these advances of 1900 is that they have been made, not by direct changes of tariffs, but by modifications of the freight classifications.²

The foregoing is followed by some three pages which describe the changes in the classifications and explain how the conclusion was reached that they produced a general advance of twenty-five per cent in railway rates. This process deserves analysis; for it is clear that if it is erroneous, the conclusion of the report is worthless. The method was adapted from the annual report of the Interstate Commerce Commission for the year 1900,³ and the recital of facts and conclusions was almost bodily transferred. On January 1, 1900, a new official classification was promulgated by the railways north of the Ohio and Potomac and east of the Mississippi. It modified 824 of the ratings established by the classification which it superseded, and of the changes made 818 were advances from one class to another. This classification is applicable to traffic between Chicago and New York unless, as in the case of grain, live stock and dressed meats, special rates are provided. It contains about 10,000 items⁴; hence not to exceed $8\frac{1}{2}$ per cent of the total number were advanced. The Interstate Commerce

¹ P. 350. The italics are not in the original.

² P. 281.

³ Fourteenth Annual Report, pp. 14 *et seq.* But the Interstate Commerce Commission did not *state* that there had been an advance of twenty-five per cent. It asserted that there had been a general advance and *intimated* (*ibid.*, p. 20) that this amounted to twenty-five per cent by saying that "if rates can be advanced twenty-five per cent, they can be still further advanced by the same method."

⁴ The writer accepts an estimate made by Mr. Michael B. Wild, a statistician employed by the Baltimore and Ohio Railroad.

Commission, however, utterly ignored the unchanged items and, applying the New York-to-Chicago rates to the items that had been transferred, ascertained that 434 had been advanced from the fourth to the third class, thus raising the rates applied to them between those points 42.8 per cent; that 214 had been taken from the third class and placed in the second, involving an advance between those points of thirty per cent; that 100 had been changed from the sixth to the fifth class, making an advance of twenty per cent; and that the other changes, affecting from one to thirty-two items each, had resulted in advances of from 16.6 per cent to 100 per cent. The rates between the same points on three items had been reduced thirty per cent and those on an equal number 14.3 per cent. The commission multiplied each percentage of increase by the number of items to which it applied and, dividing the sum of the products by 818, the total number of advances, obtained 35.5, which it declared to be the "average advance." Now this is about as bad a misuse of figures as could be devised. It not only ignores six items which were reduced and more than 9000 that were not changed at all, but it also rests upon the obviously incorrect assumption that the traffic movements of all items are equal in volume. The latter error would vitiate any calculation. Its extent is suggested to those in any way familiar with traffic movement by the fact that at least eighty-five per cent of the changes in the official classification related to the comparatively insignificant traffic that moves in less than carload lots.¹ Passing over this error, however, it will be instructive to see how the calculation would stand if all of the items in the classification had been included. This is shown in the table on the opposite page.

Thus a very simple and obviously necessary correction does away with all but 2.89 per cent of this advance of 35.5 per cent which has been exploited by two federal commissions. It by no means shows the real change, however, for that could be ascertained only by finding the precise importance of every

¹ P. 285. In fact, a principal purpose of the changes was to induce shippers to adopt the more economical practice of shipping in full carloads.

change, or, in other words, the exact volume of traffic under each item in the classification.

Methods similar to those employed in connection with the official classification were applied to the two other great classifications by the Interstate Commerce Commission, and the Industrial Commission blindly followed its lead. These calculations constitute absolutely the sole basis for the statement that rates have advanced twenty-five per cent. No other evidence in support of this absurd contention has been or can be adduced. A general increase in freight rates of twenty-five per cent throughout the country would bring industry practically to a standstill. Its destructive consequences would be felt

	NUMBER.	EXTENSION.
Items advanced 35.5 per cent	818	29039
Items reduced 30 per cent	3	—90
Items reduced 14.3 per cent	3	—42.9
Items not changed	19176	0000
Total	10000	28906.1
Average change	2.89 per cent.	

in every quarter and the bankruptcy of the lines foolish enough to bring it about and persist in its maintenance would occur as soon as they could eat up the surpluses which they happened to have on hand when it was effected. No such threat has been directed at American industry from any quarter, and it never will be unless the direction of the railway business is sometime delegated to men whose qualifications have not been submitted to the competitive test through which leadership in that field is now attained. In all truth the evidence that is publicly available concerning the recent movement of the general level of railway rates is far from convincing. The changes in classification were undoubtedly made in the belief that the higher level of prices, affecting not only the

¹ Approximate.

commodities moved but the supplies necessarily purchased for railway use, justified some increase in rates, but intelligent investigation would show that the changes were not of sufficient number or importance to produce a very material rise. On the other hand, some very important rates, notably those of grain, live stock and meat products, were exceptionally low throughout nearly the whole of the year 1901.

It is an open question how far the testimony of average ton-mile earnings can be trusted in this connection. The ton-mile is the most satisfactory measure of the volume of freight traffic, but it is nowhere contended that it is an invariable unit. The average ton-mile of one period or of one railway or region may clearly differ very widely from that of another period, railway or region. A ton-mile of pig iron is a very different thing from one of buggies; the average ton-mile in a district of diverse tonnage and diffused deliveries, like the state of Connecticut, is not at all like that in a region of relatively homogeneous traffic and movement, like West Virginia; and there is a vast difference between the same unit for the New York, New Haven and Hartford, which is practically a terminal road, and for the Chesapeake and Ohio, which is very largely devoted to the transportation of bituminous coal. No well-informed person ever claimed that the differences between the average earnings per ton per mile of successive periods precisely measure the upward or downward movement in freight charges. Yet there is reason for believing that the changes in this average do throw a great deal of light on the course of rates, and that if the changes are great enough, they not only indicate its general direction but roughly suggest its extent. The average ton-mile is so broadly based, even when derived from the traffic of but one of the greater railway systems of the country, that it is scarcely conceivable that it could be subject to unexplained and very violent or rapid modifications; and when derived from the business of the whole United States, or even of one of the ten great districts that are used for classifying railway statistics, it is reasonable to regard it as substantially constant unless specific causes of variation can be adduced.

Certain changes in the composition of general freight traffic are at times apparent to close observers. The Industrial Commission claims to have noted two general changes: first, that there is a tendency toward a great increase in low grade traffic, and second, that high grade traffic is disproportionately greater in times of industrial prosperity.¹

The commission alleges that the first statement is proved by statistics, quoted from the McCain report on railway charges, which show that 52.4 per cent of the westward bound tonnage in the Trunk Line territory which passed beyond the western Trunk Line termini was in the fifth and sixth classes in 1892, while prior to the year 1887 there was no class lower than the fourth, and that there has been a progressive augmentation of the proportion of freight assigned to the lower classes. Properly understood, this table does not imply any greater proportionate increase in low than in high grade freight. It means simply that articles which formerly paid high rates have been transferred to lower classes. It was used to demonstrate this in the McCain report and would not be used for any other purpose by one conversant with railway-rate history. Because the development of American industry in the last decade has been so largely in the direction of the increase and concentration of manufactures, it would be natural to suppose that manufactured articles have taken a position of much greater importance in the total tonnage; and the assumption would be reasonable that greater prosperity must have rendered the wants of consumers increasingly complex. Yet, notwithstanding these considerations, there is evidence that the average ton-mile has remained fairly stable.² If it has not, there can be little doubt that whatever change has occurred has been in a

¹ Pp. 276, 277.

² Traffic conditions in the ten regions used for the classification of the statistics reported to the Interstate Commerce Commission undoubtedly differ very widely. In the fiscal year 1900 the range of average ton-mile earnings was from 5.46 mills in Group III to 11.52 mills in Group I, or 111 per cent, while the number of ton-miles representing total services varied from 3,989,211,310 in Group VII to 41,275,547,319 in Group II, or 935 per cent. Between 1890 and 1900 the ton-mileage of the whole country increased from 76,207,047,298 to 141,599,157,270, or 85.81 per cent, and the increase in the different groups was between 57.16 per

direction quite different from that supposed by the commission. The decrease in the proportion of traffic made up of products of agriculture and the increase in the movement of manufactured articles clearly support this view. The notable increase in the movement of the products of mines may be considered evidence to the contrary, but a little analysis of the data throws doubt upon this conclusion.¹

In its second generalization the commission is more fortunate. Its conclusion is supported, so far as the year 1901 is concerned,

cent in Group I and 202.80 per cent in Group X. Yet the changes in the territorial distribution of tonnage were so nicely balanced, with regard to average earnings that a return to the distribution of 1890, with the average earnings per ton-mile of 1900 remaining in force in each district, would have modified the average for the entire country of the later year by less than four one-hundredths of a mill. The following table, comparing data reported by the Interstate Commerce Commission and the Eleventh Census, fails to show any very significant change in the composition of the total railway tonnage. The increase in the last item may be assumed to be a result of a change in classification.

ITEM.	1900		1890	
	TONS CARRIED.	PER CENT OF TOTAL.	TONS CARRIED.	PER CENT OF TOTAL.
Products of Agriculture	121,940,996	12.73	86,536,657	13.51
Products of Animals	32,369,674	3.38	26,428,028	4.13
Products of Mines	477,783,484	49.88	271,545,700	42.40
Products of Forests	99,756,175	10.41	63,798,185	9.96
Manufactures	135,039,876	14.10	79,959,770	12.48
Merchandise	42,521,093	4.44	29,746,813	4.65
Miscellaneous, other commodities .	48,452,307	5.06	82,446,395	12.87
Total	957,863,605	100.00	640,452,548	100.00

¹ The total mineral tonnage of American railways in the fiscal year 1900 was 477,783,484; but this figure contains a great deal of duplication, as it is the aggregate of the reports of the several railways, and much of it is made up of shipments passing over two or more lines and thus reported more than once. The tonnage of this sort originally taken up from other sources than connecting railways was 271,602,072 tons, of which 171,322,650 tons originated east of the Mississippi and north of the Ohio and Potomac rivers, 33,056,168 tons east of the Mississippi and south of the Potomac and Ohio and 67,223,254 west of the Mississippi. But 43,692,936 tons of anthracite originated on the railways of the country in 1900, substantially all of it in the region first named. As this is 25.20 per cent of the mineral tonnage originating in this district, and as anthracite is not carried at extremely low rates but, on the contrary, at rates higher than the average for general traffic in the region indicated, it is clear that the average earnings per ton

by the very heavy proportion of the total traffic of the east and west lines which was westward bound. It is well known that eastward traffic consists largely of grain, other food products and raw materials, which move at the lowest rates, while the westward business is mainly in manufactured products that pay a good deal more per unit of weight.

Making no allowance for changes in the character of the unit, the evidence of the average earnings per ton per mile indicates a moderate advance in charges during the last two years. The change, however, does not even approximate twenty-five per cent and has not restored the level of a very few years ago.¹

(3) Two points must be emphasized in order to portray to the popular comprehension in any adequate or accurate fashion the facts of railway rate discrimination. There must be (1) a very clear distinction between those discriminations which are right and proper and those which operate unjustly, and (2) an equally clear insistence upon the fact that rate cutting and unjust discrimination are not synonymous terms. Neither of these points receives any attention in the report, but on the contrary its tendency is to confuse the reader in regard to both of them. It is absolutely essential to the present industrial system that railways should discriminate, in fixing their charges, among the different services they perform. They could not

per mile on mineral tonnage cannot be very low in this district. It may be assumed that as between the several regions the rates on other mine products roughly vary as the general averages, and as forty-four per cent of the mineral tonnage, except anthracite, originated south of the Ohio and Potomac or west of the Mississippi, the average rate per ton per mile must have been materially influenced by the higher rates in those regions. Again, it is a fact of common observation that products of mines are not usually carried as far by rail as the general average of all tonnage; so that the high proportion of the total weight made by this class of freight does not indicate an equally high proportion of the total ton-mileage, with a corresponding influence upon the average ton-mile unit. These are very general conclusions, but nothing more is possible until more complete statistics are available.

¹ The following table (see next page) shows average receipts per ton of freight per mile in mills as given in the successive annual reports of the statistician to the Interstate Commerce Commission.

charge at uniform rates per ton per mile, or per unit of weight regardless of distance, or on any other basis, without restricting traffic undesirably at one point or another. Only those discriminations are unjust which are arbitrarily made with reference to the individuals or localities or kinds of traffic affected,

REGION.		YEAR.						DECREASE FROM 1890 TO 1901.	
		1901	1900	1899	1898	1895	1890	Amount.	Per cent of 1890.
The United States.		7.50	7.29	7.24	7.53	8.39	9.41	1.91	20.30
Group I.	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island	11.51	11.52	11.23	11.76	12.23	13.73	2.22	16.17
Group II.	New Jersey, Delaware, District of Columbia, New York (east of Buffalo), Pennsylvania (east of Pittsburg), West Virginia (north of Parkersburg) . .	6.46	6.13	5.82	6.17	6.98	8.28	1.82	21.98
Group III.	Ohio, Indiana, Michigan (southern peninsula), New York (west of Buffalo), Pennsylvania (west of Pittsburg)	5.68	5.46	5.29	5.78	6.42	6.95	1.27	18.27
Group IV.	Virginia, North Carolina, South Carolina, West Virginia (south of Parkersburg)	6.41	5.95	5.94	5.92	6.70	8.44	2.03	24.05
Group V.	Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi, Louisiana (east of Mississippi River)	8.02	8.08	8.07	8.35	8.95	10.61	2.59	24.41
Group VI.	Illinois, Iowa, Wisconsin, Minnesota, Missouri (north of St. Louis), South Dakota (east of Missouri river), North Dakota (east of Missouri river), Michigan (northern peninsula) . .	7.89	8.06	8.21	8.26	9.61	9.61	1.72	17.90
Group VII.	Montana, Wyoming, Nebraska, Colorado (north of Denver), South Dakota (west of Missouri River), North Dakota (west of Missouri River) . .	10.43	10.64	11.01	11.57	10.98	13.60	3.17	23.31
Group VIII.	Kansas, Oklahoma, Indian Territory, Colorado (south of Denver), Texas (Panhandle), New Mexico (north of Santa Fe) . .	9.71	9.64	9.68	9.61	11.61	11.52	1.81	15.71
Group IX.	Texas (except Panhandle), Louisiana (west of Mississippi River), New Mexico (east of El Paso and south of Santa Fe)	10.18	9.38	10.65	10.42	12.53	13.03	2.85	21.87
Group X.	Washington, Idaho, California, Oregon, Nevada, New Mexico (west of El Paso)	10.55	10.67	11.36	11.46	12.61	16.51	5.96	36.10

The foregoing shows that as recently as 1897 the average ton-mileage earnings was higher, not only for the country at large but for every one of the ten groups, than in 1901. The average for the whole country and for every group was also higher in every year prior to 1897. The averages of seven groups were lower in 1901 than in 1898; seven lower than in 1899; five than in 1900; while the average for the whole country was lower than in any year previous to 1899.

and in more or less wanton disregard of the real underlying conditions which determine the social value of the different transportation services concerned. Neither any railway manager nor any student of transportation economics nor any law-maker or jurist has ever described in any but the most general and indefinite terms the criteria by which discriminations are to be tested in the effort to determine whether they are just. The Industrial Commission had a magnificent opportunity to investigate in this direction, and its efforts, if well directed, might have contributed much to the solution of the most difficult question connected with railway development; but it utterly neglected these possibilities. A federal law has long required the publication of all interstate rates and has made deviations from the legally promulgated schedules a serious offense. Rate cutting of this kind is grossly improper, because it strikes at a fundamental requisite of regulation, namely, the publicity of rates; but it does not necessarily involve unjust discrimination. It may be that the cut rates are made available to all shippers — a not at all uncommon occurrence, of which there were frequent instances in the year 1901 — and that a really unjust discrimination exists in the public tariff which is violated. Rates which affect unfairly the interests of particular purchasers of transportation can never be in state of equilibrium, although they may be announced in schedules that in form and manner of promulgation completely satisfy every statutory requirement. This condition may occur through the errors of judgment or the malicious purpose of railway officers, or even in obedience to unwise decrees of public regulative agencies; but whatever its cause, there must always coexist a tendency to charge really reasonable rates. Such deviations from the schedules may be made illegal and punishable by the most severe penalties, but they do not constitute unjust discriminations.¹ There is good ground for the belief that a not insignificant proportion of recent rate cutting has resulted from the natural tendency of rates toward the adjustment that would satisfy the current commercial

¹ Although it may be convenient, for judicial purposes, conclusively to presume that they do.

conditions. The report tends to direct the attention of its readers to the evils of rate cutting and of allowing favored shippers privileges that are not generally enjoyed, rather than to the much more fundamental and difficult questions that arise from maladjustments of the rates announced in the published schedules. This is unfortunate; for while the substantial solution of the obvious evils of rate cutting can be attained whenever the public chooses to take a step which both railway history and sound judgment point to as the one means to that end, the difficulties sure to be encountered in an effort to secure a satisfactory and generally fair adjustment of the charges for different services are much more subtle and the means of surmounting them far more elusive.

(4) No facts in the history of railway development are more important than those which express the tendency toward the concentration of the control of the entire system of railway facilities serving a particular country or extensive portions of those facilities. This is fully recognized in the report, and the discussion of the subject fills some twenty-five pages,¹ exclusive of those devoted to pooling, which is really but a phase of concentration. No other portion of the report, however, is more likely to lead the reader astray.

The reader is told that recent consolidations have been accomplished by "first, actual purchase or ownership in fee; secondly, acquisition by lease; thirdly, stockholding control; and fourthly, minority representation in directorates."

This not only is a far from satisfactory classification, but, what is worse, it is incorrectly applied. Thus there is such a thing as consolidation through the actual purchase of the property and franchises of one or more corporations by another, although it is scarcely permissible to apply the term "in fee" to rolling stock and equipment. The report correctly states that throughout all American railway history there has been a strong tendency towards consolidation by this means, and properly cites as illustrations the Chicago, Milwaukee and St. Paul,

¹ Pp. 304-329.

the Atchison, Topeka and Santa Fe and the Erie systems.¹ But in seeking to apply this classification to the facts of recent railway history the author of the report selects as illustrations the operations by which the Great Northern and Northern Pacific secured control of the Burlington, the New York Central of the Lake Shore and Michigan Southern, the Reading of the Central of New Jersey, and the Southern of the Mobile and Ohio.² Now in every one of these instances control was secured by the purchase of shares and is exercised through the ownership of stock and in no other way. In none of them has there been any purchase of the real estate of the controlled corporation "in fee" or of any of its other property. Every one of these instances belongs in the third class described in the report, *viz.*, that of "stockholding control."

In the same class properly belongs the union of the West Shore with the New York Central, which is used to illustrate consolidation by lease. It is true that in this case a lease for 475 years from January 1, 1886, gives to the latter company the right directly to operate the property of the former; but this was effected only as a detail of an arrangement by which the lessee became the possessor of every share of the capital stock of the lessor and the guarantor of its entire bonded indebtedness. Neither is the Great Northern an example of consolidation by lease. It is not in any true sense a consolidated property at all; for the Great Northern Railway Company was organized expressly to become the lessee of the property of the St. Paul, Minneapolis and Manitoba, which still constitutes 70.41 per cent of its entire system. Since October, 1898, the Great Northern has acquired over ninety-seven per cent of the capital stock of the original company, so that there is now legal "stockholding control." Those who are familiar with railway development do not need to be told that this practice of supplementing "shareholding control" by leaseholds is very common. Probably most of the mileage now operated under leases is also controlled by the ownership of shares in the

¹ P. 311. Nearly every railway in the country might have been cited as in some degree expressing this tendency.

² P. 310.

corporations which actually hold title to the property. Such leases are merely a means of obtaining the right of direct operation, which does not accrue as an incident of share ownership, no matter how extensive. This is obviously very different from the expansion of a property through leases negotiated with really independent corporations. Such expansion is not uncommon, and the report cites properly two instances, those of the lease of the Boston and Albany to the New York Central, and the Fitchburg to the Boston and Maine.¹

A more serviceable classification of the different ways in which railway properties have been consolidated would be the following:

- I. The expansion of an existing corporation.
 - A. By the purchase of the property and franchises of one or more companies.
 - B. By the purchase of a dominating interest in one or more companies, such interest being either
 - a. All or nearly all of the shares;
 - b. A bare majority;
 - c. In a few cases and under special conditions a strong minority.
 - C. By leasing one or more properties belonging to other companies.
- II. The especial creation of a new corporation.
 - A. To purchase the property and franchises of two or more existing corporations.
 - B. To purchase dominating interests in such corporations.
 - C. To lease the properties of such corporations.
- III. The acquisition of the control of legally separate corporations by a single individual, firm or compact group of persons.

Properties cannot properly be said to have been consolidated merely because one of them has obtained minority representation in the board of directors of the other. The New York Central and the Pennsylvania now have such representation in the directorate of the Northern Pacific, and the Missouri Pacific board contains a member who is also a director in the Baltimore and Ohio, which is commonly regarded as a part of the

¹ P. 311.

expanded Pennsylvania system, as well as in the Illinois Central, which is vigorously independent. In fact, minority representation of this sort is one of the commonest facts in railway organization. The report also speaks frequently of "investment holdings"¹ of railways in the securities of other railways. In the proper sense of the term there is no such thing. Railways purchase shares or convertible bonds of other companies in order to control or materially to influence their management. They sometimes acquire for the same purposes bonds of companies that are or may become insolvent, but their bondholdings usually represent advances to new or weak lines which they regard as likely to prove profitable as "feeders."² In times of depression some railways may be compelled to dispose of such securities in order to pay interest, and some may do so rather than forego the payment, or reduce the rate, of dividends, or in order properly to maintain the property directly owned; but the acquisition of such securities is not for the purpose of deriving direct revenue in the form of interest or dividends.

¹ Pp. 206, 312.

² That there are no "investment holdings" of significance would be inferred from the fact that in the present period of unprecedented railway prosperity there has been but a relatively small increase in railway bondholdings, while the par value of the stock owned has been greatly increased. From June 30, 1897, to June 30, 1900, the par value of railway bonds owned by railway corporations other than those which issued them increased \$68,652,821, or 17.04 per cent, and that of shares so held \$407,261,352, or 38.31 per cent. Interstate Commerce Commission, Thirteenth Annual Report on the Statistics of Railways, p. 55.

Again, railway managers must be presumed to know as much concerning the likelihood of obtaining good returns from railway securities, even of corporations other than those which they direct, as the general public. Therefore it seems probable that if they made purchases on behalf of their own corporations for investment purposes, the holdings thus acquired, particularly in a time of exceptional prosperity in their industry, would show as high an average return as that obtained by other investors. Comparisons of incomes from bonds and shares on the basis of par values are not very satisfactory, but they may be somewhat instructive. On June 30, 1900, railway companies owned, in the aggregate, bonds of other railways having a par value of \$472,831,377, and during the previous year they received as interest on such bonds \$9,951,331, or 2.10 per cent. The outside public held \$4,427,795,446 in bonds and received \$242,998,285, or 5.49 per cent, as interest. Similarly the railway shares owned by railways produced dividends at the rate of but 1.43 per cent, while those held by others produced 2.71 per cent. *Ibid.*, pp. 55, 72.

The report attempts to draw a sharp distinction between recent consolidations and those which occurred in the earlier development of the American railway system. It declares that the consolidations of the last two years not only contrast strongly in magnitude with those of earlier years; they are at the same time different in principle. The purpose of the earlier combinations was in the main to secure business by the extension of lines and feeders to strategic points. . . . The object of these later consolidations is essentially different. . . . The new consolidations are intended expressly to obviate competition.¹

Later in the report the idea in the mind of its author, obviously derived from contemplation of the conditions in France and other European countries in which there is a more or less effective division of territory among the different railway systems, is made more clear by the following statement :

An obvious and logical result of the wholesale consolidations of the last two years may be to apportion the entire country between great groups of railroad interest, each of which shall entirely dominate the situation within its own area.²

Then follows an attempt to show that such territorial division has already been in a marked degree achieved.

Only a little consideration of the evidence is necessary to convince the student that there is no such distinction between early and recent consolidation as that argued in the report. It is not a new thing for parallel lines to be united, and among the latest consolidations there are many examples of the acquisition of connecting properties for the purpose of reaching new territory. Thus the New York Central and Hudson River acquired the New York and Harlem in 1873 and the West Shore in 1885, the Lake Shore and Michigan Southern acquired the New York, Chicago and St. Louis at about the same time, and the New York, New Haven and Hartford the New England in 1898. In each of these cases the lines consolidated were parallel to each other. The principal recent acquisitions, on the other hand, include the Long Island and Western New York and Pennsylvania, by the Pennsylvania Railroad; the Boston and

¹ Pp. 308-309.

² P. 320.

Albany, by the New York Central; the Burlington, jointly by the Great Northern and Northern Pacific; the Kansas City, Fort Scott and Memphis, the Kansas City, Memphis and Birmingham and the Chicago and Eastern Illinois, by the St. Louis and San Francisco; the Choctaw, Oklahoma and Gulf, by the Rock Island; the Plant system and Louisville and Nashville, by the Atlantic Coast line; and the Chicago, Indianapolis and Louisville, jointly by the Southern and the Louisville and Nashville.¹ In none of these instances is the acquired property parallel to that which has obtained control, but in each of them the purpose of the consolidation was, and its effect has been, to extend the sphere of influence of the purchasing or leasing corporation and to give it access to new territory or additional "strategic points."

Nor is it correct to say that, while the earlier consolidations "conduced markedly to economy of operation . . . there is no longer any object in economy of operation to be sought."² The economies to be effected by the necessarily broader operations of the present day are not precisely like those of earlier days, but they are not less real. Among them may be mentioned the advantages of purchasing supplies, such as rails, cars, locomotives, *etc.*, in the largest possible quantities, and the opportunity to improve methods by detailed comparisons of the results obtained under different practices and conditions. In fact, the latest consolidations have had precisely the same causes as the earlier ones; they have resulted from the desire of individuals to extend their industrial power and to augment their pecuniary gains through the profitable expansion in any practicable direction of the corporations which they control. They have been justified by possibilities of producing the services required by the public at lower cost and of substituting order and stability for disorder and demoralization. They have induced additional capital to enter the railway field just as did similar operations in the past, and they have caused investors to be satisfied with greater security and lower interest.

¹ The last four consolidations occurred after the report was printed. Since the foregoing was written the Louisville and Nashville has passed into the control of the Atlantic Coast Line, a connecting system.

² P. 309.

The alleged territorial grouping may be somewhat faintly foreshadowed, but it requires a great deal of imagination to supply the details of the picture as they appear in the report. To say that the New England roads are already consolidated on a territorial basis, is to cite the nearest approach to such a condition in the United States. The New York, New Haven and Hartford is essentially a terminal road, but on through business which extends westward of the Hudson River it has to meet the competition, in its own territory, of the Boston and Maine, the Boston and Albany, the Central Vermont and the Central New England, while at least two of these companies are able to compete with it for valuable local business. Traffic conditions, however, now render it impossible that there should be any effective grouping of the carriers which reach the Atlantic seaboard unless it can be rendered comprehensive enough to include all of those which terminate anywhere on the eastern coast of this continent between Halifax and Norfolk. It is not at all certain that, with the growth of foreign trade — particularly the increase in exports of manufactured articles — and the development of the carriers which serve the southern Atlantic and Gulf ports, it may not be necessary soon to extend this statement so as to include all ports from Halifax to Galveston. In so-called Trunk Line territory, in which the report says "division of the field seems to have been recently progressing," there are seven lines north of the Potomac River whose owned and operated tracks extend from its eastern to its western boundaries. These are in five systems, as the New York Central has controlled the West Shore for sixteen years, and the Pennsylvania has for about a year dominated the Baltimore and Ohio, although without possessing a majority of its shares or in its directorate. The Erie, the Delaware, Lackawanna and Western, and the Lehigh Valley properties are separately managed, although with the Reading and Central of New Jersey they are parties to a "community of interest" that has greatly relieved the situation in regard to anthracite mining. Even in this field the Delaware and Hudson, the New York, Ontario and Western, the Delaware, Susquehanna and Schuylkill and the Pennsylvania

operate independently of the other carriers and of one another. The two southern Trunk Lines are dominated by the Pennsylvania, although in the Chesapeake and Ohio the New York Central is a large shareholder.¹ They are far more important as carriers of bituminous coal than as competitors for Trunk Line traffic. The report is also in error in assuming that the "granger" roads can be grouped apart from the transcontinental lines. The Great Northern, the Northern Pacific, the Union Pacific and the Atchison, all transcontinental roads, are heavy grain carriers and strong competitors of the St. Paul, the Rock Island and the Northwestern for cereal traffic; while the first of the companies in the second group may at almost any time be built to the Pacific coast, the second is already equipped for transcontinental business and the third is strongly allied in traffic matters with the Union Pacific.² In order to perceive the "strong evidence" of a tendency toward general southwestern consolidation spoken of in the report,³ one's eyes would have to be closed to the operations in that region of the Southern Pacific, the St. Louis and San Francisco, the Atchison and the Rock Island systems, none of which is in any degree controlled by the Missouri Pacific or other "Gould" property.

(5) Railway competition is discussed in the report as a topic subordinate to the general subject of discrimination in charges. This inversion is unfortunate not only because it may create an impression that there is no competition except that among routes which can perform identical services — a type of competition that all qualified students have recognized as the principal cause of unjust discrimination — but also because it fails to convey an adequate idea of the important place which

¹ The outstanding share capital of the Chesapeake and Ohio is a little more than \$60,000,000. Of this the Pennsylvania owned \$10,130,000 on December 31, 1901, and the New York Central \$5,000,000 on June 30, 1902. See the annual reports of the companies for the dates named and Poor's Manual of Railways for 1901, pp. 125-126. No such exchange of shares as that alleged, on pages 320 and 321, to have taken place was ever made.

² The St. Paul has, since the above was written, entered into an agreement with the Union Pacific which gives it access to the Pacific coast.

³ P. 321.

competition occupies in the field of railway economics. This portion of the report makes an excellent beginning by calling attention to the fact that the popular idea that there is no railway competition except where there are parallel routes is unwarranted. It declares that there are four distinguishable types of competition in railway transportation, *viz.*:

direct competition of parallel lines; second, indirect competition of widely separated lines; third, the competition between cities; and finally, the competition between markets, which may be within the same country or in distant parts of the world.¹

While the foregoing, with the discussion by which it is followed, will probably rouse many readers from the mischievous belief that there is no escape from railway monopoly except through the wasteful duplication of facilities,² no one will be led by anything in the report to a perception of the real nature or the imperative force of that type of competition which controls the charges for nearly all railway services.

The distinctions which the report attempts to enforce are not real and are therefore misleading. The first two forms of competition suggested are identical. No two railways are really parallel, and in the cases in which that term is applied with the nearest approach to accuracy there are always many towns reached by one of the so-called parallel lines to which the other does not have access. The type of competition which the report attempts to divide between these two classes is simply that of routes which offer to perform identical services. Nearly every route is more or less circuitous, and when this type of competition exists the competitors are sure to have routes of varying length. Certainly the degree of curvature cannot be made the basis of a very fruitful classification. The excess mileage of one route may be more than offset by advantages of trade, roadbed and equipment, by volume of

¹ P. 355. The author of the report gives a fundamentally different classification on page 414.

² Especially as it is followed by the excellent statement that ruinous rate wars, followed either by pooling or by consolidation, constitute the principal result of the direct competition of parallel lines. — P. 355.

traffic, by freedom from unwise legislative restrictions or by other peculiarly favorable conditions. When the competition of circuitous routes is that of lines which, because the business competed for comes to them as extra traffic and because they profit by even the smallest additional contributions to capital expenses, can afford to take it at rates that produce barely more than the cost of handling, it is easily condemned by the superficial; but the careful student is more than likely to find that, within the limits suggested, it is natural and useful.

Neither is there any genuine distinction between what the report calls the competition "between cities" and that "between markets" nor, even if these terms were accurate, would it be proper to designate either as a type of railway competition. Cities and markets are not railways, and they might compete with infinite intensity without in any degree affecting railway charges by their rivalries. True competition among cities or markets would have to be conducted at their own expense, and railways might easily view it with complete indifference. What is really intended to be suggested by these terms is doubtless the competition among producers, in which all those who contribute in any way to production, including carriers of all kinds, must participate. This type of competition, with regard at least to the great staple products, is practically world wide; for it is almost, if not wholly, true that the world has been drawn together by railways, steamships, telegraphs and telephones until it constitutes but a single market. Such competition pervades the entire field of transportation and closely restricts the charge for nearly every service. Each transportation service¹ is a complementary commodity, which has neither utility nor value until joined to some other commodity. In the modern productive system many commodities are grown or manufactured far from the points at which they are to be consumed. They acquire first of all their utilities of form, but the productive process is not complete until a utility of place has been added. But for each

¹ Except in the case of passenger travel for other than commercial purposes, in which case the service is a direct commodity or a consumers' good.

particular volume of supply of any commodity in any market there is a definite price which, so long as the conditions of demand remain constant, will not be varied. Usually this price is a competitive one; but whether it is or is not, it must furnish the compensation for the producers both of form and of place utilities. Railway carriers, however, are not on an even footing with the local producers whose wares they transport in the division of the gross sums for which the commodities sell when the necessary utilities of place have been added. Most articles of general consumption can be grown or manufactured, with greater or less convenience, at the points of consumption and in many other regions, some of them widely separated and each involving the utilization of different transportation routes. The producers of place utilities in each of the supplying regions possess more or less mobility, and those of a particular region will withdraw their labor and capital or transfer them to another field, served by other carriers, if both are not properly compensated. Their products also have definite and ascertainable costs of production. There is no definite cost of production assignable to any specific railway service. Such services are invariably at joint cost. Therefore, when the commodities in the production of which a particular railway service is instrumental are sharply competitive, any sacrifices necessary to maintain their position in the market are certain to fall largely upon the carrier.¹ This is the real force which regulates railway charges and keeps the return to railway capital at the minimum rate which will induce a sufficient supply of funds for renewals and new construction. It is not competition among cities or markets but is in the strictest sense competition among railways and other carriers.²

Instead of four, there are really but two distinct forms of railway competition. The first is that of alternative routes,

¹ H. T. Newcomb, "Observations concerning the Theory of Railway Charges," *Yale Review*, November, 1900.

² The consideration of this form of competition on page 414 of the report, although introduced to support an erroneous conclusion concerning capitalization, is much more satisfactory.

the second that of railways, in combination with the producers of utilities of form, as producers of marketable commodities. The first form of competition operates directly upon the rates at a few places—*viz.*, those that are served by two or more carriers—and tends to reduce the charges at these places below the points at which they would bear the most desirable relation to the general level of rates. By causing wasteful methods and extravagant expenditures this form of competition has the indirect effect of keeping the general level of rates higher than would otherwise be necessary. The second form operates directly upon all rates, except those applied to articles of which the supply can be drawn from but a very restricted region, and tends to reduce them to the level at which aggregate receipts will barely pay operating expenses, including maintenance, and the lowest return upon capital which will induce an adequate amount of the latter to be devoted to the railway industry. The first form of competition is the cause of unjust discrimination; the second fixes the standards by which the fact of reasonableness is to be determined.

The principal weakness in the discussion in the report is that it fails to keep in view even the crude classification of competition which it suggests, and constantly uses expressions that seem to support the contention that the competition of parallel routes has really reduced the general average of charges. If the author of the report had not lost sight of the more complex type of railway competition, he could not so frequently have repeated the fallacy that "local freight rates are the result of a monopoly,"¹ or urged with such apparent confidence the erroneous proposition that railway consolidation tends to retard the fall in the general level of rates and even "opens the way to a higher range of charges."²

(6) There is a widespread popular belief that the capitalization of railway property has been improperly and maliciously augmented for the purpose of extorting from the public exorbitant charges and in order to deceive legislators and railroad

¹ P. 323. See also p. 359.

² Pp. 322-323.

commissions. No other misconception concerning the railway industry has been so prolific a parent of prejudice or so ready a weapon in the hands of demagogues. The report lends its support to this belief. The pages which it devotes to capitalization¹ commence by confusing capital and capitalization, really two very different things, and abound in such terms as "fictitious additions," "flagrant methods," "bonus to bait purchasers" and "increase capital surreptitiously." It fails to take account of the fact that railway corporations own large blocks of railway shares and bonds, which by this very fact are part of the basis of the capital issues of the holding companies, and are thus, so far as purchasers of transportation are concerned, effectively cancelled. In consequence of this oversight the aggregate capitalization of American railways on June 30, 1900, is stated as \$11,491,000,000, and the average per mile of line as \$61,490, while the correct figures are less than these by 16.91 per cent, the difference being due to stocks and bonds, with an aggregate par value of \$1,943,050,349, which were owned by railways.² This error naturally led to a misconception of the plain meaning of recent changes in the capitalization of the American railway system and to an implied adverse criticism based upon the idea that there has been an increase disproportionate to the growth in railway mileage.³ Thus it is declared that "official statistics report the increase of capitalization for 1900 over the preceding year to amount to \$1147 per mile of line," — a statement that is not supported by the figures, even if railway ownership of securities is ignored. The real result by this method is an apparent increase of \$934 per mile of line; but if account is properly taken of the effective cancellation of securities by company ownership, the comparison shows an average decrease from June 30, 1899, to June 30, 1900, of \$674 per mile. The tone of the report when it touches upon the supposed relation between capitalization and rates lends definite support to the

¹ Pp. 397-419.

² Interstate Commerce Commission, Thirteenth Annual Report on the Statistics of Railways, pp. 53, 55.

³ P. 401.

idea that high capitalization is seriously dangerous to the general public. Indeed it is roundly asserted, without argument or evidence, that "in the long run excessive capitalization tends to keep rates high; conservative capitalization tends to make rates low."¹

The belief that increases in capitalization must increase rates, or at least prevent normal reductions, is based upon a singular refusal to accept the evidence of railway history or statistics. Thus in 1900 the region having the lowest average capitalization per mile of line of any of the ten groups used in the statistical reports of the Interstate Commerce Commission, *viz.*, \$42,707, showed average earnings per ton per mile of 8.08 mills; while the region having the highest average capitalization, \$112,255, showed average ton-mile earnings of but 6.13 mills. The average earnings per passenger per mile in the former region was 2.325 cents, and in the latter 1.789 cents.² In reality capitalization is in part a more or less honest expression of the estimates of promoters and reorganizers and, in at least an equal degree, a result of mere convenience. In reorganizations and consolidations it is necessary to exchange new securities for old, and the latter must therefore be given a common denominator in terms of the new. The natural result of this arithmetical process is the augmentation of the number of parts into which the property is theoretically divided. The earnings out of which interest and dividends must be paid are, on the other hand, determined by commercial conditions, a fact which is obviously unaffected even by the supposition that rates may for a time be arbitrarily and unwisely fixed. The securities of different grades and amounts in no way fix the aggregate to be divided among their owners, but merely establish the proportions in which whatever sums may accrue to their benefit shall be divided. A grave source of misunderstanding between the purchasers and the vendors of transportation would be removed if this were commonly understood,

¹ P. 414.

² Interstate Commerce Commission, Thirteenth Annual Report on the Statistics of Railways, pp. 53, 95.

and in further confusing the public mind the report tends to postpone the establishment of railway regulation on a basis of sound public sentiment and adequate comprehension of the essential conditions of transportation. Such jugglery with corporate securities as that recently announced in connection with the Chicago, Rock Island and Pacific is seriously detrimental, in that it is dangerous to investors and destroys that stability which is necessary to make corporate securities a safe and popular means of investing small savings; but it can never affect rates or earnings except in the most remote and circuitous manner. The public should be protected against such proceedings, but probably only by means of adequate provisions for publicity and by the development of a public sentiment, extending even to the American leaders of the *haute finance*, which would make such operations unprofitable.

It must be said, in conclusion, that this portion of the Industrial Commission's work is radically unsatisfactory and grievously disappointing. It displays a disheartening disregard of the obligation to scrutinize with unusual caution every statement of fact or opinion that is to carry to the public the implied authority that attaches to every official report of a federal investigation. It is untrustworthy alike in its statements of fact and in its generalizations, while it manifests but too clearly a disposition to construe every incident of railway practice or history as completely as possible in a manner adverse to the citizens and corporations engaged in that industry. These things will not be clear to the majority of readers of the report, and it cannot fail to mislead many who sincerely desire to comprehend the railway situation.

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REFERENDUM AND INITIATIVE IN CITY GOVERNMENT.

THE theory of recent municipal reform in the United States is that of a "business corporation rather than an integral part of the state." Upon this theory, power and responsibility have been transferred to the mayor, on the ground, as stated by Mr. Seth Low, one of the earliest exponents of the theory, that "in the administration of large business enterprises some one man must be given the power of direction and the choice of his chief assistants." Perhaps its earlier advocates did not intend to carry their theory as far as it has gone; but, however this may be, the mayor in the larger cities has been made, under the influence of the theory, not only the chief executive, but also the chief legislative authority. The climax was reached in New York in the charter of 1897, wherein the initiative in matters of taxation, indebtedness, franchises and improvements was bestowed upon the mayor and the boards appointed by him, with a joint and absolute veto upon the common council, and a personal veto of the mayor equal to a five-sixths vote of the council. It is significant that in the revision of 1900 a reverse step was taken, and the excessive power of the mayor was slightly reduced. At present there is a lull in the progress of the theory throughout the country, caused, perhaps, by its admitted failure in many cases. As shown by the results, the theory neglects factors which demand recognition. What these are, should be, if possible, determined.

Political science and economic science are alike in that they seek a basis in psychology. If the city is exclusively a business corporation, it must call into play only the psychic factors which belong to business. If it is also a political corporation, it must call into play also the psychic factors which underlie politics. These personal factors operate through social organization, and to operate effectively the organization must be so