THE RAILROADS OF THE UNITED STATES UNDER GOVERNMENT OPERATION DURING THE WORLD WAR

by

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THE RAILROADS OF THE UNITED STATES UNDER GOVERNMENT OPERATION DURING THE WORLD WAR

Chapter I.

General Condition of the Railroads Prior to the Declaration of War by the United States, April 6, 1917.

In time of war as it is conducted in modern times, a nation is completely dependent upon its transportation system for the success of its army. During a time of war, railroads have two functions to perform, first the military or strategic function as had the railroads of northern and eastern France and second, the economic function of military operation as had the railroads of the United States. The activities of the railroads of northern and eastern France were concerned entirely with the military operations of the country but the activities of the railroads of this country were concerned with the movement of troops and army supplies and at the same time with maintaining the ordinary commercial and industrial life of the nation. 1.

The railroads of this country were not totally unprepared for such work as our entry into the war placed upon them because the problems relative to that action by

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1. Marshal Joffre, the French military leader during the early years of the World War said, "The battle of the Marne was won by the railways of France. This is a railway war." Dixon and Parmalee--War Administration of the Railways in the United States and Great Britian.--p. iii.

our Government had been thought out beforehand by railroad officials and the preliminary steps toward coordinating and unifying the operations of the railraads had already been taken before the United States entered the war. Former wars in which the United States had been a participant had shown the weak links in our transportation system; so officials knew what steps must be taken in order to secure the results desired.

The first war in the United States in which railroads were a significant factor, was the Civil War. By an Act of Congress on January 31, 1862, the President of the United States was authorized to take possession of the railroads if the public safety required it. During that war a total of 2105 miles, all of it being in the states of Virginia, Mississippi, and North Carolina was taken over by the Government in order to restore connections between the North and the South. This was a war measure only and the lines were restored as soon as the exigency was over.

During the Spanish-American War, the operations of the railroads were a valuable lesson as to the results of decentralization of authority in transportation matters. The railroads transported nearly one-half million men without trouble but completely broke down when they attempted to supply the camps with provisions. Congestion was created in the movement of supplies. Freight cars were not labeled. No one knew what the cars contained or

where supplies were to be found. There was no comprehensive plan or dentralization of authority.

When trouble broke out on the Mexican border in 1915, railroad officials remembered this former experience and took steps to prevent its recurrence. In May 1914, the War Department asked the American Railway Association to locate an officer in Washington who could advise with the Quartermaster Corps, which organization is responsible for all army transportation, and in October 1915, the Quattermaster General asked that the American Railway Association establish a commission on military transportation with which he could co-operate in the movement of troops and supplies. This commission was composed of four prominent railroad officials, Fairfax Harrison, R. H. Aishton, A. W. Thompson, and W. G. Besler.

When mobilization took place in June 1916, one railroad official was stationed at the office of the Quartermaster General, one at each War Department headquarters of which there are five, and one at each mobilization camp. These officials were to assist and give information and advice concerning the movement of troops and Government supplies. Inspectors were also appointed for all unloading points to keep informed as to conditions existing at these places. This action was taken in order to avoid congestion. A committee was also appointed to handle the distribution of passenger equipment, and the Pullman Company established an office in Washington to

direct the distribution of sleeping cars. Movement in all cases was conducted without delay or congestion.

The railroad history of the United States may be divided into three periods, the formative period from 1826 until 1875, the competitive period from 1875 until 1906, and the regulative period from 1906 until the present time or when the railroads were taken over and operated by the Government.2. During the first period the building of railroads was encouraged in every way possible both by the state and the Federal Governments. During the second period or the competitive period there was cut-throat competition and rate wars between the different railroads of the country and although the Interstate Commerce Act was passed during this period, regulation did not become very strict or effective until the third period. The Hepburn Act of 1906 inaugurated the third period in the history of the railroads and regulation under its and the Mann-Elkins Act which was passed in 1910 has been much more strict and effective than during either of the other periods. The Hepburn Act was aimed at the abuses of secret rebates, the wholesale granting of passes, the juggling of railroad finances, and the corrupt political practices of the railroads. It has succeeded in abolishing these and in doing so has rendered the country a very great service but at the same time this

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2. Dunn, Samuel O.--Ten Years of Railroad Regulation, Scribners, October 1916---p.-412.

regulation has had some bad effects upon the railroads. However, in the final analysis, railroad officials are responsible for the enactment of such strict regulation because they would not comply with more lenient laws.

The consolidation and combination of several lines into one system in attempts to eliminate competition, to maintain rate and other agreements, and to evade the law, have caused the railroads a great deal of grief. Such practices aroused suspicion in the minds of the people and made them all the more eager in their demands for more strict railway regulation. The most of such consolidations were formed between 1890 and 1906. Two of the best examples that we have are the Northern Securities Company and the Union Pacific-Southern Pacific Merger.

The Northern Securities Company was a holding company formed by the Great Northern and the Northern Pacific Railroad Companies to hold the stock of these two systems thus preventing other interests from securing control of them. These two systems which jointly owned the Burlington, wished to build up a great transportation system in the Northwest and wanted a permanent basis upon which to build; so the interests of the Northern Pacific and the Great Northern Railroad Companies were united.

The Union Pacific-Southern Pacific Merger which was managed by Harriman who was also at the head of the Union Pacific Railroad, is one of the most remarkable chapters in our industrial history. It was probably the

largest both as concerns geographical extent and financial magnitude of its kind in the world. The Union Pacific purchased the Southern Pacific outright and owned a majority of the stock in several small lines, and a controlling interest in many of the larger systems of the country. That company had a controlling interest in a continuous line of railroads from the Atlantic to the Pacific. The guiding principle in the consolidation was the creation of a monopoly in all transcontinental business, and the problem which was to eliminate competition, was being rapidly solved when the Government took a hand in the affair. The small holdings of other companies enabled the Union Pacific to exercise a powerful influence on the trafffic policy concerned.

The policy of regulation after 1906 was an outgrowth of the previous period when conditions surrounding the railroads were totally different from those existing then. For a few years previous to 1906, the railroads made large earnings and great optimism prevailed. Political leaders, eager for an issue, thought that the public should share in these earnings; so agitation for lower rates began. Public opinion was thus turned against the railroads. A state of mind, hostile to carriers, was created in nearly every legislative body. Railroad officials are partly responsible for the adverse public opinion because of their refusal to recognize the fact that in their operation, the public demands first consideration. If the

public which formerly considered the railroads as sources of private profit only, and railroad officials had long ago recognized the fact that the railroads are vested with a public interest, many of the difficult problems confronting the railroads to-day would have been solved. The reason for such large earnings prior to 1906 was because the railroads had been built and paid for ahead of the traffic. By 1906 the traffic had caught up with the mileage and has remained so since that time. On account of increasing expenses and the increasing difficulty in securing rate advances and new capital the railroads were unable to undertake new construction and to add as much new equipment as was needed, with the result that by the autumn of 1915, they were unable to handle the normal increase in business. Ex-President Taft best summarizes the reasons for the conditions of the railroads in the following:

"The railroads long ago abused their privileges, granted undue discriminations, built up rate trusts, encouraged rebates, and sought to corruptly control legislatures and politics. The people demanded reform. It came slowly in interstate commerce regulation. The railroads flouted the law until in 1910 the Government was given by Congress a supervision so drastic that they could no longer defy the people. Then the restraining of them became too severe, the rates they were permitted to charge were too low, the wages they had to pay were increased by law and

by necessity, then other expenses grew enormously, their incomes were cut or wiped out, and they were driven to the wall. When the war came on they were not able to carry the load thrown upon them, largely because the law prevented such cooperation as would economize their energies, and because the treatment by the Government had taken away their credit to secure the capital to enlarge their facilities."3.

INCREASED OPERATING EXPENSES

The adverse condition in which the railroads found themselves in the autumn of 1915 was due to the lack of earnings. The policy of the carriers had always been to keep equipment and facilities well ahead of the growth of traffic, meeting the costs from income and from the sale of securities. There always was an ample margin of safety for handling the increasing volume of freight and passengers. Their ability to continue such a policy depended on the amount of earnings which acted as a basis for additional credit and as long as they were receiving sufficient earnings they encountered no difficulty in securing new capital through the sale of securities.

For a time, the railroads were able to absorb increasing costs because of lower unit operating costs which came about through the making of improvements and enlarggements and the increased traffic, and while this

3. Taft, Wm.--Mr. Wilson and the Campaign--Yale Review--October 1920--p. 20.

condition existed, investors had confidence in the securities of the railroads but a turning point came about 1906. The gradual rise in operating costs which had been evident since about 1900 or shortly before, coupled with the national and state policy of regulation which tended to decrease rates, soon reduced net earnings. At this time there was a great deal of activity on the part of state commissions and legislatures. Laws, reducing revenues and increasing expenses, were enacted; taxes increased; and labor organizations demanded higher wages. The railroads tried to convice the Interstate Commerce Commission that higher rates were needed but were unsuccessful. The inevitable result which far sighted men had predicted became evident. There was drastic retrenchment and curtailment of service, the only thing possible for the railroads if they were to remain solvent. As it was many of them experienced a great deal of difficulty to keep out of the hands of the receiver, and not all of them did that because at this time about one-sixth of the total railroad mileage of the country was in the hands of the receivers, or more than had ever been in the receiver's hands at any one time previous to this. The point of traffic saturation had been reached.4.

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4. Cunningham, Wm. J.--The Railroad Under Government Operation--Quarterly Journal of Economics--February 1921 --p. 290.

WAGES

The wages were one of the largest items of operating expenses. In 1916, wages were taking the greater part of gross revenue but in September of that year the Adamson Eight-Hour Law which increased them still more, was enacted. This law provided for a basic eight-hour day with pay for overtime at the rate of time and one-half instead of a ten hour day with pay for overtime in proportion to the total time put in as was the case under the previous agreement. This law increased the wage bill directly $60,000,000 and increased it yet another $50,000,000 that had to be paid for overtime.

The following table shows the effects of the Adamson Law: 5.

	1918	1917	1916
Miles represented	250,473	252,029	250,233
Employees, number	1,897,741	1,780,235	1,703,577
Employees, per 100 m. of line	757	706	681
Hours worked(thousands)	5,559,324	5,536,733	5,097,538
Compensation	$2,686,734	1,781,027	1,511,728
Per employee, per yr.	$ 1,416	1,001	877
Per hour (cents)	48	32.5	28.2
Ratio to revenues (%)	54.06	43.71	41.09

Costs of materials.

The next greatest increase in operating expenses was the cost of materials needed in the railroad business.

Increased cost of equipment: 6.

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5. Thompson, S. Railway Statistics of the U.S.--1918-p. 65.
6. Increased Cost of Equipment--Ry. Review--Dec. 9,1916-P.790

	1914	1916
Mikado engines	$20,300	$33,900
Mallet Engines	32,300	51,500
Steel 50 ton freight cars	730	2,000
Steel cabooses	1,200	2,500
Copper	11½¢ per lb.	28¢
Steel rails	26.80 per ton	28.00
Lumber	150% increase.	

Increase of 1916 over 1915. 7.

Fuel	$ 100,000,000
Rails	30,000,000
Locomotives	72,000,000
Passenger cars	18,000,000
Freight cars	105,000,000

Taxes.
Increase. 8.

1912	$ 120,091,534
1913	127,331,960
1914	140,531,575
1915	139,298,167
1916	151,599,841

Some figures regarding rates will be given at this point in order to make a comparison between the trend of expenses and revenue.

Rates. 9. (cents)

1913	.729 per ton mile
1914	.733 " " "
1915	.732 " " "
1916	.716 " " "

Rates were the highest in 1904 that they had been since 1896. In 1896 they were .806¢ per ton mile and in 1904 they were .78¢ per ton mile. Since 1904 they have declined and in 1916 they were the lowest that they had ever been.

These tables show just what the railroads were confronted with in regard to operating expenses. In some

7. Increases of 1916 over 1915--Ry. Age. Apr.6,1917. p. 728.
8. Report of Interstate Commerce Commission--1917--p.36.
9. Report of Interstate Commerce Commission--1917--p.36.

instances the cost of equipment and materials had more than doubled within two years, taxes were about twelve million dollars greater in 1916 than in 1915, while in 1916 rates were the lowest that they had ever been. Operating costs had been gradually increasing for about fifteen years but after 1914 they took a sudden jump upward and as the railroad business is always conducted on a very narrow margin, there should be but little or no surprise then that with the above conditions to combat, the railroads failed to perform their proper function after 1915.

THE TRAFFIC INCREASE

The increase of traffic in the autumn of 1915 caused a great deal of trouble. This was not an increase following a period of expansion as was the case in 1907 but was an increase following a period of depression. If the increase had followed a period of expansion the railroads could have handled it better because they would have had more cars, and would have been prepared better in every way, but from 1913 until 1915 freight traffic declined and there were many idle cars. Managers tried to reduce operating expenses and at the same time tried to convince regulating authorities that a rate increase was necessary but they were unsuccessful in both. The increase in traffic in 1915 was as unheralded and unlooked for as it was unprecedented in amount. The

increase brought a large increase in gross earnings but at the same time expenses began to rise rapidly so that it was impossible for the railroads to maintain their net return upon a satisfactory basis.

When the war broke out in Europe, those countries ceased manufacturing everything except war necessities and they could not fill their own demands for those products; so they had to come to the United States for their raw materials and a great amount of manufactured products. That caused many new manufacturing establishments to be built here. Materials for the construction of these had to be transported. Then, after they were completed, raw material and coal had to be gotten to them to keep them in operation; and finally the finished products had to be transported to the seaports for shipment. In addition to this the railroads had to transport foodstuffs for export and for the new war industries. There was a demand from new traffic and from many different sources of traffic. There was also an abnormal movement in new and unaccustomed directions. These conditions placed much heavier burdens upon the railroads than they were prepared to bear.

CONFLICT OF STATE AND FEDERAL REGULATION.

Much state regulation of railroads conflicted with and much was a duplication of federal regulation. This caused a great waste to the railroads both in time and in

money. Each state desires to protect its own citizens and industries in their competition with those of other states; so laws to that effect were placed upon statute books. Much of this regulation inconveniences the railroads. One state requires screens on the windows but another state forbids them; one state orders cuspidors in cars but an adjacent one forbids them. The states have non-uniform headlight and safety appliance laws; the Federal Government also has a safety appliance law. Such legislation hampers the activities of the railroads and makes it impossible for them to give their best service, and it also weakens the whole transportation system. States seek for that which is best for their citizens, not for that which is best for the nation. But railroads go from one state to another, are operated as a single unit, and not with state lines as division points. State regulating bodies should recognize this point.

OPPOSITION OF THE INTERSTATE COMMERCE COMMISSION TO RATE INCREASES.

The railroads tried many times in the period intervening between 1906 and 1917 to secure rate increases but their demands were generally refused. The Interstate Commerce Commission is composed of a body of intelligent men but many of them went on the Commission with little knowledge of railroading or else were prejudiced against

the railroads. They have dealt only with the pathology of railroad business. In dealing with the railroads, they have acted as a sort of a detective agency and thus have lost sight of the fact that they might do constructive work for the railroads and at the same time protect the public. It seems that some of the Commissioners have let their enthusiasm for protecting the public get the better part of their good judgment and common sense. This attitude on the part of some of the Commissioners is another relic of the conditions existing prior to 1906. The Commissioners have generally, as far as the welfare of the railroads was concerned, used a shortsighted policy in deciding rate cases, giving but little thought to the effect that their decisions might have on the railroads in the future. Of course there are many difficulties encountered in deciding a rate case. Many times it might seem to the average person that a rate advance was entirely justifiable, when if he knew the real conditions surrounding the case, he might change his mind. In many cases a carrier is justified in asking for increased rates, but if they were granted great injustices would be worked to certain interests as for example, coal and lumber operators who are working under a contract for a period of time. Competition between different railroads, between localities, and between industries must also be considered. The Commission has held to the theory that a city is entitled to natural advan-

tages but not to undue preference by carriers. It will not grant rates to allow one market of supply to compete with another, and in deciding long and short haul cases it claims that the interests of the producers and communities are involved as much as those of the carriers.

In deciding the Fifteen Percent Case in June 1917, when the railways of the whole country asked for a fifteen percent increase in rates because they claimed an emergency which required prompt remedial measures existed, the advance was refused to all but lines in Official Classification Territory, and those lines secured only an increase of about eleven cents a ton on bituminous coal, coke, and iron ore between Chicago and New York, because the Commission claimed that the figures presented did not show a country wide emergency, and that these figures also showed most lines to be in a prosperous condition and that action was not justified because of the needs of a few weak lines when most lines were in good condition. The Commission was also of the opinion that refusing to grant higher rates would not retard the prosecution of the war and that granting them would not facilitate its prosecution.

The Commission claims that "A reasonable rate is one which will provide a return to the form of a constant profit." 10. This is a simple definition but one encounters many difficulties in trying to determine just rates upon such a

10. Report of Interstate Commerce Commission--1908--p. 83.

basis. To determine a just rate one should know the size of the investment account of a railroad and in the past this has been a difficult factor to determine because no uniform method of valuation has been worked out until recently; so there was no reliable basis upon which to work when tyying to determine rates upon investment as a basis. The Commission had to accept the accounts of the railroads in such cases and these were not always reliable or best suited to the purpose. This example shows only one of the many difficulties with which the Commission came face to face in trying to reach a decision as to what rate was a just one.

FINANCIAL CONDITIONS

IMPAIRED CREDIT

The small earnings of the railroads had destroyed their basis for securing credit. The credit of a railroad depends upon its earning power and that in turn depends upon the rates which it is permitted to charge. In 1914 and 1915 the credit of the railroads reached its margin. During those years, one-sixth of the total mileage of the country was in the hands of receivers. All railroads that were in the receiver's hands were not there because of conditions due primarily to insufficient earnings. The credit of some of the lines, notably the Wabash, had been used for expansion when it should have been used in purchasing equipment. That line had extensive rather than intensive development. Other systems,

especially the Rock Island and the New Haven had been under the control of unscrupulous and dishonest management and would have been in the receiver's hands even with higher rates. These two systems should have been well paying ones had not their management used the properties as the basis for such financial operations. This placed a heavy debt upon the stockholders from the effects of which it will take many years to recover.

Everything done in the railroad business is a means to secure revenue with which to expand and if railways do not earn enough to do this they will have to borrow. If a railroad borrows too much, its debt becomes out of proportion to its stock and its credit will decline. That is what happened to our railroads.

Before the war started the railroads could have secured capital had they the credit, but after the war started they would have been unable to secure it unless they had paid very high rates and this they were unable to do. After the war started, we were making large loans to the Allies, and this with the demand for capital from the industrial establishments which were bidding high for capital, took all of our surplus capital. Also at this time two-thirds of our foreign held securities were returned and $2,000,000,000 of these were railroad securities.

In 1907 James J. Hill estimated that eight and one-fourth billion dollars would be required in the next five

years to properly move the nations commerce, but during that period only about one-third of that amount was added. He also said that an addition of about five percent should be made annually to mileage but during that same period only one and one-eight percent was added annually. 11.

METHODS OF FINANCE

During the period of insufficient earnings the railroads had to use an increasing amount of bonds and short term notes with which to finance themselves. Their credit was so poor that people would advance them credit only upon the best of security. This method of financing increased fixed charges and caused large expenditures which should have gone for development purposes.

Capital for new construction:- 12. (thousands)

	1914	1915	1916
Bonds	$ 238,377	$ 78,624	$ 57,031
Stock	64,854	12,911	7,070
Total new money	$ 303,231	$ 91,231	$ 64,101
Percent of stock	21	14	11

The above table shows two conditions. The first is that bonds are greatly in excess of stock, and the second is that the amount of money being put into new construction and betterments was rapidly growing less each year. The

11. Hill, James J.--Railroad Situation--Worlds Work, Oct. 1917--p. 593.
12. New Railway Capital--Railway Age--February 23, 1916--p. 300.

credit of most the lines was so poor that they experienced increasing difficulty in their efforts to sell stock. Investors wanted the best of security when they advanced money to the carriers.

THE EQUIPMENT SHORTAGE

In 1914 and 1915, the railroads did not have the money nor the credit with which to purchase equipment, 1915 being an especially bad year. In 1916, an especially profitable year, they had money with which to buy equipment but they could not secure it as fast as it was needed. When the railroads were unable to buy equipment, manufacturers reduced its production with the result that when a heavy demand was placed upon them they were unable to meet it. The same condition probably would have existed not to such a great extent though, if the railways had been able to buy equipment in 1914 and 1915. Business was slack during those years and many idle cars were standing on the tracks deteriorating; so there is little possibility that the railroads would have bought extra cars even had they foreseen the heavy future demand, and have allowed them to stand idle on the tracks. Manufacturers of equipment would have been in the same condition in either case.

In 1915, there was congestion in eastern terminals and sporadic and local car shortages but the situation did not become serious. This condition nearly always

occurs in the fall and winter months when crops are being moved, due to the fact that cars cannot be unloaded at terminals. Again in the autumn of 1916, the situation became worse than ever and rapidly grew worse until in the winter and spring of 1917 we had the worst car shortage in the history of the country.

There are many reasons for the congestion in eastern terminals and the resulting car shortage in the west, probably the most important one being the lack of shipping space for export traffic. Ocean travel at this particular time was very uncertain because of the effectiveness of German submarine warfare. When there was no ship awaiting exports all that could be done was to leave the goods in the car or unload them upon the ground. While the latter practice was employed to some extent, the former was employed most because prices were so high that owners of the products could afford to pay demurrage charges.

Another very important reason also was the shortage of motive power and the use of antiquated machinery in shops, which caused a loss in the time of making repairs. Frank McManamy said, "Ten million dollars spent on shop machinery and equipment before the war started would have made the Government control unnecessary."13. The railroads were at this time especially short on switching and short haul power.

A third reason for the congestion was bad traffic rules. Cars were used as store houses; there was no

13. Shop and Engine House Equipment and Facilities,-- Railway Age, January 3, 1920--p. 405

priority in shipment; movement was slow, for four to eight days being the average from points in Iowa to Chicago, and there were delays in switching to points of unloading and through terminals. The reconsignment of cars by shippers was also responsible for much trouble. There was also a lack of rules for the interchange of cars. Western lines lost all their cars to their eastern connections. On October 9, 1916, other lines owed the Union Pacific a balance of 24% of its equipment. 14.

A fourth reason was the attempt of shippers to sell all of their products at ance. Prices were good and people were anxious to get the goods off of their hands as quickly as possible, consequently in most cases they were shipped far in advance of the time when they would be needed. In 1914, the wheat crop was also a heavy one and the farmers tried to move it all at once because of the high quality and the high price of the grain. There was a lack of elevator capacity, so cars were used for that purpose.

Other reasons were the lack of terminal facilities, the lack of labor, many of the laborers having gone into the war industries where wages were higher, bad weather which delayed the movement of trains, and the use of coastwise and inland waterway ships for ocean transportation, thus placing the work formerly done by them

14. Interstate Commerce Commission Inspectors Investigate Car Shortage in Nebraska, Railway Age, Oct.27, 1916--P. 743.

upon the railroads.

In summarizing this section, it can be said that the bad traffic situation was an emergency growing out of the war. The unseen and unequalled demand for facilities to move the traffic placed a burden upon the railroads which they could not carry. Attempts were made by the railroads in the form of increased demurrage rates and embargoes to remedy the situation and while these aided a great deal yet the situation gradually grew worse and worse until in February 1917 a collapse of the whole transportation was evident.

Chapter II.

Operations of the Railroads from the Entry of the United States into the World War, April 6, 1917, until the Assumption of the Railroad Control and Operation by the Government, December 28, 1917.

After the United States declared war on Germany, it became a matter of prime importance that the operations of the railroads should be unified more than had ever been the case previously, because a heavier burden than ever would now be thrown upon them. In addition to the work that they had been doing they would now be required to transport materials for the construction of army camps, ships and aeroplanes, to transport soldiers to those camps and to ports of embarkation, and to transport foodstuffs and equipment to the camps and to the seaports for shipment across the ocean to the soldiers who would be sent abroad. This was an immense task to give them considering the condition of their traffic affairs at the time and considering the bad winter through which they had just gone. Our entry into the war came at a very inopportune time for the railroads because their traffic was almost completely disorganized. Operating under difficulties as they were, the fact was obvious that they would have to exert themselves to the limit if the railroads were to perform their function in the manner that was to be expected of them. The railroad executives recognized the seriousness of the situation and acted quickly in an effort to meet the emergency.

In the Army Appropriation Act of August 29, 1916, was a provision for the establishment of a Council of National Defense, designed to be a body of peace time effort "for the coordination of industries and resources for the national security and welfare"1 before war should come upon the land. The framers of this provision framed it to meet the Mexican trouble, there being no thought in their minds at the time that we would enter the World War. This Council was composed of six Cabinet officers and an Advisory Committee of seven members who were persons with a knowledge of some special industry. The members of this Committee were to perform duties assigned by the Committee in general. The first duty assigned to the Committee was the location of railroads with reference to the frontier of the United States so as to render quick transportation of troops and supplies to points of defense; their coordination for military, industrial, and commercial purposes in the location of extensions and branch lines; and the utilization of waterways. The President of the United States appointed Daniel Willard, President of the Baltimore and Ohio Railroad Company as the person on the Committee to have charge of transportation problems.

When war was declared on April 6, 1917, the Council of National Defense called upon the railroad officials

1. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 17.

to so organize their business as to lead to the greatest expedition in the moving of freight. A meeting of railroad officials was called immediately and on April 11, seven hundred railroad executives met in Washington, D. C. to decide what was to be done. At this meeting the Railroads' War Board, consisting of five members, was formed under a resolution signed by the chief executive of practically every railroad in the country. The members of this Board were: 2.

Fairfax Harrison, Chairman-President of the Southern Railroad.
Samuel Rea----------President of the Pennsylvania Railroad.
Howard Elliot----------Chairman of the Committee of Intercorporate Relations of the New Haven.
J. Kruttschnitt----------Chairman of the Board of Directors of the Southern Pacific.
Hale Holden----------President of the Chicago, Burlington, & Quincy Railroad.

Daniel Willard of the Advisory Committee of the Council of National Defense and E. E. Clark of the Interstate Commerce Commission were members ex-officio.

The activities of the Railroad War Board was coordinated with those of the Council of National Defense and those of the Interstate Commerce Commission by a member of each of these being a member ex-officio of the Railroad War Board. These two ex-officio members participated in the deliberations of the Railroads' War Board and in the shaping of its policies. There was

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2. Dixon & Parmalee--War Administration of Railways in The United States and Great Britian--p. 21.

also cooperation between the Railroads' War Board and the army and navy, and the Food and Fuel Administrations, and points of contact were established with nearly all other governmental agencies. 3.

The executives who inaugurated the Railroad's War Board pledged themselves to operate their systems in a continental system during the war "merging during such period all the merely individual and competitive activities in the effort to produce a maximum of national transportation efficiency".4. Although this, the patriotic motive was the main reason for the efforts put forth by the executives, it was not the only one. Another object expressed by more than one railroad executive, to be attained was that they "Proposed to demonstrate to the country that a co-operative organization of private railway corporations could so successfully meet the situation that Government interference with operation would be unnecessary". 5. The officials of the railroads recognized the fact that they were on trial and that failure on their part meant Government operation of the railroads, and that should such operation become a necessity, a change to pre-war status might not be likely nor possible.

The operations of the railroads were to be directed by the Executive Committe of the Railroads' War Board acting through regional committees who in turn acted through the chief executive of each individual railroad.

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3. Cunningham, W. J.--The Railroads under Government Operation, Quarterly Jr. of Economics--Feb. 1921--p. 295.
4. Dixon, F. H.--The Operations of the Railways during the War, Journal of Political Economy--Aug. 1919--p. 577.
5. Dixon, F. H.--The Operation of the Railways during the War, Journal of Political Economy--Aug. 1919--p. 578.

The chairman of the regional committees together with the Executive of the Railroads' War Board and the members ex-officio made up the complete board. These regional committees exercised control in territories corresponding to the five army departments, namely the Northeastern, the Eastern, the Southeastern, the Central, and the Western.

The Railroads' War Board did not have authority to compel the railroads to comply with its orders. The extent of its powers was to give suggestions and make rules which would aid the railroads. It derived none of its powers from the Government. It was formed by the railroad officials themselves and exercised powers which were entrusted to it by them. Although the Board could not compel the railroads to comply with its orders, yet the railroads did this in most cases because they recognized the difficulties with which they were confronted. The work of this Board was to so coordinate and unify the operations of the railroads of the country that they could meet the requirements for the movement of troops and Government material and at the same time maintain the ordinary commercial life of the nation. The whole problem was to secure better operating efficiency.

At the same meeting when the Railroads' War Board was formed, the Special Committe of the Council of National Defense was enlarged to thirty three members and divided into six departments to correspond to the six War Departments, and seven subcommittees under the

supervision of the Railroads' War Board and reporting to it, were formed. The name of these different committees shows in a general way the work for which they were responsible. These Committees were: 6.

A Committee on Car Service.
A Committee on Military Transportation and Accounting.
A Committee on Military Equipment and Standards.
A Committee on Materials and Supplies.
A Committee on Military Passenger Tariffs.
A Committee on Military Freight Tariffs.
A Committee on Express Transportation.

METHODS USED IN SECURING OPERATING EFFICIENCY

As has been said, the whole problem confronting the railroads was to secure operating efficiency and the methods which were employed in endeavoring to secure that will now be described. 7.

1. The pooling of Coal shipments.

All Coal that was destined for Lake Erie ports was pooled in shipment regardless of ownership. This saved 1½ days for each coal car. All lake ore shipments were pooled on the return trip. These two movements saved 5200 cars during the season of navigation.

Bituminous coal to tidewater ports was also pooled. This plan reduced the grades of coal from 1156 to 41. There was no longer the holding of coal until a cargo of a certain grade was accumulated. This plan saved 133,000 cars. There was an increase of 20.9% in the number of cars moved from May until September as compared with the same period for 1916.

2. Embargoes.

Embargoes were used when congestion threatened, when shippers ordered more cars than they could load,

6. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 21.
7. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 25.

or when consignees ordered shipments without contracting in advance for vessel space.

3. More intense car loading.

Here was the center of the drive for operating efficiency. Ordering in full carloads and co-operation among buyers by clubbing together in buying for a single destination was encouraged. Shipments for a single destination were concentrated. Whole trainloads of flour and of corn and oats were shipped from Minneapolis, Minnesota to New England. Double and triple minimum loads were put in cars.

Increase in loading units. 8.

Cotton	from	50	to	75 bales.
Sugar	"	24000 lbs.	to	60000 lbs.
Potatoes	"	125 bbls.	to	200 bbls.
Cement	"	70000 lbs.	to	77000 lbs.
Flour	"	46000 lbs.	to	62000 lbs.
Coal	an increase of 111%.			

4. Committees on car service.

The Committee on Car Service stationed subcommittees throughout the country to anticipate trouble and to localize complaints. Weekly reports on the grain situation including the amount in elevators and the amount shipped were made. The car inspection service reduced the number of cars required in face of an abnormal export of 76,000,000 bushels of grain from May until July.

5. The pooling of freight cars.

Freight cars were pooled and used where they were needed worst. Committees were appointed with full power to draft locomotives and cars from western and southern roads to be used on eastern lines.

6. The elimination of unnecessary passenger service.

Special and excursion trains were reduced in number as were luxury cars and luxurious bills of fare. The number of trains on branch lines was reduced; through passenger service was consolidated, some trains being eliminated; no double header passenger trains were run if it were possible to get along without

8. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 34.

them; mixed thain service was substituted; and through trains were required to do local service. these regulations conserved fuel, man, and motive power for more essential service.
This reduction in passenger service was mainly east of Chicago. There was too much competition between trans-continental lines for much reduction of service there.

7. Other methods.

Other methods employed were the pooling of terminal facilities, the keeping of a careful watch over cars needing repairs, the speeding up of movement all along the line, and requiring that interline shipments should be accompanied by the revenue way-bill in order to avoid delay at interchange points and at destination by being required to wait until the way-bill came through the mails.

Congress was not content to leave the railroads entirely to themselves in making regulations and rules because of the seriousness of the situation. Accordingly, upon the recommendation of the Interstate Commerce Commission, the Esch Car Service Act was passed on May 29. By this Act, every carrier was required to establish, observe, and enforce just and reasonable regulations and practices with respect to car service.

A second Act of Congress was the Priority Act of August 10, 1917. This Act authorized the President to direct that carriers both rail and water, should give preference to such traffic as was in his judgment essential to the national defense. R. S. Lovett, Chairman of the Executive Committe of the Union Pacific Railroad Company, was appointed Priority Director. Two orders were given under the provisions of this Act before the Government

assumed control of the railroads. The first one, given on August 20, was to avert a threatened coal famine in the Northwest. Under the order, railroads were to give preference to coal for Lake Erie ports because an insufficient amount was going there to supply communities served by those ports during the winter. The second order was in regard to the use of open top cars. By it, shippers were forbidden to use such cars for purpose other than the shipment of coal, Government shipments, and other essential products. Some shippers had been using the cars for shipping non essential products as was the case in Ohio where 6000 cars were being used weekly in hauling road building material.

THE SUCCESS OF THE RAILROADS' WAR BOARD.

The operation of the railroads under the Railroads' War Board was not an unqualified success nor was it a complete failure. During the year congestion was reduced while the amount of traffic was steadily increasing. On May 1, the country experienced the greatest car shortage it had ever known but by June 1 it had been reduced 30%. The campaign for the heavier loading of cars caused an increase of 8.9% over 1916. 9. 25,000,000,000 more ton miles of freight were handled during the first six months than during the same period in 1916. In nine months this Board succeeded in moving 18% more coal and 14% more

9. American Railway Efficiency During the War--Railway Age, Jan. 4, 1918--p. 18.

of all freight than was moved in 1916. In addition the extra freight they also moved 2,000,000 soldiers and their equipment, and moved 34,000 carloads of freight to cantonments, which cantonments required a total of 2500 cars daily in provisioning the soldiers and laborers within them.

The success attained by the Railroads' War Board is shown by the following table:- 10.

FREIGHT OPERATIONS.
Seven Months ending October 31. (Roads with annual operating revenues above $1,000,000)

Item	Per cent of Increase of 1917 over 1916.
Freight train miles	4.4
Freight locomotive miles	4.8
Freight car miles	
Loaded	2.9
Empty	4.3
Total	3.3
Revenue ton miles	12.6
Non-revenue ton miles	10.3
Total revenue and non-revenue ton miles	12.4
Average no. of freight locomotives in service	1.3
Average number in shop or awaiting shop	d 8.0
Per cent in shop or awaiting shop	d 9.2
Average number of freight cars in service	2.5
Average number in shop or awaiting shop	d 5.6
Per cent in shop or awaiting shop	d 7.9
Tons per train	7.7
Tons per car	9.2
Tons per loaded car	9.3
Average miles per locomotive per day	3.5
Average miles per car per day	0.7
Average miles operated, single track	0.1

(d - Decrease)

This table reveals a striking picture of operating

10. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 37.

efficiency. It will be noticed that the increase of equipment was very small; so results were accomplished with the existing equipment. Efficiency was secured, first by the heavier loading of cars, and secondly in the greater mileage made by cars. Equipment held for repairs decreased. This fact may be due to one of two causes or to both. Repairs were made more quickly or else equipment was not sent to the shops but was kept in operation as long as it could be used. Greater speed was attained by the locomotives while at the same time they were hauling heavier loads. In 1917, they pulled a twelfth more in each train and covered more miles per day than in 1916.

However in November 1917, railroad officials saw that they were facing defeat unless more traffic could be moved. The operating efficiency was increasing over that of 1916 but the rate of increase was declining while the amount of traffic to be moved was growing larger. The Railroads' War Board did everything possible to avert disaster, but conditions steadily grew worse. Freight congestion was increasing rapidly on the lines serving ports on the Atlantic seaboard. There are four important reasons for this congestion as seen by Mr. Cunningham of Harvard University. 11.

The first of these is the inadequacy of facilities to handle the increased amount of traffic. The principal

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11. Cunningham, Wm. J.--The Railroads Under Government Operation, Quarterly Journal of Economics, Feb. 1921--p. 297.

difficulties were in the terminals at Pittsburg, Baltimore, Philadelphia, and New York. The greater share of the war traffic of the remainder of the country had to go through these terminals and the railroads had to supply raw materials and take finished products from the manufacturing plants which were concentrated in the states near to those points. The shortage of terminal facilities in this region delayed the unloading and movement of cars.

A second cause was the failure to regulate the flow of export traffic. Export freight was accepted without regard to the available ship capacity. Some of the Allied orders were under contracts that provided for the payment of a large percentage of the invoice as soon as the materials were loaded on the cars. This was true especially of the contracts with Russia and when that country broke down, large amounts of materials were left on cars at both Atlantic and Pacific seaports. The profits to the manufacturers on these contracts were large and the traffic departments of the railroads were anxious to secure the increased tonnage so there was every inducement to load the materials as early as possible. The trouble started at the eastern seaports and gradually backed up to intermediate yards, then to the producing centers east of Pittsburg, and finally to Chicago and Mississippi river points. A car shortage in the west was the result of this eastern congestion.

A third cause was the lack of an effective agency

for determining the degree of priority for products and for coordinating the demands for Government shipments, which shipments had, under the Interstate Commerce Act, priority over all others in time of war. Each Government Department wanted priority for its freight and as this class of freight made up a large amount of the shipments of eastern lines, great demoralization of traffic resulted.

A fourth cause of the congestion was the failure on the part of the railroads to curb competitive influences. This was only natural though because the railroads had been brought up under the policy of competition and there was difficulty in departing from such a policy expecially in so short a time.

When conditions became so bad there was much agitation for a different method for operating the railroads. Many plans were advanced some favoring one kind of operation and some another but all were of two general types, that the Government should either assume control of the railroads during the war, or else existing laws should be so modified as to permit the railroads under the existing method of operation, to meet the need. Early in December a special report of the Interstate Commerce Commission was published and this document had more influence than anything else in influencing the plan of operation adopted. In this report, the Commission gave the fundamental causes for the failure of the railroads to meet the transportation needs of the country and the plan which it believed should

be adopted. The opinion of some of the Commissioners will be given below.

Mr. Hall was of the opinion that the policy of governmental regulation was largely responsible for the failure of the railroads under the management of the owners. He said that the competitive principle had been fostered and guarded, this causing the railroads to seize and retain every point of vantage for their particular roads. Poolings, mergers, rebates, and the consolidation into large systems grew out of rate wars which the Commission tried to prevent. Regulative acts were framed in time of peace and were for peace conditions. Those acts looked toward the protection of the nation and its commerce in time of war. After the United States entered the war, it became clear that unification in operation was indispensible to the fullest utilization of the railroads. 12.

"The Interstate Commerce Act was not enacted to meet such a situation. Carriers have the right to demand just and reasonable rates to yield a fair return after other expenses are met. The railways must not be permitted to become less efficient at such a time. Increased rates cannot bring capital in sufficient amounts." 13.

"The carriers should be permitted to unify in a lawful manner. Anti-trust laws should be suspended during the war with the exception of the section on anti-pooling and one with respect to consolidation or mergers of parallel and competing lines as applies to rail and water carriers". 14.

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12. Hall, H. C.--Report of Interstate Com. Com.--1918-p. 5.
13. Hall, H. C.--Report of Interstate Com. Com.--1918-p. 6.
14. Hall, H. C.--Report of Interstate Com. Com.--1918-p. 7.

Commissioner McChord believed that voluntary co-operation could not be effective. Voluntary committees could not accomplish what the situation demanded because the element of self-interest, the traffic influence, was a persistent factor in postponing and resisting measures that seek to disregard individual rights in the efforts to secure transportation results as a whole. Individual and competitive activities have their effect in spite of voluntary agreements. There also runs in the activities of committees an inclination to do whatever is needed to prevent government authority from acting.

"We need the strong arm of governmental authority. We must have action that is strong and vigorous."15.

As to the position of the railroads during the period of voluntary co-operation, Mr. Sakolski says,

"In nine months before the Government took over the railways, they floundered in a sea of irresponsible centralized direction while under private and responsible financial management. The companies surrendered their individual initiative and independence without any adequate relief to assure their financial or corporate integrity. Under this system, the operating difficulties multiplied so that government operation was both a military and financial necessity. There can be but little doubt but that the owners and managers benefitted through government operation." 16.

The immediate cause of the breakdown was the heavy increase in traffic coupled with a too generous use of the preferance tag and the bad weather. War industries were speeded up, some being placed upon a 24 hour basis. This created an abnormal demand for facilities to transport fuel and finished products. The use of the preference

15. McChord, C. C.-Report of Interstate Com. Com.-1918-p.7.
16. Sakolski, Am M.-Present Situation-Com. & Fin. Chronicle, March 20, 1920--p. 12.

tag in Government shipments defeated its own purpose. There should have been some central authority to determine the degree of priority of shipments but none was provided. The entire winter of 1917-1918 was the most severe one known and the railroads suffered much on account of this. Besides the delay occasioned by bad weather, marine terminals were blocked with ice and there was almost no co-operation at all between rail and water transportation.

The railroads, during the period of voluntary co-operation, succeeded in speeding up their machinery and moved more traffic than had ever been moved before in the same length of time, but they came to a place where, under existing conditions and laws, they could go no farther unless some of the restrictions upon them were removed. It would, in the estimation of the Interstate Commerce Commission, have taken longer to modify the existing laws in regard to railway operations, than for making plans for Government operation of the lines; so the Government, on December 28, 1917, assumed operation of the railroads of the nation.

In assuming control of the railroads, President Wilson, said of the Railroads' War Board,

"The group of railway executives who were charged with the task of actual coordination and general direction, performed their difficult duties with patriotic zeal and marked ability, as was to have been expected and did, I believe, everything that it was possible for them to do under the circumstances. If I have taken the task out of their hands, it has not been because of dereliction or failure on their part, but only because there were some things the Government can do and private management

cannot do." 17.

Thus the period of voluntary co-operation on the part of the railroad officials themselves, during which there were many radical changes from former railroad policies, ends and the railroads enter into a new period far different to any that they had ever experienced before. The President's Proclamation of December 26, 1917, in which he stated the policy to be followed in regard to the railroads for at least during the duration of the war, removed all uncertainties concerning the railroad policy. Railroad officials were relieved of much anxiety when the President assumed control of the railroads and every interest in the country was glad that he took the action that he did. There was not a dissenting voice when the railroads passed under Government control and operation.

17. Dunn, Samuel O.--Regulation of Railways--p. 12.

Chapter III.

The Actual Period of Government Operation:-(December 28, 1917 to March 1, 1920.)

On December 26, 1917, President Wilson utilized the power given him in the Army Appropriation Act of August 29, 1916, and in a proclamation issued on the former date, stated that the railroads of the United States would pass from private to Government operation at noon on December 28, 1917, giving as his reason for the action that,

"It had become unmistakably plain that only under Government administration can the entire equipment of the several systems of transportation be fully and unreservedly thrown into a common service without injurious discrimination against particular properties. Only under Government administration can an absolutely unrestricted and unembarrased common use be made of all tracks, terminals, terminal facilities, and equipment of every kind. Only under that authority can new terminals be constructed and developed without regard to the requirements or limitations of particular roads." 1.

The greater part of the President's proclamation will be given here because it states in a clear manner the method of operating the railroads, the administration and its organization, and also the methods to be followed in making contracts with the individual carriers. The sections of the proclamation that refer specifically to the railroads read as follows:-

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1. Report of the Interstate Commerce Commission--1918--p.10.

"Now therefore I, Woodrow Wilson, President of the United States, under and by virtue of the power vested in me by the foregoing resolutions and statute and by virtue of all other powers there to me, enabling do hereby, through Newton D. Baker, Secretary of War, take possession and assume control at 12 o'clock noon on the twenty-eight day of December 1917, of each and every system of transportation and the appurtenances thereof located wholly or in part within the boundaries of the continental United States, and consisting of railroads, and owned or controlled systems of coastwise and inland transportation, whether operated by steam or by electric power, including also terminals, terminal companies and terminal associations, sleeping and parlor cars, private cars and private car lines, elevators, warehouses, telephone and telegraph lines and all other equipment and appurtenances commonly used upon or operated as a part of such rail or combined rail and water systems of transportation to the end that such systems of transportation be utilized for the transfer and transportation of troops, war material and equipment to the exclusion so far as may be necessary of all other traffic thereon and that so far as such exclusive use be not necessary or desirable, such systems of transportation be operated and utilized in the performance of such other services as the national interest may require and of the usual and ordinary business and duties of common carriers.

"It is hereby directed that the possession, control, operation and utilization of such transportation systems hereby by me undertaken shall be exercised by and through Wm. G. McAdoo, who is hereby appointed and designated Director General of Railroads. Such Director may perform the duties imposed upon him, so long and to such extent as he shall determine, through the boards of directors, receivers, officers and employees of said systems of transportation. Until and except so far as said Director shall from time to time by general or special orders otherwise provide, the boards of directors, receivers, officers, and employees of the various transportation systems shall continue the operation thereof in the usual and ordinary course of the business of common carriers, in the names of their respective companies.

"Until and except so far as said Director shall from time to time otherwise by general or special orders determine, such systems of transportation shall remain subject to all existing statutes and orders of the Interstate Commerce Commission, and to all statutes and orders of regulating commissions of the various states in which said systems or any part thereof may be situated. But any orders, general or special, hereafter made by said Director shall have paramount authority and be obeyed as such.

"The Director shall, as soon as may be after having assumed such possession and control, enter upon negotiations with the several companies looking to agreements for just and reasonable compensation for the possession, use, and control of their respective properties on the basis of an annual guaranteed compensation, above accruing depreciation and the maintenance of their properties, equivalent, as nearly as may be, to the average of the net operating income thereof for the three-year period ending June 30, 1917, the results of such negotiations to be reported to me for such action as may be appropriate and lawful.

"But nothing herein contained, expressed or implied, or hereafter done or suffered hereunder, shall be deemed in any way to impair the rights of the stockholders, bondholders, creditors, and other persons having interests in said systems of transportation or in the profits thereof to receive just and adequate compensation for the use and control and operation of their property hereby assumed.
"

"Regular dividends hitherto declared, and maturing interest upon bonds, debentures andoother obligations, may be paid in due course; and such regular dividends and interest may continue to be paid until and uless the said director shall, from time to time, otherwise by general or special orders determine; and, subject to the approval of the director, the various carriers may agree upon and arrange for the renewal and extension of maturing obligations.

"----------But for the purpose of accounting said possession and control shall date from twelve o'clock midnight on December 31, 1917." 2.

Immediately upon his appointment, Director General McAdoo went to work to organize his working staff, or the Railroad Administration as the body was called. He selected his assistants from among men who were experienced in the railroad field and most of the accomplishments of the Railroad Administration were due to the whole-hearted and loyal efforts of these men. The Director General had only one purpose in view, to operate

2. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 198.

Supplement No. 1 to the Railway Age of December 20.

Supplement No. 2 is a list of the officers of the Railroads under Federal control

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Rear-Admiral C. J. Peoples
P. A. S. Franklin
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R. L. McKellar, Secretary

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F. P. Gaines, Vice-Chairman
J. J. Dermody — W. E. Morse
C. E. Lindsay — A. O. Wharton

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913 I. C. C. Bldg., Washington
M. Brice Claggett, Private Secretary to Director General
OSCAR A. PRICE, Assistant to Director General
*Resignation effective Jan. 1

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Advisory
612 I. C. C. Bldg.

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1010 I. C. C. Bldg.
Ballard Dunn, Assistant Actuary
Bureau of Suggestions and Complaints
The above and
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J. F. Jarrell
E. H. Lamb
Frank F. George
*Resignation effective Jan. 1

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W. J. Flynn
Chief of Secret Service
Phillip J. Doherty, Counsel
Property Protection
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A. T. HARDIN, District Director
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Freight Traffic Committee
141 Broadway, New York
ROBERT L. RUSSELL, Chairman
Richard Van Ummerson
Archibald Price
Elmore D. Hotchkiss
Joseph R. Ruffin
W. A. Moore, Secretary

Ohio-Indiana District
H. A. WORCESTER, District Director
721 Union Central Bldg., Cincinnati, O
Hugh McVeagh, Executive Assistant

Allegheny Region
C. H. MARKHAM, Regional Director
Broad Street Sta., Philadelphia, Pa.
M. P. Blauvelt, Asst. Reg. Dir.
L. W. Baldwin, Operating Assistant
C. R. Capps, Traffic Assistant
J. B. Fisher, Transportation Assistant, Mechanical Assistant
E. B. Temple, Engineering Assistant
L. D. Shearer, Supervisor Tel. & Tel.

J. R. KEARNEY, Chairman
Sailing Day Plan Committee

Regional Purchasing Committee
E. H. BANKARD, Chairman
J. D. Landis

Pocahontas Region
N. D. MAHER, Regional Director
Roanoke, Va.
T. S. Davant, Traffic Assistant
D. E. Spangler, Trans. Asst.
G. W. Jett, Supervisor Tel. & Tel.

Regional Purchasing Committee
E. T. BURNETT, Chairman
B. T. Jett

J. A. TALBOTT, Chairman
Sailing Day Plan Committee

Southern Region
B. L. WINCHELL, Regional Director
Healy Building, Atlanta, Ga.
J. T. King, Acting Operating Assistant
A. R. Smith, Traffic Assistant
Staff Officers
J. W. Small, Mechanical
J. T. King, Transportation
H. N. Rodenbaugh, Engineering
E. H. Dulaney, Traffic
G. W. Lamb, Accounting
W. L. Stanley, Claims and Claim Prevention
J. A. Jones, Telegraph and Telephone

Regional Purchasing Committee
F. H. FECHTIG, Chairman
Albert C. Mann

W. L. STANLEY, Chairman
Sailing Day Plan Committee

Southern Export Committee
CHARLES T. AIREY, Chairman
Atlanta, Ga.

Northwestern Region
R. H. AISHTON, Regional Director
226 West Jackson Blvd., Chicago
W. G. Bierd, Assistant Regional Director
J. G. Woodworth, Traffic Assistant
J. L. Haugh, Engineering Assistant
E. D. Brigham, Manager, Ore, Coal and Grain Traffic, Duluth, Minn.
J. B. Cook, Supervisor Coal Traffic, Butte, Mont.
Roy W. Morris, Supervisor, Tel. & Tel.

T. M. PROCTOR, Chairman
Sailing Day Plan Committee

Regional Purchasing Committee
L. S. CARROLL, Chairman
F. A. Bushnell

Puget Sound District
L. C. GILMAN, District Director
209 O. W. Passenger Station, Seattle
W. C. Wilkes, Asst. to Dist. Dir.

Central Western Region
HALE HOLDEN, Regional Director
547 Jackson Boulevard, Chicago
B. B. Greer, Assistant Regional Director
F. E. Clarity, Transportation Assistant
H. A. Scandrett, Traffic Assistant
H. R. Safford, Engineering Assistant
T. E. Paradise, Mechanical Assistant
Richard B. Thornton, Inspector, Tel & Tel.
B. J. Rowe, Supervisor Coal Traffic, Chicago
H. K. Mack, Supervisor Coal Traffic, Herrin, Ill.
Geo. Williams, Supervisor Coal Traffic, Denver
J. D. Kenworthy, Supervisor Coal Traffic Salt Lake City, Utah

GEORGE MORTON, Chairman
Sailing Day Plan Committee

Regional Purchasing Committee
L. N. HOPKINS, Chairman
M. J. Collins
E. A. Clifford, Assistant

WILLIAM SPROULE, District Director
San Francisco, Cal.

Southwestern Region
B. B. BUSH, Regional Director
Ry. Exchange Bldg., St. Louis, Mo.
W. G. Vollmer, Assistant Regional Director
E. A. Hadley, Engineering Assistant
W. B. Biddle, Traffic Assistant
G. W. Briece, Supervisor of Transportation
C. H. Wood, Supervisor of Car Service
W. Rogers, Tel. and Tel. Eng.
H. E. Mack, Gen. Supervisor Mail Traffic
H. A. Weaver, Supervisor Coal Traffic, Kansas City
H. K. Mack, Supervisor Coal Traffic, Herrin, Ill.
R. L. Sweringen, Supervisor Oil Traffic, Kansas City
W. A. Hopkins, Supervisor of Stores

Regional Purchasing Committee
C. A. HOW, Chairman
J. L. Cowan

F. M. LUCORE, Chairman
Sailing Day Plan Committee

Southern Export Committee
CHARLES T. AIREY, Chairman
Atlanta, Ga.
J. W. Daley, Galveston
W. M. Rhett, New Orleans

Texas District
F. G. PETTIBONE, District Director
M. K. & T. Ry. Office Bldg.
Dallas, Tex.

the railroads efficiently as an arm of the Government in war, and he took no chances with political appointees. The organization of the Railroad Administration was as follows:- 3.

W. G. McAdoo----------Director General.
Henry Walters----------Operating Advisor.
J. Skelton Williams----Advisor on Financial Matters.
Hale Holden----------Supervisor of Railroad War Board Organization.
Edw. Chambers----------Advisor on Traffic Matters.
W. D. Hines----------Advisor on Legal Matters.
A. H. Smith----------Assistant to Director General.
R. S. Lovett----------Priority Director.
W. S. Carter----------Labor Advisor.

Other appointments were made but these are sufficient to show the general character of the organization and the type of men chosen to fill the positions. The complete organization of the Railroad Administration, both national and regional, is shown in the accompanying chart.

For operating purposes the country was divided into first three and later into seven regional districts with regional directors who were experienced railroad men, in charge of each, assisted in some cases by a district director. The Regional Directors had general supervision over the lines in their respective districts and their duty was to see that the orders and regulations of the Railroad Administration were complied with and to keep that body informed as to conditions in their

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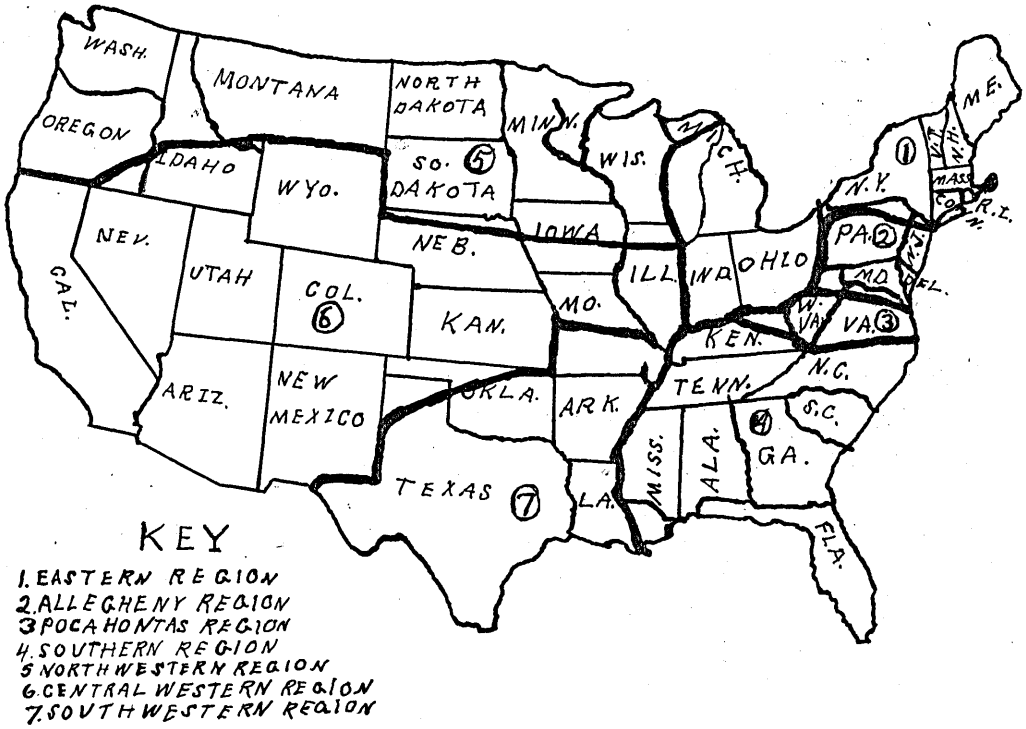
3. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 131.

districts. They were supreme in command in their respective districts and were directly responsible to the Director General. Following are the different regions and their directors:- 4.

Eastern Region----------A. H. Smith
Allegheny Region----------C. H. Markham
Pocahontas Region----------M. B. Maher
Southern Region----------B. L. Winchell
Northwestern Region----------R. H. Aishton
Central Western Region----------Hale Holden
Central Southwest Region----------B.F. Bush.

Map showing the division of the country into districts. 5



The first order of the Director General directed that all who were in the employ of the railroads should con-

4. Thompson, S.-Railway Statistics of the U. S.-1918-p. 41.
5. Thompson, S.-Railway Statistics of the U. S.-1918-p. 41.

tinue their duties in the same manner and report to the same officers as before Government operation. Under this order the president of a railroad company acted as the agent of the Director General and at the same time continued as chief executive of the corporation, this form of organization being used until after the passage of the Federal Control Act on March 21, 1918. After the passage of this Act there was an attempt to draw a line between the federal and the corporate activities of the railroads but such an undertaking was not as successful as wished for with the result that on May 21, a change was made in the organization.

The Director General now ordered that there should be a distinct cleavage between federal and corporate activities. With this end in view he placed the individual railroads in charge of federal and general managers, the federal managers being in charge of the more important single lines or groups of less important lines, and the general managers being in charge of smaller divisions. The federal managers were required to sever all connections with the respective companies and become the exclusive agents of the Government because the Director General felt that they could not co-operate with him to the best advantage if they at the same time maintained their affiliations with the private companies and because he thought that he did not receive the amount of support which he thought necessary, in a few cases. The

federal managers were chosen from the staff of the road of which they were to have charge, in many cases the president being chosen but in a great many cases some subordinate official being chosen because he was in closer touch with operations. From this time there were two sets of officers for each road, the federal and the corporate. The latter officers were left free to represent the corporation in its responsibility to the stockholders and the directors. The duty of the federal manager was to make reports to the Regional Director of his respective district and to avail himself to the fullest extent of any advantage to be secured in the operation of his road or in the preservation of its identity. The placing of competent railroad men in charge of all the important positions created by the Railroad Administration gave greater assurance in regard to the proper functioning the railroads. 6.

The policy to be pursued by the Railroad Administration is given in the following and is known as Mr. McAdoo's "Declaration of Policy" of June 17, 1918. 7. (Things to be accomplished in order of importance.)

1. "The winning of the war which includes the prompt movement of men and the material that the Government requires. To this everything else must be subordinated.

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6. Cunningham, Wm. J.-The Railroads Under Govt. Operation, Quarterly Journal of Economics--Feb. 1921--p. 302.
7. Dixon & Parmalee--War Administration of the Railways in the United States and Great Britian--p. 137.

2. "The service of the public which is the purpose for which the railways were built and given the privileges accorded them. This implies the maintenance and improvement of the railroad properties so that adequate transportation facilities will be provided at the lowest cost, the object of the Government being to furnish service rather than to make money.

3. "The promotion of a spirit of sympathy and a better understanding as between the administration of the railways and their 2,000,000 employees as well as their 100,000,000 patrons, which latter class includes every individual in the nation, since transportation has become a prime and universal necessity of civilized existence.

4. "The application of sound economies including:
   a. The elimination of superflous expenditures.

   b. The payment of a fair and living wage for services rendered and a just and prompt compensation for injuries received.

   c. The purchase of material and equipment at the lowest prices consistent with a reasonable but not an excessive profit to the producers.

   d. The adoption of standardized equipment and the introduction of improved devices that will save life and labor.

   e. The routing of freight and passenger traffic with due regard to the fact that a straight line is the shortest distance between two points.

   f. The intense employment of all equipment and a careful record and a scientific study of the results obtained with a view of determining the comparative efficiency secured."

In the above statements, it can be seen that the Railroad Administration assigned itself to an immense task. The fundamental principles of this policy are unification, consolidation, and standardization. These were the methods to be employed in bringing about a realization of the goal set.

The Contract Between the Government and the Individual Railroads.

In the President's Proclamation, the Director General was authorized to enter into negotiations with the different railways in order to determine a just and reasonable compensation on the basis of an annual guaranteed rental above accruing depreciation an d the maintenance of their property, equivalent to the net operating income for the three-year period ending June 30, 1917. All of the fundamental principles upon which the contract was to be based were stated in the proclamation. In an Act of Congree of March 21, 1918, commonly known as the Railroad Control Act, the general principles that were to form the basis of the agreements with the different railroads were stated. A contract had to be drawn up between the Government and every individual railroad that was taken over, and not until October 22 was the form of the contract finally agreed upon by all the parties concerned. The delay was caused by the many issues involved and by the conditions that were peculiar to each line of railroad which demanded separate consideration. As it was considerable difficulty was experienced in reaching an agreement with many of the companies with the result that by January 1, 1919, contracts had been executed by but 23 out of the 160 or more Class I railroads. At the termination of federal control 147 contracts had been executed and 83 were yet under consideration. Of these 83,

49 had agreed as to compensation while 15 had declined to accept the compensation offered and had filed application with referee boards to fix the amount of compensation. Six roads had declined to make contracts and seven had never made application for one. 8. The gist of the main sections of the Railroad Control Act which was approved by the President in May 1918 is given below: 9.

Section 2. If no agreement was made with the carriers, 90% of the estimated amount of just income was to be paid. Any amount over that found due was to be paid with 6% interest. Carriers were to pay interest on overpayments.

Section 3. Claims for just compensation, not adjusted were to be submitted to boards on application. These boards were given power to summon witnesses and require records and testimony. They were to report to the President the just compensation and the President could make an agreement upon that as a basis.

Section 4. Compensation for additions, etc. were to be increased by a certain per cent upon cost.

Section 5. No dividends in excess of those of the three year test period average were to be paid. Railroads that paid no dividends during that period had to secure the approval of the President before any could be paid.

Section 6. There was to be a revolving fund of $500,000,000 out of the United States Treasury, to pay the expenses of federal control and to provide facilities. The President could order the carriers to increase their facilities and advance them the amount needed, the carriers paying interest on the amount advanced. The loss claimed by additions etc. was to be ascertained by an agreement between the President and the carrier.

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8. Cunningham, Wm. J.--The Railroads Under Government Operation, Quarterly Jr. of Economics, Feb. 1921--p. 306.
9. United States Statutes at Large-1917-18--The Transportation Act of March 21, 1918--p. 451.

Section 7. With the approval of the President, any carrier could issue securities to provide necessary funds. The President might purchase the securities out of the revolving fund and sell them whenever desirable at a price not less than cost.

Section 8. The President could appoint agents for executing the powers and could call upon any part of the Government for services.

Section 10. Carriers while under Federal control, were subject to existing laws not inconsistent with this act. There was to be no defense as a government agency. No process was to be levied against the property while under Federal control. The President had power to initiate fares, rates, classifications and regulations by filing them with the Interstate Commerce Commission, which should not be suspended pending final determination. They were to be reasonable and just. Complaints could be made against them. The certificate of the President was necessary to increase operating revenue.

Section 11. The punishment for the violation of the provisions of this act or for interfering with the use of railroad property was a fine of $5000 or two years imprisonment or both.

Section 12. The money derived from operations was United states property and was to remain in the custody of railroad officers. The method of accounting existing before federal control was to be used. Disbursments were to be made in the same manner as before federal control and were to be made for specific purposes designated by the President. If the roads were restored to the owners during any tax period, only the amount falling under federal control was to be paid out of money received then. The books were to be closed whenever the President so wished and the excess or deficit to be credited or debited to the revolving fund.

Section 13. All cases then in court were to proceed.

Section 14. There was to be federal control for twenty-one months after the war ended. The President could, prior to July 1, 1918, relimquish

such carriers as he desired to relinquish. There was no right to compensation after relinquishment.

Section 15. Nothing in this law affected state laws except when they intefered with Government operation.

Section 16. "This act is expressly declared to be emergency legislation enacted to meet conditions growing out of the war, and nothing herein is to be construed as expressing or prejudicing the future policy of the Federal Government concerning the ownership, control, or regulation of carrers or the method or the basis of the capitalization thereof." 10.

The provisions of the contract can be briefly summarized. In taking over the property, it had to be enumerated in detail, for accounting adjustments and regulations and for final settlement. Improvements and new equipment were to be charged to the railroads affected and were to carry interest payable by the Director General as rental from the date of completion or delivery, but strictly war improvements were to be a charge against the Government. The Director General was to meet operating expenses and normal taxes, to maintain the property up to the standard existing when taken over, to maintain contributions to pension and other funds, to pay the continuing cost of valuation work, and to carry out all contracts and agreements for the buying of supplies. The railroads themselves were to bear the expense of maintaing their

10. United States Statutes at Large-1917-1918, The Transportation Act of March 21, 1918--p. 458.

corporate organization, of war taxes, and to meet all charges such as interest and dividends. The operating income was determined by deducting all operating expenses, normal taxes, and certain operating rentals from operating revenues. The guaranteed rental was to be paid to the carrier whether it was earned or not. If adjustment of claims could not be accomplished by a conference, the Interstate Commerce Commission was to appoint a board of referees, and if an agreement could not be reached with it, the carrier was allowed to petition the Court of Claims. Carriers were denied the right of litigation at the end of federal control on the question of whether they had suffered from the diversion of traffic, it being held by the Director General that Congress intended that the authorized compensation should cover this element. The annual average income was to be ascertained by the Interstate Commerce Commission and certified by it to the President. In making accounting and adjustments in regard to maintenance and reserves, consideration was to be given to the amounts spent for such during the test period, and to the condition of the property when taken over. Excess operating income was to remain the property of the United States. In case of lines that were in the receiver's hands, or in the case of those where due to abnormal or undeveloped conditions, expenditures for additions and betterments, were not fully reflected, as was the case with southern lines, the President was

authorized to make any agreement which he considered just.11.

Conditions When the Government Assumed Control

The Government assumed control of the railroads when their traffic affairs were in the very worst condition. Congestion at that time extended far into the west and added to this trouble was the unusually severe weather which not only interfered with the movement of trains but blocked marine terminals as well, so that the terminals were crowded to the point of paralysis. About the middle of January, occured a storm that completely paralyzed traffic, and all during the winter one storm followed closely upon another. A great deal of time is lost on railroads because of the effects of cold weather and snow storms. Ash pans freeze, water and ice freezes on the engines, coal freezes in the cars causing difficulty in securing a good fire, lubricating oil gets cold and will not flow, the solidly frozen roadbed increases wear and tear on the equipment, switches freeze and are difficult to operate, and there is difficulty in getting up steam in the engines. All these conditions serve to retard and delay the movement of trains.

Another factor was the bad condition of motive power. It had been kept in service when it should have been in the repair shops and when severe weather came, much of it went out of use altogether. During the bad weather many

11. Dixon, F. H.--Federal Operation of Railroads during the War, Quar. Jr. of Economics, August 1919--p. 582.

shopmen were utilized in clearing the tracks of snow, thus causing delay in repairing the equipment, and some engine houses were unable to accommodate the larger engines. This condition caused a great deal of delay in terminals and a great deal of lost time in taking engines where they could be repaired.

A short history of the conditions existing on the Pennsylvania Railroad during the winter of 1918 will be given in order to give a picture of the conditions that confronted the railroads. Conditions were the worst on this system of any system but conditions were very bad on all lines, so a history of those existing on the Pennsylvania will not be far from typical of those on all lines and especially of those on eastern lines. 12.

On January 23, 1918, 23 trains on the track were ready to move but there were no locomotives available. In one yard there were 50 cars of Government Automoblies and 50 of these were in open top cars. At Glenrock Pennsylvania, there were 120 cars all of which had been held over 20 days. There were 1156 cars for the American Shipbuilding Company at Hog Island, 667 being in the Philadelphia terminal and 427 at Hog Island not being unloaded. The congestion was east of Pittsburg and was partly due to cold weather and sick trainmen.

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12. This historical material concerning the Pennsylvania Railroad is taken from: Lee, E.--Experience of the Pennsylvania with Winter--Railway Age, March 1, 1918--p. 447.

After the heavy snow storms of January, shopmen were utilized in shoveling snow and clearing switches. This made less labor in the shops at a time when it was needed most. In the Altoona shops, from December 20, 1917 until January 21, 1918, the men spent 9225 ten-hour days in shoveling snow. This time represented a loss of the repairing of 19 engines, of the building of 39 steel freight cars, of the strengthening of 83 cars, of the heavy repairing of 25 cars, of the light repairing of 45 passenger cars, and of the manufacture of 350 car wheels. The disruption of the forces in this manner also slowed up labor as well as causing the loss of time. On the Bellwood Division, 11000 hours were spent in shoveling snow. As a result of this 540 cars accumulated. At Pittsburg 2357 cars accumulated.

During the cold weather, engine failures increased 45% in the Pittsburg district. On January 28 there were 70 engine failures in six hours. There was also much trouble with boilers due to the poor quality of water used.

In the Philadelphia yards, the normal movement of cars was 2925 daily but from January 14-25, it averaged less than 2000. From 54 to 61 cars daily were left over without locomotives. The average daily western movement of cars of this division was from 1400 to 2200 but the number sent was from 110 to 586.

On the Middle Division, 11000 cars were left over every day, and only 50 % or 60% of the normal business was done.

On the Pittsburg Division, 10000 cars were left over daily and there were 100 trains daily without engines. The Pitcairn coal district needed 324 cars daily but received only 24.

Reduction in tonnage:

Maryland Division----------36%
Philadelphia Division-------25
Middle Division-------------17
Pittsburg Division----------38

There was also at this time a great deal of trouble in holding labor due to causes which have already been mentioned. On the Cresson Division of the Pennsylvania, 171 new men were hired within 4 months in order to maintain a force of 149 men.

When railroads are confronted with such conditions as have been described, it is utterly impossible for them to do an average day's work, or to come anywhere near that goal. Snow drifts retard the movement of trains; the utilization of shop labor for track labor slows down t repair work; bad weather increases sickness among employees; and much efficient labor is lost to other industries, leaving less efficient labor to do work which requires the very best labor that can be secured it it is to be done expeditiously.

OPERATING EFFICIENCY.

A. Freight Service.

As soon as the Railroad Administration was organized, its main efforts were toward the securing of operating efficiency. At this time, though no one in the country except a few Government and railroad officials knew it, the Allied nations had sent us word that unless the United States could get foodstuffs to them, Germany would win the war. Every effort was now bent toward getting the necessary provisions to the Allied nations. Every thing else was subordinated to this need for a time and the problem was solved. The demands of the European countries were made in February and by March 15 their vessel capacity had been satisfied and there were available at North Atlantic ports an excess on wheels of 6,318 cars of foodstuffs exclusive of grain in cars and in elevators. After that time there was never any danger but that we could meet the demands of the Allies for foodstuffs. In making the drive for operating efficiency, economy and the saving of money were considered although those factors were not the chief aim, that aim being to meet war necessities. Many of the methods employed by the Railroads' War Board were retained and enlarged upon and many new methods that were either impracticable or impossible under voluntary co-operation were used. The most important of these methods were the unification of terminals and stations, the reduction of passenger service, reductions

in ofganizations, and other miscellaneous economies. These methods will be described in detail below.

1. Solid Train Movements.

Foodstuffs traveling from west to east, fruits from California, lumber from the northwest to be used in the construction of aeroplanes, ships, and army camps, packing house products, and flour, corn, and oats from Minnesota were shipped in solid trainloads. Although such a practice is not the most economical because the most economical weight of a train varies with the rate of grades and with the power of locomotives, which differ widely on different railroads, yet the practive did much to quicken the movement of freight because the continuous movement of traffic was secured through advance information to connecting lines, thus eliminating switching through terminals. 13. Fast schedules were unnecessary because of continual movement and minimum terminal delays. Certain products were designated to certain lines on certain days, thus insuring maximum tonnage to all lines, and each train had a specific routing. The plan accelerated oil movements 100%.

All export traffic was, as far as possible, tobbe concentrated at Chicago, St. Louis, and Pittsburg and solid trainloads were to made up at these points for the different ports. The strain caused by the great amount of

13. Cunningham, Wm. J. The Railroads under Govt. Operation, Quar. Jr. of Economics, February 1921--p. 314.

export traffic was lessened to some extent by the work of the Exports Control Committee which was created on June 11, 1918 and which "consisted of a representative of the United States Railroad Administration, a major general representing the army, a rear admiral representing the navy, a steamship representative representing the Shipping Control Committee, and a traffic expert representing the Allies."14. The committee was to have charge of all questions relating to export traffic.and It was to determine the probable amount of such traffic and to work out a plan for its distribution through the different ports in order to relieve the congestion at New York which had until this time received the greater share of the export traffic. After February 14, 1918, an export license was required of all export freight.

2. The Unification of Terminals.

The best example of the unification of freight terminals was in Chicago. In that city there are three belt lines, the Inner Belt Line or the Belt Railway of Chicago, the Middle Belt Line or the Indiana Harbor Railroad, and the Outer Belt Line or the Elgin, Joliet, and Eastern Railroad. The Outer Belt Line was used for an interchange line for traffic moving beyond Chicago, with the exception of perishables, those products being routed over the Middle Belt Line. The Inner Belt Line was used for the delivery of cars within Chicago. Interchange switching in all terminals was largely eliminated.

14. Cunningham, Wm. J.--The Railroads under Govt. Operation. Quar. Jr. of Economics, February 1921--p. 315.

In Chicago, as the result of co-operation with producers, 66% of the coal arriving there during August was consigned directly to consumers from the mines, and cross hauling between terminal lines was largely reduced through the same co-operation.

Terminal managers were appointed in all the larger cities and they had jurisdiction over the facilities of all lines. 136 off line and uptown stations were closed. In the Southwestern Region switching was consolidated so that 54 lines did what was formerly done by 109 lines. In New York harbor 117 coal barges and 18 tugs belonging to different railroads entering the city, were pooled as were also the piers, each railroad being assigned to a certain pier.

3. Embargoes.

Rules of February 28, 1918. 15.

a. Consignees who did not unload promptly were subject to the approval of the Director General.

B. Expeptions when a complete embargo was not essential, were live stock, coke, charcoal, acids, alcohol, ammonia, light oil, petroleum products in tank cars, and tank cars;

c. Domestic food products when not expected for home consumption, and food products for animals except hay and straw;

15. Embargo Rules, Railway Age, February 28, 1918--p. 405.

d. Materials assigned to the United States Government or its agents;

e. Railroad material and supplies other than coal and coke when consigned to an officer destined to a point on his line;

f. Printing paper, printing ink, and scrap and waste paper when consigned directly to paper mills or manufacturers; agricultural improvements for preparing the soil;

g. Demurrage charges were to be assessed if cars were loaded in violation of the demurrage rules.

During the winter of 1917-1918, an embargo was placed upon everything except food, fuel, and certain war munitions and supplies on the Pennsylvania east of Pittsburg, on the Baltimore and Ohio Railroad east of the Ohio river, and on the Philadelphia and Reading Railroad for the purpose of enabling those lines to specialize in coal for supplying the acute conditions in New England and New York harbor, and in supplying empties for mines and coke ovens.

4. The Routing of Freight.

The owners of freight had absolutely no power in the routing of their freight. It was routed by officials regardless of origin and ownership. This practive did away with circuitous routes which has been one of the most wasteful practices in railroad operation in the past. General Order Number 1 of the Director General directed

that everything possible be done to alter this condition. Studies were undertaken for the purpose of developing new routes which would not only be shorter but also more economical and efficient and as a result, car, engine and train miles have been saved and shippers have had the services of many more cars than they otherwise would have had. During the ore shipping season a total of 64,770 loaded and empty cars were rerouted with a saving of 3,577,464 car miles from the Missabe Iron Range alone. In the Eastern and Northwestern Regions alone there was saved a total of 16,863,633 car miles.

Cases of shortened routes. 16.

Between and	Long route.	Miles	Short route	Miles	Saving
Duluth-Chicago	C.B.&Q-N.P.	606	Soo line	464	141
Chicago-Kans.City	C.Gt.West	596	A.T.&S.F.	458	138
Minneapolis-Des Moines	C.B.&.Q.	614	C.R.I.&Pac.	270	344
Portland-Ogden	S. Pac.	1339	U. P.	857	482

This plan was thought by the Railroad Administration to be one of its most important reforms but Mr. Cunningham however, does not believe this to be the case. 17. He thinks that the importance of the factor has been over-estimated. He finds that in practice freight suffered the least delay when moved over the normal routes. A shifting of the load to the shorter route often found it unprepared to move the load and congestion resulted. Even if there were savings they were but a fraction of a per

16. Statements of Hon.W.G.McAdoo before the Interstate Com. Commission, January 3 and 4, 1919--p. 13.
17. Cunningham, Wm. J.--The Railroads under Govt. Operation, Quar. Jr. of Economics, February 1921--p. 314.

cent of the total car miles. Savings made by using shorter routes were in many cases overbalanced by the higher cost of moving cars over the shorter and more congested routes.

5. The Permit System.

The use of permits in the shipment of goods was a great aid in clearing up congestion. Before goods could be shipped to a consignee he must have contracted in advance for the required vessel space, and he must also be able to accept and unload the goods without delay. This was a method of controlling the traffic at the source and there is a possibility that the transportation demand would not have been met without the employment of this system.

6. The Pooling of Equipment.

The Car Service Section had complete control over equipment and with the exception of coal cars, it was distributed to where it was needed without regard to ownership. During the greater part of federal control the payment of charges for car hire between different roads was waived and each road was instructed to give the same running repairs to foreign cars that it gave to its own. Motive power was also transferred from one road to another where a shortage existed.

7. Demurrage Rates.

These charges were cumulative and were increased almost to the prohibitive point, the charge being $3.00

for the first day, $4.00 for the second day, and $10.00 for the eight day and thereafter.

8. Heavier Car and Train Loading. 18.

	1919	1918	1917
Average train load in tons revenue and non-revenue freight.	688	681	653
Average car load in tons, revenue and non-revenue freight.	27.8	29.2	27
Percent of loaded to total car miles	68.7	67.8	70.2

The increase in coal carried was 22,000,000 tons during the first six months of federal control.

Figures of the Interstate Commerce Commission on car and train loading. 19.

	1919	1918	1917
Tons per loaded freight car	25.48	26.99	24.77
Tons per freight train	631	628	597
Tons of freight originating	1190,172,967.	1,376,844,812.	1382,004,577
Ton miles per mile of road	1,559,442	1,738,305	1,698,825

This was one of the best fields for improvement in the matter of moving traffic. Formerly cars had been moved when only partly loaded and scarcely any cars were ever loaded to capacity. The figures given show that the train load and the car load were both greater in 1918 than in 1917, but the same efficiency was not maintained during 1919 because of conditions due to the termination of the war. In 1918 freight train movement was not as large as in 1917 but if larger trainloads could be moved

18. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920--p. 8.
19. Report of the Interstate Commerce Commission, 1920, Table VII, p. 101; Table III, p. 99.

with steady movement in a little bonger time, a great saving would result. The units for loading cars were increased and shippers were required to move grain and foodstuffs in maximum lots.

The "sailing day plan" was employed in the movement of freight in less than carload lots. It was designed to bring about a better utilization of freight cars by securing a heavier average load per car. Schedules were made for the main less than car boad shipping points and such freight was held for through cars which fan to certain points on specified days. The plan was not altogether approved of by shippers because it gove some distributing centers an advantage over its competitors to common markets when the traffic from the first was heaviest and justified more frequent service. In New York and Philadelphia, store door deliveries were made. The interchange of labor was also practiced in order to avoid the accumulation of less than carload freight.

9. The Coal Zoning Plan.

This plan was continued from operation under the Railroads' War Board. It was predicted that the railroads could not meet the nations need for coal but they met it in spite of the bad weather in the winter of 1918 and also succeeded in transporting 37,083,300 more tons during the first ten months of the year than was transported during the same time in 1917. At the beginning of fdderal control a serious situation existed with regard to bi-

tuminous coal. There was a shortage of cars at the mines, a lack of efficient distribution, and a dislocation of the New England supply because of the use of coastwise ships in ocean transportation. A critical condition also existed in the northwest. In meeting this situation each producing district was given a certain fixed area in which to market its production. Shipments to other places were not allowed without a permit by the Fuel Administration. This eliminated a great many long hauls and a great deal of short hauling and also offered an incentive for using the coal in the plain states which at any other time would not have been mined in competition with better grades of other districts.

Anthracite coal and empty cars were moved through the Pennsylvania tubes, and bituminous coal at New York harbor was diverted to the piers where it could be dumped most expeditiously to relieve the need of bunker coal for ships. This was a move which could not have been taken under private control.

10. The Pooling of Repair Shops.

Equipment needing repairs was taken to the nearest repair shop in which it could be accommodated, regardless of ownership. Many shops were not adapted to the repair of some of the large engines and they had to be hauled some distance at times before they could be taken to one that could accommodate them. Some times it was found to be more advisable to close some engine houses and con-

centrate the work in a less number. This plan was used at Galveston. The separate car inspection forces maintained by individual lines was consolidated into one force at many of the large interchange points.

11. The Standardization of Equipment.

Director General McAdoo claimed that there were about 2000 styles of freight cars and mearly as many of locomotives; so he thought that standardized equipment would be a good thing for the railroads. Under such a plan, the producers of equipment and the management of repair shops could employ more uniform methods and thus save a great deal of time and money. He had a committee work out plans for the standardization of equipment and it finally made plans for 12 standard types of freight cars and for 6 types of locomotives of two weights. Under the terms of the contract between the Director General and the railroads, the Director General was required to secure the approval of the corporation before he could permanently assign any of the equipment to it. Most railroad men did not favor the plan because of the varying conditions that existed on different lines. None of the twelve standard types might meet the conditions on particular lines. The railroad officials did not so much oppose standardization as they did the degree of standardization. Two or three times the number of standard types of locomotives might meet the situation on all roads.

The case for standardization of freight cars was much stronger and it is possible that such was a good reform. Cars do not stay on the home road and if all cars conform to certain types they can be repaired in any shop. Railroad repair shops would not have to carry as many repair parts and there would be a great deal of time saved in repairing because each repair shop would have the part needed and would not have to wait until a special design was made before beginning work.

12. Uniform Freight Classification.

There had been three classifications applying to interstate commerce and in addition to this many states had classifications. These various classifications contained about 15,000 different items and they differed in many details. Great confusion resulted in rating and classifying freight. To remedy this, a consolidated classification was prepared and submitted to the Interstate Commerce Commission for its approval, Mr. Hines not caring to initiate it himself without the approval of that body. The principal obstacle to a plan of uniform classification was that such a plan would cause losses to some roads in the lowest classification in any territory were adopted and on the other hand if meant higher rates to shippers if the highest classification were adopted.20. The Interstate Commerce Commission held

20.Cunningham, Wm.J.--The Railroads Under Govt. Control, Quar. Jr. of Economics, February 1921--p. 319.

hearings upon the proposed plan and the shippers showed such opposition at these that the Commission declined to approve the plan of re-classification because it appeared to have the effect of increasing rates unduly. The Comission did however, give its approval to the unification of classification rules. If such a plan had been approved it would have been easier for officials to compel closer compliance to car loading standards, thus preventing underloading.

13. The Simplification of Accounting. 21.

The change from privated to federal control with the separation of corporate and federal accounts placed a heavier burden upon the accounting departments of the railroads. At first the railroads were instructed to keep two sets of accounts but later the federal and the corporate forces were divided and one was concerned with the Government accounts and the other with corporate accounts. The Director General required many special accounts and statistics as did also the Division of Accounting and the Division of Capital Expenditures. And later, in July the standardization of operating statistics placed still heavier burdens upon the accounting departments of the railroads.

To counterbalance these heavy burdens many simpbifications in accounting relating to interroad transactions,

21. Cunningham, Wm. J.--The Railroads Under Govt. Operation, Quar. Jr. of Economics, February 1919--p. 319.

were ordered. The Government was interested only in the combined results of the roads as a national system and not in absolute accuracy of accounts; so many shortcuts in accounting methods were ordered.

The first step was the adoption of the universal interline waybill which provided for the billing of all through freight moving over more than one road from point of origin to point of destination. This eliminated much re-billing at junctions and thus reduced the delay of freight.

Next, came the discontinuance of the technical and arithmetical checking of bills between roads under federal control. The billing road was required to use care in making out the bill and the debtor road was required to assume the accuracy of the bill. This applied to freight claims, car repairs, equipment rents, joint facilities, and statements concerning the settlement of joint revenues arising through interline traffic.

The next step was the use of the "road to road percents" method of apportioning interline freight revenue instead of the old method of each road figuring from waybill records the amount which it owed to other roads and which other roads owed to it. The new plan provided for the division of joint freight revenues as between carriers in the same proportion that such revenues were divided during the year preceding federal control. A method like this was also used in dealing with passenger revenues.

Another short cut method used was the discontinuance of freight car hire charges between roads under federal control.

14. Advance Movement of Materials.

The advance movement of raw materials during the summer months when traffic was slack was encouraged. People were also encouraged to secure their winter supply of coal during the summer when the railroads were able to get it to them.

15. Centralization of Government Shipping.

Government shipping was centralized by the appointment of Major General George W. Goethals, then acting Quartermaster General, as Director of War Department Transportation. This method would provide a central management to handle Government traffic which would make for the orderly movement of supplies, and would make next to impossible the recurrence of the situation that came about through the exeessive used of the preference tage under the Railroads' War Board, when there was no central organization to take charge of such matters.

16. The Elimination of Duplicate Lines.

When there were two closely situated, parallel lines or where a parallel line had been built for the express purpose of competing with an older line, their activities were correlated so that there would be as little waste of energy as possible. Examples of such railroads are

the West Shore, the Nickel Plate, and the Des Chuyler Railway and the Oregan Trunk Line, these latter two going down opposite sides of a canyon into a territory whose traffic did not justify one line. Unified control stopped the waste due to such competition.

17. The Consolidation of the Express Companies.

The four express companies were consolidated into one company to be known as the American Express Company, which was to conduct the business on all federal lines. 50¼% of the earnings were to go to the United States Government for payment for hauling the express, and the balance after paying expenses and an5% dividend was to be divided between the Express company, the Railroad Administration, and a guaranty fund.

B. Passenger Service.

1. The Elimination of Unnecessary Service.

Elimination to December 31, 1918. 22.

Eastern Region	16,253,914	Passenger train miles
Allegheny Region	4,870000	" " "
Southern Region	1,702,480	" " "
Northwestern Region	23,280,000	" " "
Central Western Region	16,772,524	" " "
Southwestern Region	4,411,244	" " "

Service between St. Louic and Chicago was reduced 40%.

Between many of the larger cities there was a surplusage of trains arriving and departing at the same time, some of them being but partly filled. There were two twenty-four trains between New York and Chicago, both

22. Thelen, Max--Public Service Under Govt. Operation. Annals of American Adademy, November 1919--p.24.

leaving and arriving at the same hour. Between Chicago and St. Paul, Chicago and St. Louis, and Chicago and Kansas City there were in each case from three to five trains leaving at about the same hour in the evening and arriving at about the same time the next morning. In other cases there was a triplication or quadruplication of service. Many of these unnecessary trains were discontinued, and the competing trains on parallel lines were discontinued and the remaining service was arranged so that the time of the arrival and the departure of the trains was more frequent than under the old system. The schedules of many trains were lengthened, this being the case with limited trains and they were required to handle local traffic. The saving was greatest in the west and the northwest where accommodations were most liberal, and in the east where traffic was heaviest. On January 6, 1918, 400 trains were discontinued on eastern lines. The hauling of special trains and of needless private cars was discouraged and schedules were revised so that connections would be closer and so that trains would leave at successive hours instead of the same hour. Tickets of one railroad were honored by any other railroad and a universal mileage book was adopted and sold at $30.00 per thousand miles plus 8% war tax. This was designed to lessen the pressure at ticket offices and to diminish congestion which had been complained of at ticket offices.

2. The Consolidation of Ticket Offices.

Up town and off line offices with the exception of a few in the larger cities, were consolidated and the employees were assigned to work in other departments of the railroad service. This was done because there was no longer any competition for traffic of any kind. This affected a saving of over $23,000,000.

3. The Unification of Terminals.

Plans were made out providing for the common use of some terminals which had previously been used by an individual railroad. The best example of this is the use of the terminal of the Pennsylvania Railroad in New York City by the Baltimore and Ohio and the Lehigh Valley railroads. Such a plan resulted in better service to the public. Another example is the use of the pier of the Southern Pacific railroad at Oakland, California by the Santa Fe and the Western Pacific railroads.

4. The Change in the Dining Service.

Table d'hote service was put into use on October 1, 1918 in order to conserve in the use of food and dining cars. Meals were served at the uniform price of $1 each. A la Carte service was restored on March 1, 1919 to meet the requirements of travelers.

The movement of passengers.

Troop movements--May 1, 1917 until June 30, 1919. 23.

23. Thelen, Max--Public Service Under Govt. Operation, Annals of American Academy, November 1919--p. 24.

The total troop movements during this period was 13,890,691 individual movements divided as follows:

7,988,707 movements in special troop trains.
3,614,058 " " regular " "
2,287,926 " of drafted men to camps.

The movement of troops received the greatest attention of any of the Government demands and the railroads met the situation every time that they were called upon to move troops. The troop movement required a great number of sleeping and tourist cars as well as chair cars. The shorter movements were made in chair cars but all the longer movements from camps to ports of embarkation were made in tourist and sleeping cars. This movement furnished no return load. The cars had to be taken back to the camps and a large amount of motive power was utilized in doing this.

Passengers Carried. 24. (In millions)

1919	1,212
1918	1,123
1917	1,110

The Railroad Administration tried to discourage passenger travel at this time but the numbers carried broke all previous records. The railroads carried this large number of passengers with practically no increase in equipment and with a greatly reduced number of trains. The trains were generally crowded and delayed trains were a common occurrence. But the convenience of the public had

24. Report of Interstate Commerce Commission-1920-Table III--p. 99.

to be subordinated to war needs. After the war ended much of the discontinued service was reestablished because of the demands of the traveling public.

SUCCESS OF THE DRIVE FOR OPERATING EFFICIENCY.

There are many different opinions as to the success of the railroads under Government operation as regards the amount of traffic moved. Many railroad officials claim from figures given by them comparing the operations of the railroads during the years 1918 and 1919 with the operation during the years 1916 and 1917, that not as much traffic was moved as would have been moved under private management, while the Railroad Administration claims and also gives figures to prove its claims, that the railroads were much more efficient under Government management. We are sure of one thing and that is that the railroads under Government operation sudceeded in accomplishing the task that was intended for them. They moved the freight and the people necessary for the winning of the war. There is a claim, but figures from different sources show it to be untrue, that the railroads moved more freight during 1917 than during 1918, but even if that were true, in 1918 they moved more that was necessary for our military operations. The question was not altogether the amount moved but also the kind of freight that was moved. The Government had absolute power and could give priority to any class of freight that it needed

worst, while under private operation there was always present the incentive to take freight merely for the sake of the revenue that it afforded. The worst freight congestion in history was cleared up within five months after the Government assumed control.

Table showing freight traffic for 1917, 1918, and 1919, 25. (Net ton miles per mile of road per day.)

	1919	1918	1917
January	4275	3878	4770
February	4002	4591	4511
March	4059	5273	5192
April	4124	5471	5257
May	4524	5226	5617
June	4615	5423	5694
July	4878	5487	5441
August	5075	5691	5351
September	5625	5731	5217
October	5651	5584	5385
November	4711	5155	5298
December	4688	5184	5121
Average for 12 months	4689	5206	5156

Number of tone miles of revenue freight. 26.
(In millions)

1919	367,061
1918	408,778
1917	398,263

These figures tell their own story. The railroads moved much more freight during 1918 than during 1917 but the record was not maintained during 1919.

A word should be said regarding the slump in efficiency during 1919. This was not due to negligence or mismanagement on the part of the Railroad Administration but was caused by conditions connected with the termination of the war. When the United States entered the war,

25. Hines, W.D.--Report to the President for Fourteen Months ending March 1, 1920--p. 8.
26. Report of the Interstate Com. Com.-1920-Table III--p. 99.

changes were made without hesitation. The comfort and convenience of the traveling public was necessarily subordinated to the nation's first and primary need. War conditions made operations more difficult than in peace times. But after the armistice was signed complaints were made about the class of service that was being furnished. During the war people were stirred by the patriotic motive and they gladly accepted limited service but after the war was over the patriotic motive was lacking. The war had been won and people wanted a return to the prewar service. There was also a slump in traffic at this time. War could not be stopped one day and normal railroad operations be resumed the next. Time was required for adjustment to the new conditions.

The operating results during the first ten months of federal control are summarized by Director General McAdoo as follows: 27.

"The railroads, during the first 10 months of Federal control, produced 1.9 per cent more ton miles with a decrease of 2.1 per cent in train miles and a decrease of 5.8 per cent in loaded car miles. The average train load increased from 655 tons to 682 tons, a gain of 4.1 per cent; and the average carload increased from 26.8 tons to 29 tons; a gain of 8.2 per cent. I may say that that does not reflect the situation as favorably as the results justify, or as the Railroad Administration is entitled to, because, in order to get food and supplies promptly to the seashore for transshipment over the ocean, we hauled empty cars regardless of any other traffic into the regions where the originating traffic was, and carried the supplies back to the seaboard with all possible

27. Statements of Hon. W. G. McAdoo before the Interstate Commerce Committee of the Senate, January 3 and 4, 1919--Better Operation--p. 14.

rapidity, in order to meet the demands in Europe of the armies and the civilian population there. That refers to the instance described in the previous part of my report. Ordinarily, as you know, the railroads make it a point never to haul empty loads if they can avoid it, which, of course, is sound economic practice. The exigencies however, were so great we had to haul those empty cars a very long distance in order to get them quickly where the vital traffic was, and we get no credit for that in the statistics I have just given. That would be more favorable if we took those matters into account.

"The increase in traffic in 1918 was accomplished by the use of approximately 3.4 per cent more freight cars and approximately 1.4 per cent more freight locomotives than in 1917. Compared with 1916, the 1918 increase in freight cars was 6.9 per cent and the increase in freight locomotives was 2.4 per cent.

"It should be explained that the total ton-miles handled are much less than they would have been in the past for a corresponding volume of traffic by reason of cutting out circuitous hauls. The general statement may be made that the actual transportation production is greater than is indicated by ton-mile statistics. In whatever degree the actual performance of moving tons from one place to another as required is accomplished by moving the tonnage over shorter routes, to that degree the ton-mile statistics understate the real performance when they are compared with a period when the shorter routes were not used. That is somewhat technical, but all railroad men, I hope, will understand it."

WAGES.

Early in the year of 1918 the Division of Labor was created as a division coordinate with the other divisions of the Railroad Administration, and W. S. Carter, President of the Brotherhood of Locomotive Firemen and Engineers was appointed as director. Bipartisan boards of adjustment were also created to deal with the grievances of employees that could not be settled locally. The work of these boards was very satisfactory, an agreement being reached in practically every case that came before them.

The boards were created by agreement between the labor organizations and the Regional Directors. The principle of collective bargaining was recognized in all labor questions.

Immediately after its organization the Railroad Administration created a Railway Wage Commission consisting of Franklin K. Lane, C. C. McChord, J. H. Covington, and W. R. Wilcox. The duty of the Commission was to make an investigation of railroad wages as compared with wages in other industries, of railroad conditions in different parts of the country, of the special emergency wages caused by the war, and the relations between different classes of laborers on the railroads. This Commission was to make a report to the Director General covering the whole field of railroad wages. General Order Number 27 of the Director General, which increased the wages of the railroads' employees, was based upon this report.

The above Commission was unable to deal with all labor problems so a Board of Railroad Wages and Working Conditions, composed of three representatives of railroad labor and three representatives of railroad management was created. This Board took up the special claims of employees and made recommendations upon the bases of which supplements to General Order Number 27 were made, these supplements providing for various changes in wages and working conditions.

The labor situation on the railroads was a very

serious one during the entire period of federal control, though it was much more serious before the war ended than afterward because of the difficulty in securing and retaining efficient labor. Wages were much higher in war industries, consequently many laborers left the railroads and entered those industries. Much of the labor secured by the railroads during this period was inefficient and could not accomplish as much as efficient labor. The Pennsylvania System had the equivalent of an annual turnover of 100% from May 27, 1918, until June 5, 1918, 4477 employees having stopped work and 5122 new ones having been hired. The greatest difficulty was in securing shop and track labor.

Railroad employees fared very well under federal operation, having received several substantial increases in wages during that period. These increases were necessitated though by the rise in the cost of living and the high wages being paid in other industries, and when all is told there is a doubt whether railroad labor received any more or as much as it was entitled to and the fact is certain that it was not securing as much as the labor in other industries. The increases had to be granted to keep the laborers satisfied. The railroads were having trouble with their employees just previous to the time when the Government assumed control of the railroads and that situation probably exerted considerable pressure when the Government decided to assume

control of the railroads. There were no authorized strikes during federal control but there probably would have been had not the wages demands been granted. As it was, there was much dissatisfaction and at some times there were threatened strikes. The best picture of railroad wages in general during Government operation can be given by the following table, part of which has been given before in this paper: 28 (m-thousands)

	1919	1918	1917	1916
Miles represented	250,313	250,473	252,029	250,233
Employees, number	1,960,569	1,897,741	1,780,235	1,703,577
Per 100 miles of line	783	757	706	681
Hours worked(m)	5,165,320	5,559,324	1,536,733	5,097,538
Compensation(m)	$2,901,963	2,686,734	1,781,027	1,511,728
Per Employee per yr.	$1,480	1,416	1,001	887
Per hour (cents)	56	48	32.5	28.2
Ratio of revenues(%)	55.47	54.06	43.71	41.09

In studying the above table one finds an increase of over 15% in the number of employees while there was an increase of about 1% in the number of hours worked in 1918 over 1917. In 1919 there was a greater number of employees than in any other year and they worked a less number of hours than in any other year except 1916. These results are due to the Adamson Eight-Hour Law. It was cheaper for the Railroad Administration to increase the number of employees than pay for overtime; so more employees were required to do the same amount of work that a less number of men had done before the Adamson Law went into effect.

28. Thompson, Slason--Railway Statistics for the U. S.-1919 --p. 59. Part of the above table was given in Chap.I, p. 10.

General Order Number 27, the first one dealing with railroad wages went into effectoon May 25, 1918. Under that order, wages were increased for all those employees who were receiving less than $250 per month on December 31, 1915. Back payment was allowed on all time since that date and the amount due on such payments on June 1, 1918, was $125,000,000. The increase was not the same for all classes of employees. Those who were receiving a low wage secured a higher percentage of increase than those who were receiving a higher wage. The greatest increase was 43% for those who were receiving less than $46 per month. From that figure the rate of increase scaled downward until those who had been receiving $250 per month, secured no increase at all. If however, the employees had received an advance in wages since December 31, 1915, and most of them had, that advance was to be considered in making the new increase. This ruling resulted in much dissatisfaction because in many cases, the railroads had already advanced wages as much or more than the Government had.

The increase in wages for the different wage groups; 29.

Wages per month	Per cent increase
$ 50	43
60	41
70	41
80	40.44
90	36.38
100	31.29
110	27.12
120	23.64
130	20.69
140	18.16

29. Wages per month	Per cent increase
$150	15.96
160	14.04
170	12.34
180	10.83
190	9.48
200	8.26
210	7.16
220	6.15
230	5.24
240	4.56
239-250	Increase large enough to increase the wage to $250.

The Board of Railway Wages and Working Conditions recommended an advance in wages to shopmen and employees of the mechanical departments of the railroads, which took effect on July 1, 1918. These employees which included machinists, boiler makers, blacksmiths, sheet metal workers, electrical workers,, carmen, moulders, their apprentices and helpers composed a group of 500,000 workers. The advance established a minimum basic rate of 68 cents per hour for all the classes named except carmen, second class electrical workers, and all apprentices and helpers who had had four years experience and who were on January 1, 1918 receiving less than 55 cents per hour. For the other employees included in the order, a minimum of 58 cents per hour was established. These wages averaged about 13 cents an hour higher than those previously paid.

A basic eight-hour day was established and a minimum

29. Congress Recommends Wage Increase of $300,000,000; Railway Age--May 10, 1918--p. 1163.

advance of 2½ cents per hour was given to all common labor, these two measures being against the recommendations of the Wage Commission.

General Order Number 28 practically abolished the class of clerks who received less than $900 yearly. In 1917 there were 101,570 employees in this class but in 1919 there remained only 5,603 and the increase in their pay from 1915 until 1919 amounted to 154.5%. In 1919 the pay of the clerical staff exceeded the total paid to road engineers, firemen, and conductors.

In April 1919 the Brotherhoods secured wage advances amounting to $65,000,000.

In August 1919 railroad employees again asked for increased wages but at the request of President Wilson, they withheld their demands until a better opportunity was afforded for determing the trend of the cost of living. The President thought that the lines would go back to the owners at the end of the year but when they did not do so the employees again presented their demands but at the President's request, again withdrew them until better machinery for dealing with wages could be organized. On March 1, 1920 the railroads were restored to the private owners without any provision being made for increasing wages, leaving the employees to deal with the private owners as best they could.

In fixing railroad wages, the wages paid in the temporary was industries were not considered to any degree.

The Railroad Administration wanted to find a just and equitable basis which would outlive the war and which would give a living wage to every employee. Efforts were made to eliminate inequalities and to standardize railroad wages as much as possible, and while this work has not been finished, it has received a good start.

Average yearly compensation of selected classes, 1915-1919. 30.

	Road Freight engineers.	Road freight firemen.	Road freight conductors.	Road freight brakemen.
1919	$2643	$1842	$2320	$1715
1918	2481	1671	2260	1632
1917	2076	1258	1840	1186
1916	1839	1117	1602	1043
1915	1792	1087	1537	994

	Machinists	Section Foremen.	Section men.	Other unskilled labor.
1919	$1882	$1315	$ 940	$1046
1918	2334	1148	854	1041
1917	1287	875	589	692
1916	1203	811	506	608
1915	993	731	429	545

	Station Service.	Clerks over $900	Clerks under $900	General Officers $3000 and over
1919	$1136	$1381	$ 716	$5308
1918	987	1422	808	6276
1917	754	1215	681	6574
1916	656	1185	681	6565
1915	602	1118	627	6099

	All employees.
1919	$ 1480
1918	1416
1917	1001
1916	887
1915	825

30. Thompson, Slason--Railway Statistics of the United States-1919--p. 69.

RATES.

The Railroad Administration did not increase rates immediately after the Government assumed control of the railroads because there were other questions, one of which was the labor question, that demanded first consideration, and because the increase in rates was a question that required careful consideration. The President and the Railroad Administration had power to initiate new rates, and rates so initiated could not be lawfully changed by the Interstate Commerce Commission except upon complaint after a hearing at which the Railroad Administration was entitled to be heard. In initiating new rates, the policy was to make them high enough to cover operating expenses and fixed charges because it was felt that the traveling and shipping public should not be required to bear the expense of conducting a war.

The first general rate increase was made under General Order Number 28, although an advance of 15% had been allowed eastern lines on March 15, 1918. This order provided for an 25% increase in freight rates to become effective on June 25, and for a passenger rate of 3 cents per mile for the whole country, with ½ cent extra per mile for riding in Pullman, sleeping, and parlor cars, and ¼ cent extra per mile for traveling in tourist sleeping cars. Commutation fares were also advanced 10%. The extra charges for the use of Pullmans were abolished after the armistice was signed. Rates on certain commodities such

coal, coke, ores, wheat, and packing house products were increased by a specified amount. No charge was to be for less than 50 cents and the minimum car charge was to be $15, and no freight rates were to be lower than the class rates per hundred-weight. Intrastate rates were abolished in cases where there was an interstate rate between two points and all state rates were leveled up to the same level as interstate rates. Traffic committees were appointed in each regional district to deal with questions arising under General Order Number 28, and in the organization of these committees, the shippers were allowed to have representatives to look after their interests and to present their demands and complaints.

Freight rates were increased for the purpose of supplying more revenue but passenger rates were increased for the purpose of discouraging travel in order to have the equipment for more essential purposes, but in both cases the desired result was not attained. The increased rates did not bring in enough revenue to meet the mounting expenses and passenger traffic was as heavy if not heavier than before. The Director General estimated that the increased rates would yield $900,000,000 annually.

There were many protests against the increased rates, a few as to the amount of the increase, but the greater part, and these came to a large extent from State Railroad Commissions, were because of the disturbance which would result from putting the plan into operation and making the

necessary adjustments afterwards.

Level of rates. 31.
(Average receipts in cents)

	Per passenger mile	Per ton mile
1919	2.541	0.973
1918	2.414	0.849
1917	2.090	0.715

The increase under General Order Number 28 was the only general rate increase made during Government operation. The Railroad Administration refused to increase rates after the ending of the war for reasons that will be discussed later.

THE SHORT LINES.

The short railroad lines of the country presented a peculiar and in some cases a more or less difficult problem, in that they were not necessary to the Government scheme of defense, and yet they could not be entirely thrown upon their own resources because many of them were dependent upon larger railroad companies and most of them had agreements or contracts with other lines which were very essential to their successful operation. A Division of Public Service and Accounting of a Short Line Railroad Section was appointed by the Railroad Administration to deal with the problems of short lines.

In the Federal Control Act, there was a provision giving power to the President to relinquish from federal

31. Report of the Interstate Commerce Commission, 1920, Table X--p. 102.

control, lines that were not needful or desirable. On June 28, 1918, the Railroad Administration released 2000 miles of short lines which were in that class. These lines released included some 1400 plant facility lines, or spur lines that were for the use of industrial establishments. Some lines wer released upon their own request. After relinquishment these railroads were to receive no compensation but were given protection against conditions which might place them in an unfavorable position. They were to remain under the management of the owners and were entitled to all revenues and responsible expenses. They received the benefit of several governmental agencies. They were to receive equitable allotments of cars, a reclaim of 2 days per diem on cars for lines not over 100 miles in length, and the use of government purchasing agencies, but repairs were to be made upon the same basis as before Government control. The division of joint rates among these lines and the guarantee of the same proportion of competitive traffic was to be upon the basis of that of the three year test period. A co-operative contract which guaranteed these lines against discrimination and deprivation of traffic, was drawn up between them and the Government and it was open to the signature of the railroad officials at will.

There were different reasons for the release of these short lines. Conditions were uncertain on some of them; unreasonable demands were made by some of them; but the main reason was that these lines were regarded as a

liability rather than as an asset by the Railroad Administration. It was estimated that their operation during 1918 would result in a deficit of $20,000,000 exclusive of any compensation; and they were not needed in the plan of national defense; so it was deemed the wisest policy to relinquish control over them.

THE OPERATING DEFICIT.

The operating deficit incurred by the Railroad Administration has been the source of more criticism against that body than has anything else that happened concerning the railroads during the period of Government operation. Some of the criticisms made concerning the Railroad Administration are just and the Administration recognized them to be so, yet others, and among them the criticism concering the operating deficit, are without much foundation. The deficit was due to an increase in operating expenses which was very much greater than the increase inooperating revenues. If rates had been increased there would have been no deficit but the Administration declined to raise rates for reasons which will be discussed later.

Estimated excess of operating expenses and rentals over operating revenues: 32.

Class I railroads----------	$ 667,513,151.56
Other privately owned properties(smaller railroads, sleeping and refrigerator car lines and steamship lines----------	43,011,129.36
Inland waterways----------	2,449,738.69
Total----------	$ 722,974,019.61
Expenses of central regional organization	13,954,979.69
Deficit, Amer. Railway Express Company--	38,111,741.60

Adjustment of materials and supplies in settlement with railroad companies on account of increased prices----------	85,204,618.26
Net Interest accruals for deferred compensation, open accounts and additions and betterments----------	37,558,162.01
Deductions from gross income----------	10,118,034.36
Miscellaneous profit and loss items-----	4,894,056.38
	$ 912,815,611.91
Less non-operating income----------	12,336,855.35
32. Total----------$	900,478,756.56

The latter figure, $900,478,756.56 is the total deficit incurred by the Railroad Administration in the operation of all properties that were controlled and operated by the Government yet that figure is not the one that we have read so much about in the propaganda of the opponents of the Government ownership and in the propaganda of those who have been prone to criticise the Railroad Administration. The figure that had been popularized so much is the first one or the deficit incurred in operating the Class I railroads. This amount however is not the whole deficit incurred in connection with the Class I lines. This amount ($667,513,151.56) is the amount by which operating expenses exeeeded operating revenues on Class I lines and does not take into account the expense of the regional organization, and adjustments that would have to be made. If all of these were considered under Class I lines probably much the greater share of the deficit would be found to be due to the operation of those lines.

32. Federal Control of Railroads Results in $900,000,000 Deficit; Railway Age, May 29, 1920; p. 879. From the Report of Swagar Sherley, Director Division of Finance of the Railroad Administration.

Railroad operating expenses had been mounting gradually before 1917. In that year the first effects of high prices were felt. In 1918 and 1919 increased wages and cost of materials raised expense but there was not sufficient rate increases to meet these.

"Increased expenses were explained in 1916 by the increase in traffic; one-half of the increase of 1917 was due to the increase in traffic and one-eight of the increase of 1918 was due to the same cause but none of the increased expenses of 1919 were due to increased traffic."33.

The increase in operating expenses outdistanced the growth in traffic, but more especially it outdistanced the increase in rates. A deficit of a railroad is due to inadequate revenues. Increased rates were not put into effect by the Railroad Administration until five months after the Government assumed control; so there was five months of heavily increased costs before rate increases became effective while increased wages were made retroactive causing the payment of much back pay. Director General Hines is of the opinion that if rates had been increased on January 1, 1918 there would have been no deficit prior to November 1, 1919, and gives the following figures to prove his statement: 34.

If increased rates had been effective January 1, 1918, the deficit would have been reduced	$494,000,000
If for January and February, the railways had been paid a rental proportional to that of the three year test period during those months, instead of two-twelfths of a years rental the deficit would have been reduced--	49,000,000

33. Parmalee, J. H.--Railway Revenues and Expenses in 1919; Railway Age, Jan. 2, 1920--p. 94.
34. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920-Financial Situation--p. 28.

If the coal strike had not taken place it would have been reduced----------$ 114,000,000
A large amount was due to the slump in traffic in the first six months of 1919. The total deficit during this time, included in the $715,000,000 was 292,500,000

But after November 1918 there might have been a deficit even if rates had been increased earlier because operating costs were higher then than in the earlier part of 1918, There was also a slump in the amount of traffic during the early part of 1919 causing all railroads to work under abnormal conditions,, and the coal strike came during the last two months of the year. These factors, some of them unlooked for, decreased revenues by a large amount. The Railroad Administration could have increased rates had it desired to do so but it considered that the wisest policy was to let them remain as they were because conditions were too abnormal to permit the drawing of any conclusions as to the amount of revenue that would be needed and too, in formulating a rate policy it wanted something that would be permanent. From 1914 until 1919, freight rates increased 33.8% and passenger rates increased 27.9%, this increase being only one-third as great as the increase in railroad expenses. We can thus see why a deficit was incurred by the Government while it was operating the railroads.

The Railroad Administration has been accused of making the cost of operation excessive, or more than it would have been under private management, and while it is true that

the central and regional organizations were an expense that probably would not have been necessary under private management yet the expense necessary to the upkeep of these organizations was only a very small part of the total operating expenses. The Railroad Administration claimed quite substantial savings due to consolidation of offices and to the elimination of some high salaried officials yet these savings were probably more than eaten up by the central and regional organizations. Both amounts were so small in comparison with the total amount of expenses that they would make but little difference in the final outcome of the finances. If there was waste and excessive costs in other departments it was more than likely due to the railroads' own officials because the Government retained all the old employees that it could. There has been some criticism of railroad employees regarding this matter. Some have claimed that railroad employees made costs as great as possible in order to turn public opinions against Government operation and while this might be true there has never been and evidence advanced to prove the claim.

A comparison between the expenses of the railroads and the United States Steel Corporation: 35.

Expenses of the United States Steel Corporation:

1914	$ 494,000,000
1918	1,240,800,000

A total increase of 151%.

35. Hines, W. D.--Director General Hines Answers Criticisms Railway Age, February 6, 1920--p. 413.

Operating expenses of Class I Railroads:

1914	$ 2,140,000,000
1919	4,324,000,000

A total increase of 102%.

In the case of the Steel Corporation the public assumes that increased expenses were due to enlarged production and to higher costs, but in the case of the railroads it assumes the increase to be due to the mistakes of the Railroad Administration. But the railroads under Government control were subject to the same influences that increased costs in other industries and it was these influenses, working upon operating costs and not mismanagement on the part of the Railroad Administration, that caused the large increase in operating expenses. Conditions growing out of the war affected all industries alike and the railroad dollar was just like any other dollar when it was spent. It would buy as much but no more than any other dollar.

From 1914 until 1918, the tonnage of finished steel products of the above corporation increased 55% and the incfease in per ton cost was 61%. The increased service of the railroads from 1914 until 1919 was 26% and the increased cost per until was 60%. 36.

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36. The year 1918 was taken for the steel industry because the figures for that year were the latest available at the time Mr. Hines wrote his article and because private industry was subject to unfavorable conditions during 1919 that were not present during 1918.

The Administration has also been criticised for extravagant increases in wages. A comparison of railroad wages will be made with those paid in the steel industry:

United States Steel Corporation:
1913 Labor costs per ton $15.13
1919(March) Labor costs per ton 34.61
An increase of 119%.

The average increases in railroad wages for the same period was not over 100%.

There is also the claim that there was an excessive number of railroad employees. It is true that the number of employees increased but this was due to conditions which were not under the control of the Railroad Administration. These have been mentioned before and need not be referred to here. 37.

1917-1919--Increase in number of employees------- 9.7%
1917-1919--Decrease in number of hours worked---- 5.9%
1917 --Average hours per month of work------- 261.4%
1919 --Average hours per month of work------- 218.5

Local railroad officials controlled the hiring of men. There were 140,000 more men at work in January 1919 than in December 1917. This was partly due to the Adamson Law but more largely to the fact that because of the open winter in January and February 1919, a great amount of maintenance work was done. Officials took advantage of the good weather and a good labor supply to do a large amount of delayed maintenance work.

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37. Page 83.

Following, is a table comparing the expenses and revenues of the railroads during the three year test period with those during 1918, and 1919. 38. (000 omitted)

Item	1919	1918	Test period
Operating revenue	$ 5,184,230	$ 4,926,594	$ 3,395,231
Freight	3,556,734	3,458,191	2,380,943
Passenger	1,178,120	1,032,671	689,410
Mail	57,441	53,563	83,236
Express	127,664	126,232	59,891
All other	264,271	255,937	181,751
Operating Expenses	4,419,989	4,017,210	2,297,162
Maintenance of way and structure	778,105	656,601	407,111
Maintenance of equipment	1,232,702	1,110,280	567,665
Traffic	47,538	48,741	61,741
Transportation	2,193,264	2,056,479	1,158,763
General	125,437	112,319	82,538
All other	42,943	32,791	19,344
Net operating revenue	$ 764,241	$ 909,384	$1,098,069
Taxes	199,194	186,966	152,427
Uncollectible	917	614	721
Operating income	564,130	721,804	944,921
Net rentals	Dr. 48,337	Dr. 28,693	Dr. 39,761
Net operating income	515,593	693,111	905,160
Operating Ratio (%)	82.26	81.54	67.66

The table above provides a good means for making a comparison between operations during the test period and during 1918 and 1919. The table shows a much greater increase in operating expenses than in operating revenues. The difference of 27.60% in the operating ratio between the three year test period and 1919 shows what happened to railway finances during Government operation.

Thus it is seen that the deficit incurred was not the

38. Railway Earnings in 1919-Railway Age, Oct. 29, 1920--p. 756. From Statistics compiled by the Bureau of Railway Economics.

fault of the Railroad Administration, rather it was due to the conservatism of that body in deferring the rate increase until it could be sure of the basis upon which the increase was to be computed. The abnormal conditions existing during 1919 were very unreliable as a basis upon which to construct a permanent rate policy. If rates had been placed on a par with prices in every other industry there probably would have been no deficit. But if rates had been increased, Director General Hines dlaims that there would have been the loss to the public in either case. In the first place the deficit will have to be paid by the taxpayers of the country and if rates had been increased, the shippers and consumers of products would have paid the price. It certainly makes a great difference though who pays the cost, If it is paid by taxation, every taxpayer in the country helps bear the burden whether he ships anything or not, but if shippers and consumers pay the cost, the burden falls upon those who receive the benefit of the service and the latter is certainly the more just method of paying the costs of transportation, although in this particular case the Railroad Administration thought that the people who used the services of the railroads should not be required to bear the expense of conducting a war, the increased expenses of the railroads being in a large par t due to conditions growing out of the war. Director Gereral Hines is of the opinion that private operation would have cost

more than Government operation because private operation would have encountered the same difficulties that Government operation encountered and would have been less able to take advantage of many of the important economies that were accomplished through unification and which helped partly to offset the increased costs.

Probably the reason we have heard so much concerning the deficit from the opponents of the Government operation is because that was the strongest point of attack in turning public opinion against Government operation. The deficit was a tangible thing expressed in money, and people could understand it easily. The condition of the property which will be discussed later, 39, was certainly of much more concern to the railroads than the deficit which the Government incurred and which the private companies would not have to pay. There was nothing about the deficit to worry or cause anxiety to the private owners but the condition of the property was a cause of anxiety, yet little was said concerning this in the propaganda spread by opponents of Government operation. What the private owners wanted, was the return of their properties and they were perfectly justified in wishing for this, but in endeavoring to secure the return of their properties they should not have criticised the Railroad Administration for something that it could not help.

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39. Page 106

It can never be told whether the railroads could have been operated better and cheaper under private management during the war because the expenses that would have been incurred under private operation will never and can never be determined. We do know that the Government assumed control of the railroads because private management under the existing laws and regulations failed to provide the amount of transportation service that the country needed in order to successfully wage a war. Efficiency in transportation involves the expedition with which traffic is handled and the promptness and regularity in supplying cars and this is especially important in time of war, as well as the volume of traffic moved. This is where Government operation was perhaps superior to private operation.

THE BENEFICIAL EFFECTS OF GOVERNMENT OPERATION.

When everything concerning the conditions surrounding the railroads just prior to and during the period of federal control is known, probably most people will agree that the Government operation was the best and only program for the railroads of the country at that time. In all probability, every individual interest in the country, whatever its nature, benefitted through Government operation of the railroads; and the railroad owners benefitted most of all yet they are the ones who have criticised Government operation most. Perhaps they should not be criticised too much for this attitude. They knew there were people in the country who were in favor of Government ownership of the railroads and they also knew that while the railroads were under Government control an opportunity existed for the continuance of an experiment in Government ownership and if such an experiment were carried to a success, they would never secure control of their property again. The railroad owners tried to influence public opinion in their directions in order that they might secure control of their property again. This was probably the reason for much of the criticism that was directed against the Railroad Administration.

There were three decided advantages that accrued to the railroads through Government operation. 40. The first

40. Clark, Hamilton&Moulton-Readings in Economics of the War--p. 349.

of these was the insurance of an income during a period of uncertainty, during which time they were caught between two forces, fixed rates on the one hand and advancing costs on the other. Owners were relieved of the anxiety of securing a favorable income and could thus give their whole time and effort to other railroad matters.

Secondly, the owners were freed from the danger of continually maturing obligations which ordinarily they would have been able to meet but which could not be provided for under the existing conditions.

Thirdly, they were provided with the means of making improvements and betterments which were badly needed, at a time when their credit would not allow them to make such improvements unaided and at a time when such provision could be practically had through Government orders designed to place such requirements ahead of private concerns.

Government operation also protected the investors in railroad securities. There is not much doubt but that Government operation saved all but the very strongest lines from insolvency or a condition approximating it. If investors had not received their income from railroad securities, more than likely business over the whole country would have been dislocated at a time when every cent of money that could be obtained was needed and when the success of a great many industries was of prime importance in our military operations. If the railroads had

become insolvent, investors in railroad securities would not have received their income from this source, nor would the securities have been worth much. These investors would have been unable to pay their debts and this condition would have expanded until every class of business would have been effected. It would be difficult to imagine the real condition in which the business of the country might have been placed if the majority of the railroads had become insolvent before any aid was available. America would have been practically powerless as a participant in the war.

Then there are the benefits accruing to the general or shipping public in being able to secure cars promptly, or at least more promptly than would have been possible under private control.

Railroad labor also received many benefits in the form of higher wages but these have been discussed and will only be mentioned here.

But the greatest benefit, and this has been discussed to some extent before, is that which accrued to the nation, and to the world for that matter, in the winning of the war by the Allied nations. In time of war, the railroads of a country are first in importance after its army and navy, and in the late war an army would have accomplished but little without the support of an efficient transportation system.

THE APPARENT DEFECTS AND CRITICISMS OF GOVERNMENT CONTROL

Of course, as was to be expected, some disadvantages resulted from Government operation, but these affected only the individual railroads and were connected with the return of the railroads to the private owners. They were problems of only temporary importance and would be righted as soon as normal conditions returned. The most important of these problems was with regard to traffic. During the war traffic was diverted from customary channels, and routed over the most direct route or over the route best able to carry it. This took away traffic from some lines and gave extra traffic to other lines. The lines who lost traffic would try their best to regain it after they were returned to the owners and the lines that had gained traffic would try just as hard to retain it. This would result in keen competition and cause some difficulty in making the proper adjustments.

Another evil was the laxity in executive morals. The officials of the railroads would not exert themselves as they did under private management. They were freed from financial responsibilities and there is a probability that they were not as economical as they might have been.

Another bad effect claimed for Government operation but which is not inherent in Goverment operation, and which nearly all authorities admit to be true, is that the Government did not turn the property back to the owners in as good condition as it was when taken over. The

condition of maintenance is a more or less intangible thing and is hard to determine by riding over a railroad or making a hurried inspection of the property. One has to consider a great many different factors in comparing the condition of the property of two periods. One of these factors is the price of materials. If the price of materials was twice as high in one period as in another twice as much money would have to be expended to keep up the same maintenance work. The sums of money expended in such a case are not as good a guide to maintenance costs as are the amounts of materials used during the two periods. The amounts of materials can be easily compared but amounts of money in periods of different price levels are apt to be misleading unless very great caution is used in interpreting them. In making a comparison between the different amounts of materials used, one must also consider the amount of new mileage constructed which did not exist in the first period. These considerations are sufficient to show that the question of determining the condition of railroad property in two different periods is a more difficult problem than many might imagine.

The Government in its contract with the railroads promised to return the property in as good condition as it was when taken over. The owners claim that maintenace was not kept up to the standard and that not enough equipment was bought. The Government was restricted

in its policy of making improvements because of the shortage of labor and of materials. During 1918 the policy of the Administration was to make only such improvements as were absolutely necessary for war purposes. Labor and material were needed so badly in other war activities that only the most urgent improvements were made on the railroads. In 1919, the Administration planned extensive improvements and started work on them but when Congress adjourned on March 4, 1919 without making any appropriation for railroad maintenance work much of this work had to be left unfinished and much that was planned could not be carried out. Congress refused to appropriate money for improvements because of the approach of the termination of federal control. Congress would have sanctioned improvements if the railroads had agreed to pay for them, but the railroads would not do this and Congress would not make the improvements because it was thought that the benefit would accrue to the private owners.

Some statistics will now be given in order to show what the condition of the property was when given back as compared with its condition when the Government assumed control of it. The only manner in which such a comparison can be made is by giving the amounts spent on maintenance work during Government operation and for a few years prior to Government operation, the amounts of materials used in such work, and the amount of new equipment bought.

Amount spent for maintenance work: 41. (000 omitted)

	1919	1918	Test Period.
Maintenance of way and Structure----------	$ 778,105	$ 656,601	$ 407,111
Maintenance of equipment	$1,232,702	1,110,280	567,665

This table shows that much more was spent during Government operation than during the test period but it does not take into account the difference in the price of materials and labor during the two periods. The price of materials used in maintenacne work and of labor was much higher in 1918 and 1919 than during the three year test period. Less efficient labor was used in maintenance work during Government operation than during the test period and improvements were made as quickly as possible, so there is a possibility that the maintenance work done during Government operation would not be as lasting as that made during a different period. The following table shows better what the Government did regarding maintenance work.

Rails and ties used by the Government. 42.

	Rails laid	Ties inserted on roads
Test period	1,328,316 tons	94,835,433
1918	1,111,638 "	86,400,021
1919	1,350,000 "	85,000,000(estimate)

These figures would indicate that the Government did not keep the maintenace work up to the standard. More rails

41. Railways Earning in 1919-Railway Age, October 29, 1920 --p. 756. Statistics from figures of the Bur. of Railway Economics.

42. Maintenance of Way by the Railroad Administration-Railway Age, January 2, 1920--p. 57.

were laid in 1919 than during the test period but the increase would not counterbalance the decrease of 1918 as compared with the test period. The amount of ties inserted fell of heavily during both years of Government operation as compared with th e test p eriod.

Equipment in use at the close of each year given: 43.

	Locomotives.	Freight cars excluding cabooses.	Passenger cars.
1916	65,595	2,329,475	55,193
1917	66,070	2,379,472	55,939
1918	67,936	2,397,943	56,611
1919	68,802	2,428,049	56,240

These figures indicate that more equipment was in use during federal control than at the end of the two years just preceding. These figures might not mean as much as they seem to, however, because they show the condition that existed at one particular time. If another date had been taken the years 1918 and 1919 might not have made such a favorable showing and yet they might have made a better one.

Number of cars and locomotives built: 44 (includes Canadian output)

	Locomotives	Passenger cars	Freight cars
1916	2,162	466	101,372
1917	3,668	1,481	81,767
1918	2,585	1,969	119,363
1919	4,035	1,839	135,001

Equipment added during federal control: 45.

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43. Report of the Interstate Com. Com, 1920-Table II--p. 99.
44. Thompson, Slason, Railway Statistics of the United States, 1919--p. 47.
45. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920--p. 32.

	Purchased by the railroads.	Constructed in Railroad shops.	Purchased by Railroad Administration	Total
Locomotives	1,910	393	2,114	4,417
Freight cars	25,600	12,909	95,704	134,213
Passenger cars	700	107	-----	807

These figures make a more favorable showing than those for maintenance. More equipment was added by the Railroad Administration than by the private companies during the years 1916 and 1917, expepting passenger cars, and the Administration purchased no new passenger cars. The passenger cars that were returned to the owners were certainly in a much worse condition than they were when they were taken over because they had gone through two years of the roughest service possible.

Capital expenditures during federal control 46.

Railway and track	$ 541,000,000
Improvements to existing equipment	40,000,000
New equipment purchased by railroads	225,000,000
New equipment purchased by Railroad Administration	357,000,000
Estimated expenditures for January and February 1920	37,000,000
Total	$1200,000,000

Investment account of the railroads as of December 31 for each year given: 47.

1916	$ 17,842,776,668
1917	18,574,297,873
1918	18,984,756,478
1919	19,272,911,023

The Government made some capital expenditures as these last two tables show. For the greater amount of these expenditures it would be reimbursed by the railroads

46. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920--p.33.
47. Report of the Interstate Commerce Commission, 1920, Table IV--p. 100.

according to the terms of its contract with the roads. Only necessary war improvements were to be paid for by the Government.

Probably the chief criticism regarding the equipment is that the Government did not make the necessary additions to equipment and mileage that are generally made in normal times. The Administration did not agree to do this nor did the railroads under private management do it in the few years just preceding Government operation. The Government agreed to return the property in as good condition as it was when it was taken over but did not agree to make additions and betterments than would last for many years in the future and which were not a war necessity.

Opponents of Government ownership have been inclined to hold the Railroad Administration responsible for the claims made by the advocates of Government ownership during normal peace times, but such an attitude is unwarranted. The Railroad Administration should not be held responsible for such contentions when it was allowed to do only what Congress said it should do.

Neither should the Government be held responsible for what advocates of Government claim it will accomplish. The Government did not assume control of the railroads as an experiment in Government operation. If it had it would not have been so anxious to return the lines to their owners. It would have maintained control over them for a period of years in order to discover what such a plan could

accomplish during normal times. During a war is not the proper time for testing such plans. There are a few who claim that Mr. McAdoo wanted to show that the best results could be accomplished under Government operation, and who criticise the manner in which the railroads were operated during the period of federal control but they are probably unjust in their criticisms. Officials did think that the best results could be obtained under Government operation else the Government would not have assumed control of the roads but Mr. McAdoo had no thought of making an experiment in Government operation when he was Director General. The idea paramount in his mind was to make the railroads function so as to serve us best in our military operations. However, in his attempt to unify railroad activities, he had to employ many plans and policies that would be used in a scheme of Government ownership. Mr. AcAdoo is an advocate of Government ownership of the railroads but that is a question which is entirely separate from his management of the railroads while the war was being waged.

THE END OF THE WAR

The end of the war in November 1918 changed the conditions surrounding the railroads and necessitated changes in the traffic policy of the Railroad Administration, some of which have been discussed already. President Wilson specified in his proclamation that the railroads would be

restored to the owners within twenty-one months after the war ended. After the war ended, the Administration went to work formulating policies that would aid in restoring the railroads to their owners. Plans were put into operation which would place the railroads upon a basis approximating that of normal times before they were given back to the owners. The Administration recognized that it could not permit affairs to go along in a haphazard way and finally throw the lines back upon their owners without making some provisions for such a change.

One of the first things done in trying to restore normal operating conditions was the establishment of a Division of Public Service with Mr. Max Thelen as Director. The work of this organization was to improve relations with state commissions and to deal with relations between the public, the railroads, and the Railroad Administration. Equipment was also relocated with regard to ownership. Foreign cars were started toward the home line. During the coal strike in the latter part of 1919, the Railroad Administration was charged with the allocation and distribution of coal and in doing this it had to scatter the open top cars but they were soon relocated after the strike ended. The relocation of equipment gave a better chance for railroading at home. Railroad lines were regrouped, expecially in the Southwestern Region, and on all lines shippers were given more control over the routing of their freight. Wartime demurrage rates were also re-

duced to the pre-war basis. During this time the railroads made many demands upon the Railroad Administration but most of them were refused because it considered that the granting of these requests would be favoring private operation at Government expense.

In May 1919, President Wilson announced to Congress that the railroads would be returned to the owners at the end of the year. This placed upon Congress the responsibility of passing satisfactory legislation under which the lines could be restored. Restoring the lines upon a basis satisfactory to all concerned was a difficult task and required much careful thought and consideration upon the part of Congress. The vast majority of the people with the exception of the railroad employees, were disgusted with Government operation and were more than willing that the lines should go back to the private owners, but time was required in order to decide upon what basis they should be returned. In his speech to Congress, President Wilson gave no policy for the future of the railroads. He left the whole question in the hands of Congress. The Democrats washed their handsoof the railroads and the Republicans were reluctant to assume the problem themselves; this accounts for the delay encountered in securing adequate railroad legislation. However, both President Wilson and Director General Hines deemed it to be the best policy that the railroads should be restored to the private owners. The Interstate

Commerce Commission also voiced the same opinion in the following:

"Considering and weighing as best we can all the arguments for and against the different plans, we are led to the conviction that with the adoption of appropriate provisions and safeguards for regulation under private ownership, it would not be wise nor best at this time to assume Government ownership or operation of the railroads of the country." 48.

After the President announced that the railroads would be returned to the private owners, numerous plans were advanced for solving the problem. The framers of nearly all of these programs had some particular interest in view whem framing their plan; accordingly, each made his plan with a view to benefit those interests. The plans advanced were of three general types. The first type was represented by the plans of the Interstate Commerce Commission, of the Railway Executives, and of Mr. David Warfield, President of the Association of Railway Security Owners. The second type was represented by the plan of Director General Hines, and the third type by that of Mr. Glenn. E. Plumb, a lawyer of Washington, D. C.

The plans of the first type remained close to the underlying principles of the past. The weak points of past regulation were recognized and the framers sought to eliminate them. Government regulation and a better rule of rate making were sought. These plans rested upon private ownership; federal incorporation; the regulation of security issues, a Cabinet position of Secretary of Transportation which should have chief authority in

railroad matters, leaving the Interstate Commerce Commission with only quasi-judicial functions; a rule of ratemaking to be recognized by statute; and wage boards to be organized, when necessary, and wage costs to be considered as an expense in rate making.

The second general type of plans provided for government partnership to the extent of a guaranteed return on railroad capital; for consolidation into a few strong systems of railroads; and for the participation of labor and of the Government, in excess returns over a guaranteed amount. Director General Hines view on the whole railroad problem is given in the following quotation: 49.

"I do not personally believe in Government ownership. I believe that there can be a form of radically reconstructive private ownership with such close Government supervision including government representation on the boards of directors as will give the public and labor all the benefits of government ownership and at the same time will preserve the benefits of private and self-interested initiative and will avoid the political difficulties which perhaps are inseparable from government ownership."

Director General Hines also believed that some of the policies which were used under Government operation should be continued under private management in order to promote the greatest degree of public convenience and economy. Only the most important of these will be enumerated. They have been discussed before and will only be mentioned here.50.

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49. Parmalee, J. H.--Proposals for Solution of the Railway Problem, American Economic Review, June 1919--p. 394.
50. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920--p. 38.

1. Unifications of systems and of terminals.
2. Standardization of equipment, repair shops, and of wages and working conditions.
3. Pooling of equipment.
4. The permit system in handling traffic.
5. Consolidated freight classifications.
6. Control of export traffic.
7. Consolidation of ticket offices.
8. Uniform rules of car distribution.
9. Bipartisan boards to consider labor problems.
10. Routing of traffic.
11. Use of common time tables.
12. Representation of the shipping public on rate making committees.
13. Use of single track parallel lines as double lines.

It is obvious that the continuance of the above arrangements under private control would be the best thing that could be done so far as economy in management and convenience to the shippers are concerned, but there are difficulties that interfere with the continuance of some of these plans. Mr. McAdoo, who also believed that these plans should be continued under private operation, points out the difficulties to be encountered when he says:

"----Competition and self-interest dictate that when the roads are under private control each carrier gets as much business as possible and keeps it regardless of the fact that the aggregate result may be wasteful and uneconomical. For instance when two or more competing lines operate between two important cities, the convenience of the public can best be served if alternating trains be operated at short intervals over the different roads. Competition however, always results in each of the roads "bunching" its trains at times when the demand for traffic is heaviest. Competing lines can hardly be expected to route freight over the routes of competitors even though these competing lines may have the shorter routes and be able to handle this particular traffic more economically. Lines with advantageous terminal facilities cannot be expected under private control to place such facilities at the disposition of competitors operating under less favorable circumstances. One company will not forego lodding and hauling traffic even though this seriously embarasses the general situation because its connections cannot conveniently receive and dispose of the traffic.

Private carriers may not enforce rules which, although designed to bring about efficiency and economy, might drive business away from their lines. All the waste resulting from these practices and running into huge costs is paid for by the public in the form of higher rates." 51.

The third general type of plans, represented by the Plumb plan, provided for Government ownership outright. It provided for the purchase of the railroads by the Government and then for the turning of them over to an operating corporation, administered by a board of directors, part of whom were to be elected, the others to be appointed by the President; for the division of revenues between the Government and the operating corporation, the latter to pay its share to labor as a dividend; for the fixing of rates by the Interstate Commerce Commission and for the settlement of labor problems by boards appointed for that purpose. This was the only seriously considered plan which provided for government ownership.

All of the plans advanced gave evidence that their framers saw the gravity of the transportation situation and the need for a good system. Also that we needed a fuller and more strict governmental regulation, and better provision for adequate revenues. However, none of the above plans were considered as the one under which our railroads should operate after being returned to their owners. None of the contained all the provisions that Congress considered necessary if the railroads were to have

51. McAdoo, W.G.--Statements before the Interstate Commerce Committee of the United States Senate, Jan. 3 and 4, 1919 --p. 16.

a satisfactory basis upon which to operate. Of the above plans, that of Senator Plumb attracted most attention, not because it was the best on but because of it radical departure from past experience.

Two plans not yet mentioned were the ones which most attracted the attention of Congress. These were the Cummins' Bill, introduced by Senator Cummins of Iowa, in the Senate, and the Esch Bill, introduced by Representative Esch of Wisconsin, in the House of Representatives. There were in Congress so many differences of opinion regarding railroad legislation that none was passed by the end of the year 1919 with the result that the lines were not returned to the owners as had been planned and they could not safely be returned without proper legislation to protect them. President Wilson saw before the end of the year the the proper legislation would not be enacted for returing the railroads; so on December 24 he issued a proclamation extending the period of federal control to March 1, 1920 and stating definitely that the roads would be returned to their owners on that date. The above bills were passed by their respective house, the Cummins Bill on December 20, 1919, and the Esch Bill on November 17, 1919. However neither House would agree upon the bill of the other. Finally the two bills were submitted to a conference committee composed from members from both houses of Congress. This Connittee revised the two bills and on February 18, 1920, reported to Congress what it had done. The bill framed by this committee, known as the Esch-Cummins Bill was acceptable to both

houses of Congress, the House of Representatives passing it on February 21 and the Senate on February 23. On February 25, the bill wase sent to the President for his approval and signature and on February 28 he signed it, thus making definite what was to be done with the railroads. The Act as signed by the President provided among other provisions which will be discussed in the section immediately following, that the railroads should be returned to their owners at midnight on March 1, 1920.

THE CUMMINS' BILL, THE ESCH BILL, AND THE ESCH-CUMMINS BILL.

The main provisions of the Cummins bill, the Esch Bill, and the Esch-Cummins, or the Conference Committee bill, are given in order to show the principles upon which the new railroad legislation was based. The different bills will be considered collectively in order that the differences and changes may be noted.

I. Ownership.

Cummins bill:

Private ownership. All lines were to be consolidated into not less than twenty nor more than thirty-five large systems, made lawful by the approval of the Interstate Commerce Commission.

Esch bill:

Private ownership and consolidation to the extent that the Interstate Commerce Commission approved.

Conference bill:

Private ownership. The consolidation into systems was to be voluntary upon the part of the carriers. The Interstate Commerce Commission

was to work out a general plan of consolidation which might be accepted by the carriers.

2. Operation.

Cummins bill:-

Private, under Government regulation; the regulation to be by a Federal Transportation Board composed of five members to be appointed by the President. The Interstate Commerce Commission was to have a quasi-judicial function.

Esch bill:-

Private under Government regulation; regulation to be by the Interstate Commerce Commission.

Conference bill:-

Same as under the Esch bill.

3. Securities.

All three plans provided for Government regulation of the issue of securities.

4. Guaranteed return.

All three bills provided for guaranteeing the present standard return for a period of six months. The lines which did not ask for increased rates inside of sixty days after the termination of Federal control did not receive this privilege, however. This provision was inserted in order that the roads might not be short of ready money during the period of change when they were restored to the owners.

5. Debt:-

Cummins bill:-

Funding of the carriers debt to the Government for ten years at 6%.

Esch bill:-

Funding of the debt, less rentals owed by the Government for fifteen years at 6%.

Conference bill:-

Funding of the debt for ten years at 6%. The carriers were to give such security as the President might prescribe.

6. The revolving fund:

Cummins bill:-

There was to be an individual reserve for each line for its own credit. There was also to be a general contingent fund created by the strong lines for the benefit of all.

Esch bill:-

There was to be a fund of $250,000,000 created by the Government. This could be loaned to needy lines for periods of five years if they made application for such loans inside of twenty-six months.

Conference bill:-

Same as the Esch bill, except that the amount was $300,000,000. This appropriation was to enable the carriers to buy equipment and make improvements during the period of transition if

they were unable to finance such undertakings themselves.

7. Valuation:

Was to be by the Interstate Commerce Commission in all three plans.

8. Rates:

Cummins bill:-

Present rates were to be continued until new ones were approved by the Interstate Commerce Commission. The country was to be divided into rate districts with special consideration as to conditions existing in each. The Interstate Commerce Commission was to allow rates that would permit a return of 5½% on the valuation of the property in each rate group, plus ½% which might be used for improvements. In five year periods, the 5½% basis could be raised or lowered.

Esch bill:-

Was the same as the existing regulation except that it provided that the Interstate Commerce Commission should make both maximum and minimum rates instead of maximum rates only.

Conference bill:-

The existing rates were to remain in effect until September 1, 1920, unless a change was allowed by the Interstate Commerce Commission.

The Interstate Commerce Commission was given power to establish both maximum and minimum rates and was to establish rates that would allow a return of 5½% upon the aggregate valuation of all railway property in the rate making group, plus ½% which might be used for additions, improvements and betterments. All of the return in excess of 6% was to be divided equally between the particular carriers reserve fund and a contingent fund established by the Government from which loans might be made to weak lines for the purchase of equipment and other purposes. All carriers that wanted to receive the benefit of the Government guaranty of income were to make appeal for higher rates withing sixty days after March 1, 1920.

9. Labor:

Cummins bill:-

Three Regional Boards of Adjustment, having three members each of employers and of employees, on each board, were to be created. These boards were to decide all labor disputes other than those relating to wages. A committee on Wages and Working Conditions was to decide all questions relating to wages and working conditions and to decide cases when appeals were made to it by the Regional Boards. This Board could

appeal in turn to the Federal Transportation Board whose decision was final. Strikes and lockouts were made illegal.

Esch bill:-

Three Boards of Adjustment to decide all questions within the three classification of employees, (trainmen, shopmen, and all other employees) were to be created. These boards were to be composed equally of representatives of the employees and of the employers. The one representing trainmen was to have eight members, that representing shopmen to have twelve members, and that representing all other employees to have eight members. Three Commissioners on Labor Disputes were to be selected to hear all appeals. There was no legislation against strikes and lockouts.

Conference bill:-

A board to be known as the Railroad Labor Board composed of nine members, the employees, the employers and the public being equally represented, was to be created. The members of this board were to be appointed by the President of the United States by and with the consent of the Senate, and the central office of the Board was to be in Chicago.

The carriers and their employees were permitted

to establish Railway Boards of Labor Adjustment. These were to deal with all questions except wages,, the Railroad Labor Board having charge of this question, and if they could not reach an agreement they could appeal to the latter board. The Railroad Labor Board could investigate and decide questions upon its own motion, at the request of the chief official if a carrier, and on the petition of one-hundred unorganized workers.

There was to be compulsory submission of all labor disputes to the Railroad Labor Board if they were not decided by the other named boards. The decision of the Railroad Labor Board was final. However, there was no punishment provided for violation of its awards.

The section of the bill dealing with labor required more attention than other parts. Railway employees were fighting against the carriers going back to the owners and used all their influence with President Wilson to keep him from signing the bill. The Conference Committee drafted this section of the bill to coincide with the views of Director General Hines, whose views coincided with those of President Wilson.

10. Boards.

Cummins bill:-

A Federal Transportation Board, and the Interstate Commerce Commission.

Esch bill:-

Both the Esch bill and the Conference bill provided for one body, the Interstate Commerce Commission.

The Interatate Commerce Act was amended so as to give the Interstate Commerce Commission the following increased powers:

1. The establishment of both maximum and minimum rates.

2. The control of car service in emergencies, and the routing of freight.

3. To compelt the joint use of terminals, and to give priority to any class of freight needing such.

4. The Commission must give its approval before additions, betterments, or abandonments can be made.

5. Complete control of the railways in case of war or threatendd war.

6. Interlocking directorates in the case of railways was prevented without the approval of the Interstate Commerce Commission.

7. The membership of the Interstate Commerce Commission was increased fron nine to eleven members and their salaries were increased from $10,000 to $12,000.

Thus the railways of the country were restored to

their private owners. This legislation, while probably not the best that could have been enacted, shows a step far in advance of anything that had ever been proposed before for the solving of the railway problem. Its originators show they have a view of the relationship of the transportation system to the nation, that has never been shown before. They have gotten away from the idea that the railways are only a private undertaking, and have realized the fact that the public has as great an interest in regulation being sound and protective to the carriers as well as to the public, as have the carriers themselves.

The outstanding feature of the new law is the provision for establishing rates that will permit a return of 5½% on the valuation of the property, and the division of the earnings in excess of 6%. The men who made the law recognized that something must be done to aid and establish the credit of the railways. That (credit) is the heart of the railway problem. Give the railways a good basis for credit and a little time and they will soon be in a prosperous condition. Under the new law the Interstate Commerce Commission has a basis upon which to make its judgment which it did not have under the previous laws. The new law provided for federal valuation of the railroad properties. There was however provision for federal valuation before the new legislation was enacted but such provision had been in effect only a short time. Federal valuation would make a uniform valuation for all of the railroads and would give the Interstate Commerce

Commission a basis upon which to make its judgment when dealing with rate questions.

A changed attitude toward the railways came over the public during the war. The difficulties under which the railways found themselves during and after the war brought home to the people's minds the fact that we had a very serious railway problem on our hands. Before this time dissatisfaction was about petty matters, but during the war dissatisfaction was about very fundamental matters. At present, people are all more friendly toward the railroads than they were five years ago. This attitude is bound to react to the benefit of both the carriers and the public. At present the public is not so much interested in the rates that it has to pay as it is in the service which it secures. It is willing to pay a rate which will secure the service that it desires. If it will not pay such rates it will have to be satisfied with the kind of service that it is willing to pay for. Producers have seen that they are hampered in their productive capacity and that invested capital must lie idle if they cannot get their products to market. If they do not get their products to market, they cannot meet their obligations and bad conditions are created in all industries. The preple have seen that the most costly railway service is inadequate service, and not high priced service.

Chapter IV.

The Transportation Situation and the Condition of the Railroads upon their Return to Private Management, March 1, 1920.

At midnight, on March 1, 1920, the railroads of the United States were returned to their private owners. The officials of the lines had been preparing for this change for some time with the result that it was accomplished smoothly and almost imperceptbly in so far as the public was concerned. But the railroads on March 1, 1920, were not the same that they were when they were taken over by the Government on December 28, 1917. They could not be the same. The Government had disorganized and rearranged their activities. The identity of individual properties had been merged into that of others; the rolling stock had been scattered over the country until not more than 21% of the cars were on home lines; repairs had been made without uniformity and in some cases were not adequate; the management had been deprived of the intimate touch with its property; andtthe current revenues had been taken by the Government and no final adjustment had been made, leaving their financial condition uncertain. Operating costs had risen tremendously during the last two years; present revenues were inadequate to meet them, and there was a loss to each line of its adaptation to traffic. Under such conditions, pre-war operation would

be impossible. There was a period of adjustment that the railroads would have to go through. Such conditions were bound to cause trouble for the railroad officials but the only thing that they could do was to attack the problem with all their force and do what they were able to do! No more could be expected of them.

There is sure to be keen competition between the railroads for the regaining of lost traffic and for the gaining of new traffic and there will be heavy traffic for years to come for the equipment that exists, due to the growth of industry during the war and due to the many demands that went unfilled during the war such as the demand for new building and construction work. These conditions will necessitate a vast amount of expenditures by the railroads for new lines, additions, betterments, and new equipment. The increase in these items had by no means kept pace with the increase in business and growth of industry; so provision for them is of the utmost importance if the railroads are to give the service that will be required of them, and the shipping public is bound to be very insistent in the future in its demands for adequate transportation service.

The following table gives the estimated amounts of money that will be required by the railroads within the next three years: 1.

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1. Six Billion Dollars for Capital Expenditures, Railway Age, January 2, 1920--p. 9.

6,000	miles new line	$ 1,250,000,000
10,850	miles automatic block signals	52,264,000
15,000	miles multiple main track	----------
30,000	miles yard and side track	----------
13,177	locomotives	707,786,000
24,500	passenger cars	532,000
712,400	freight cars	1,662,000,000
	Shop equipment	61,230,000
	Extensions	600,000,000
	Engine houses, shops	250,000,000
	Grade revision, elimination of curves, etc.	600,000,000
	Stations	300,000,000
	Total amount required	$ 6,010,000,000

The Status of Accounts.

The amount of indebtedness both of the railroads to the Government for advances for improvements, and of the Government to the railroads for the guaranteed rentals was not known exactly when the railroads were returned to the owners. Some time would be required for the adjustment of these matters as each individual railroad would have to be dealt with separately in order to determine the amount due each. In his report to the President on February 29, 1920, Director General Hines gave his estimates as to these amounts, and since then these have proven to be fairly accurate. The estimates of the Director General are given in the accompanying table: 2.

2. Hines, W. D.--Report to the President for Fourteen Months ending March 1, 1920--p. 47.

APPENDIX.

Statement showing estimated net disbursements made for capital expenditures and other advances by the Government and for operations during the 26 months' period (Jan. 1, 1918–Mar. 1, 1920) of Federal control of Class I railroads and other properties, including American Railway Express Co., and appropriations made and required.

1. Total advances by the Government for additions and betterments to roadway and structures and equipment (except allocated equipment)	$780,405,512	
2. Amount that may be deducted therefrom on account of compensation, depreciation, open account, etc., due companies	461,480,839	
3. Net amount of additions and betterments to roadway and structures and equipment (except allocated equipment) to be funded for 10 years (see note 1)		$318,924,673
4. Allocated equipment funded through equipment trusts, principally payable in 15 annual installments		357,011,454
5. Other indebtedness due Government to be evidenced by one-year notes (see note 1)		194,680,562
6. Long-term notes payable to Government		44,433,664
7. Stocks, bonds, and receivers' certificates of railroad companies owned by Government		23,565,198
8. Total representing indebtedness of railroads and other properties, including express companies		938,615,551
9. Other investments of Railroad Administration:		
Additions and betterments to inland waterways	$10,029,496	
Miscellaneous investments (chiefly Liberty bonds)	83,254,404	
		93,283,900
Total of items of indebtedness and investment		1,031,899,451
10. Estimated excess of operating expenses and rentals over operating revenues:		
Class I railroads	715,500,000	
Other privately owned properties (smaller railroads, sleeping and refrigerator car lines, and steamship lines)	29,170,000	
Inland waterways	2,570,000	
Expense of central and regional organizations	14,080,000	
American Railway Express Co	37,000,000	
Adjustment of materials and supplies in settlement with railroad companies on account of increasing prices	74,003,434	
	872,323,434	

Less net credits on account of interest on (*a*) open accounts, (*b*) compensation, and (*c*) expenditures for additions and betterments	$17,900,000	
		$854,423,434
11. Grand total		1,886,322,885
Original appropriation, Federal control act	500,000,000	
Deficiency appropriation	750,000,000	
Appropriation carried in pending railroad bill	200,000,000	
		1,450,000,000
Additional appropriation that will be required		436,322,885

NOTE.—The net amount of $318,924,673, representing cost of additions and betterments to roadway and structures to be funded for 10 years, is reached by making such offsets as are permissible under the terms of pending railroad bill, in the first instance, against indebtedness growing out of additions and betterments. It is quite likely that in the actual settlement with many roads offsets will be used in the first instance to wipe out indebtedness represented by demand notes or by open account instead of against additions and betterments to roadway and structures. The result of this would be to increase the net amount of additions and betterments to roadway and structures to be funded and correspondingly to decrease the amount stated in item No. 5, of $194,680,562, as representing other indebtedness due the Government to be evidenced by one-year notes. The total of indebtedness to the Government would, of course, not be affected.

In the table just given it is seen that the total amount spent by the Government as investment and indebtedness was $1,031,899,451. Add to this, the amount that the actual operating expenses of all the properties taken over exceeded the operating revenuse and there is a total of $1,886,322,885 spent by the Government upon the railroads and the other properties while it was operating them. Up until March 1, 1920, $1450,000,000 had been appropriated by Congress to meet these expenses leaving an amount of $436,322,885 to be appropriated before the expenses of Government operation had been fully met. However this would not all be a loss to the Government because the railroads owed it for all amounts expended for improvements that were not made as war necessities. The following table shows what the Government owed the Railroads and what the railroads owed the Government: 3.

Government indebtedness to the railroads for rentals----------	$ 1,476,928,805.60
Railroads indebtedness to the Government for improvements and additions	1,667,342,077.00

Under the terms of the Transportation Act of 1920, $815,379,145 of the amount due from the carriers to the Government may be used as an offset against the amount owed by the Government to the railroads leaving to be paid to the carriers a net amount of $661,549,661.89.

As was shown in discussing the operating deficit, the total loss to the Government during the twenty-six

3. Federal Control of Railroads Results in $900,000,000 Deficit, Railway Review, May 29, 1920--p. 878.

months of federal control was $900,478,737 and $667,513,152 of this amount was chargeable directly to the excess of operating expenses over gross revenues on Class I lines.

The Condition of the Physical Property.

This was dealt with in the preceding chapter but a summary of the condition will be given here. It is the general consensus of opinion among people conversent with railroad matters and from evidence furnished in the statistics of the Director General that maintenance during federal control was not quite what it should have been although the Director General in his report to the President on February 29, 1920 stated that the condition of the plant and equipment compared favorably with the condition at the time it was taken over by the Government.

During the period of federal control the plant and equipment were under the greatest pressure of traffic to which it had ever been subjected, but the maintenance was below normal and certainly below what the wear and tear of the heavy war traffic called for. It was not the fault of the Railroad Administration that the maintenance was not kept up to the required standard because that body was dependent upon Congress for all the money it secured with which to make improvements, and during 1919 Congress refused to make appropriations with which improvements could have been made.

The Government did a little better with the equipment

although it is claimed that the proper additions were not made. Much of the equipment was needed so badly that it could not be released for repairs when they were needed. This was true especially of passenger equipment.

Authorized and actural expenditures of the Railroad Administration: 4.

	Additions and betterments.	New construction.	Equipment.	Total
1918	$ 567,327,140	$ 49,603,560	$ 289,247,838	$906,178,538
1919	215,946,749	7,826,263	41,179,618	264,951,630
1918-19	$ 783,273,889	$ 57,429,823	$ 330,427,456	$1171,131,168

Amount actually expended:

1918	$ 272,232,972	$ 21,346,231	$ 180,058,810	$473,628,013
1919	237,143,941	10,011,832	85,101,952	332,267,725
1918-19	$ 509,376,913	$ 31,358,063	$ 265,160,762	$805,895,938

These figures show that the Railroad Administration planned to spend much more than it did and if Congress had not refused to appropriate funds the Administration would have gone ahead and improved the properties leaving them in as good or probably better condition than when taken over.

Total Maintenance: 5.

		Per cent of total expense.
Test period	$ 974,776,000	42.4
1918	1,750,305,000	44.1
1919	2,010,807,000	45.5

The percentage total in the preceding table would indicate that maintenance was kept up to the normal but it does not take account of the very hard wear that the plant and equipment were subject to during federal operation. This

4. Authorized and Actual Expenditures, Engineering-News Record, May 27, 1920--p. 1075.
5. Parmalee, J. H.--Railway Maintenance in 1920, Engineering News-Record, January 6, 1921--p. 34.

hard wear and tear would necessitate the expenditure of a proportionately large amount of money in order to keep the property in as good condition as it should be and in as good shape as it was when taken over.

The depreciation of plant and equipment would certainly place the railroads under difficulties when they were returned to the owners. Extra burdens would be placed upon the lines in bringing their property back to the proper condition.

The Condition of Railroad Finances and Earnings.

When the railroads were returned to the owners, the operating expenses were exceeding the revenues by a very large amount. During the last few months of federal control the deficit had been growing larger each month. This placed the railroads in a position which made it impossible for them to finance themselves unaided after they were returned. If the Government had not guaranteed the railroads the standard return for six months and had not been willing to loan them money with which to make improvements, the carriers would more than likely have had great difficulty in doing any improvement work after they went back to private control because their credit was so poor that they could have secured funds only the best of security and at the highest of rates and it is very possible that they would not then have secured the amounts that they needed.

Provisions of the New Regulation.

It now remains to give the new system of regulation a fair trial. In doing this, every individual in the nation must do his share toward making the regulation a success. New responsibilities rest upon all but especially upon the carriers and upon the Interstatte Commerce Commission.

The shipping public should not expect too much from the railroads at first. It must be patient while the railroads are going through the first few months of this period of adjustment. It must realize that the railroads are faced with very serious difficulties and problems and that they will be unable to render their best service for some time to come. It should also co-operate to the very fullest extent with the railroads in their efforts to return to a sound basis.

The carriers must also recognize their responsibilities during this period and during the years to come. They must recognize the extent to which other industries are co-operating with them and must in turn endeavor to raise their standard of service to that level of efficiency which is expected of them. They are trusted with the responsibility of furnishing transportation service to the public and in all their dealings they must view their obligations from the standpoint of that of a public servant, and consider the public rights and the public welfare. The public has a right to the service that it expects if the railroads have the power to deliver the service. Of course,

too much must not be expected from the carriers But if we make it possible for them to operate upon a profitable basis, we have a right to demand that they furnish adequate transportation service for moving our products during normal times.

The Interstate Commerce Commission also has a greater responsibility for the welfare of the railroads under the new legislation because of the increased powers given to it. Formerly that body was not responsible for the results of the exercise of its power but now it is. Previously its main duty was in relation to the adjustment of rates, but now it has been given broader powers over railroad affairs in general. It now has broader powers over rates and it is also responsible for the proper financial management of the carriers through its control of the issueing of securities. Much of the business management of the railroads has been transferred from the corporations to the Commission, thereby making it something more than a body merely for the purpose of interpreting the law and for compiling statistics. Now, instead of viewing only one side of the case, it must see that both sides secure justice. The future success of the railroads depends upon the view taken by the Commission concerning railroad matters; whether that view is a broad, far-sighted one or a narrow, distorted one. The Commission now has the power to either make or break the railroads. Of course to a limited degree each individual in the nation is responsible for the wel-

fare of the carriers but in the first instance the Interstate Commerce Commission is responsible because it is the body that frames to a larger extent the policies governing the railroads. If the Commission permits the railroads to secure sufficient credit to meet the needed quantity and quality of transportation service, the legislation will have been a success, and it will have done its part well. The railroads, the Interstate Commerce Commission, and the new law are all on trial and only time will reveal the final result.

We have learned a lesson, and a very costly lesson, in railroading, but finally, it may be worth all that it has cost. It is to be hoped that we profit from that which we have learned. In this, as in many other cases, experience has been a costly teacher and it is to be regretted that we could not have worked out this problem without such a cost, but that not being permitted, we should profit by our mistakes of the past, and knowing these, go to work to make our transportation system, as well as every other institution relating to public welfare, contribute most to our progress as a nation.

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