THE LAST HURRAH FOR THE GILDED AGE:

THE 1917 NATIONALIZATION OF U.S. RAILWAYS

Wars small and great provoke and extend innovations of every kind -- the greater the war, the greater the provocation. Most of the attention given to such innovations is focused on weapons and devices that contribute to weaponry. There are, however, innovations in systems and processes and in the governance of nations all provoked by war. These last innovations are in the end the most difficult to grasp and the most important.

Today we address one such "innovation". The nationalization of U.S. railroads in World War I was a part of a larger scheme of institutional and governance innovation captured in the phrases "total mobilization" and "war socialism" and "war collectivism". There were certainly antecedents and precedents that figured in the nationalization of U.S. railroads, but all were merged into the nationalization experience compelled by the momentum of the Great War.

While innovations of the Great War were not in devices alone, a list of weapons is useful because they created large infrastructure system changes. Such innovations would include: the airplane, the submarine, the tank, and the radio which was a primary element in a practical command and control regime. (Eli Paul and Doran Cart prepared the attached list of their nominees for such innovations).

Our focus today, however, is on the "institutional" innovation of WWI – "total mobilization" and "war collectivism". In the application of principles of scientific management such mobilization involved government control or engagement of every asset or person of the nation in the war effort. The nationalization of U.S. rails in 1917 was an expression, an out growth, of this "innovation".

Though war collectivism, total mobilization, came into being at the beginning of the war in 1914, there had been calls for such marshalling of resources before general hostilities began. As we still see, principles of war collectivism and total mobilization led, in some nations unthoughtfully and naively, to convictions that a socialist, communist, fascist community directed by scientific management could lead to utopia.

So we begin with President Wilson's Executive Order, December 26, 1917, taking over American railroads:

"Now, therefore, I, WOODROW WILSON, President of the United States, under and by virtue of the powers vested in me … do hereby … take possession and assume control at 12 o'clock noon on the 28th day of December 1917 of each and every system of transportation … within the boundaries of the continental United States …".

Antecedents to Wilson's order were the financial successes and excesses of the Gilded Age, made possible in part by the Civil War currency boom. The financial excesses of the period produced excess investment in rails, among other technologies, and consequent service duplication, system overlap and congestion, followed.

Liquidity, Booms and Innovation: Background to Nationalization

The Post Civil War liquidity boom was supported, if not created by, issuance of greenbacks put in circulation to fund the Civil War. These greenbacks remained in circulation together with counterfeit currency and other specie issued by state and new national banks, now looking for new investment – much of it in railroads and other new technology, i.e. telephones, electric power. farm machinery and many devices imagined to take advantage of the emerging American marketplace.

The situation of the late 19th century was described by Walter Bagehot, founder of the Economist and critic of the then central banking apparatus. He said of that period's credit bubble with declining yields: "the owners of savings not finding, in adequate quantities, their usual kind of investments, rush into anything that promises speciously."* This phenomenon is observable in more contemporary settings. America always seemed to have an appetite for commercial transactions and the indispensible fuel for such transactions – paper money. **

* [Financial Times, 12/20-21/08]
**[The Radicalism of the American Revolution, Gordon S. Wood, 1991, pages 305 ff]

After the American Revolution, and despite the founders' reservations, banks were started throughout the country and became issuers of paper money – generally without reserves or capacity to honor the commitment such issuance contemplated. By 1819 Alexander Baring, a recognized British financial authority and banker could tell the House of Commons that "the system of a paper currency has been carried to a greater extent in America that in any other part of the world", confirming what Friedrich Hayek observed, that money is one of the great instruments of freedom ever invented, "providing an outstanding range of choice" to all citizens and not just to an aristocratic elite.*

Between 1793 and 1861 there were approximately 1,600 private banks under state charters using and circulating their own paper currency. There were approximately 7,000 forms of currency.** Not until 1861 did the U.S. begin printing its own currency and circulating paper money, "green-backs". During the period 1863 to 1929 thousands of new "national" banks were allowed by the U.S. to issue their own bank notes. These national banks in essence took the place of the state banks issuing currency; a federal tax on state bank notes mandated by the National Bank Act of 1863 ultimately put such notes out of business.

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* Milton Friedman, a leading proponent of supply-side economics and free market capitalism, wrote in 1948 that governments have a responsibility to issue currency to support and promote economic activity when needed but after economic activity was ensured they have a similar responsibility to withdraw currency from the financial system. As William McChesney Martin, former chairman of the Federal Reserve, said it is the central banker's duty "to take away the punch bowl when the party gets going". After Bretton-Woods in 1944, such government action by the United States is in the ordinary course much resisted by recession adverse politicians and is increasingly unlikely, as the dollar has become the global reserve currency. Inflation then becomes endemic and chronic, and "liquidity management" more difficult.

** [History of the Secret Service]

A detailed history of currency in the U.S. is not practical here. Until late in the 19th century states and local banks issued currency which was used in transactions of every kind. Problems with counterfeit green-backs led to Lincoln's creation of the Secret Service – ironically he signed the law the day of his assassination. It is enough for these purposes simply to observe that a sea of liquidity facilitated or caused the proliferation of investment opportunities on every front and the "overinvestment" in railroads, among other technologies.

Commercial transactions fueled by paper money also required a legal structure to facilitate the transactions. That structure was the private corporation and private corporate charter. Previously a monopoly of the monarch, such charters were increasingly granted under general incorporation laws, led by New York in 1811. By 1817, for example, Massachusetts alone had thirty times more corporations than the handful that existed in all of Europe.

Granting such charters represented unprecedented dispersal of public power by state and municipal governments to private enterprise. There was simply no other way for government to bring about the investments and the projects pressed for in the New World. From this public/private "partnership", which varied in its delegated efforts from time to time, the calamities and successes of the new republic of commerce emerged. This flexibility partnership was essential to the success of the U.S. ownership of the railroads from 1917 to 1920.

More fundamentally, the combination of unprecedented liquidity over a century in duration, with an accessible low cost corporate structure to house new ideas of enterprise, gave substance to one version of the American dream.

<u>Robber Barons and Investment Bankers</u>

A railroad construction mania emerged following the Civil War. Much of the construction arose from the impulse for civic betterment. Every town with a future had its "go getters" who sponsored and built "booster railroads". At the end of the Civil War there were 35,085 miles of railroad track, with 3,272 west of the Mississippi. By the end of the 19th century the total mileage was almost 200,000 miles with just over 72,000 in the barely populated west. The rail construction boom continued after 1900 with its partners and facilitators, financial and investment bankers, men with a talent for taking advantage of the excess liquidity of the U.S., the appetites of European investors and the economic development aspirations of state and local governments throughout the country. This combination of players created, in the words of one shrewd observer of the frenzy, "railroad lines from nowhere in particular to going nowhere at all" with problematic connections, and little or no equipment or management. Some of you who know Anthony Trollope's, <u>The Way We Live Now</u>, have a sense of how the great New World opportunity attracted foreign and domestic investors and charlatans. Mel Brooks', <u>Blazing Saddles</u>, is a different example of the civic betterment impulse behind rail construction and its corruption by the likes of Hedley Lamar.

Those bankers with talent for financing railroads – the likes of J. P. Morgan, E. H. Harriman, Jay Gould and Cornelius Vanderbilt – began to lose patience with the "excessive competition" that emerged from railroad overbuilding. Intense speculation on the prospects of any particular property produced wild swings in railroad stock prices. Stock price volatility and new competition frustrated realization of returns on capital and necessary reinvestment and, especially threatened the larger more established roads in the east and the emerging lines of the west – the Great Northern and Union

Pacific. By 1883 there were four transcontinental routes more or less in operation and others were conceived and had begun construction.

"In addition to their massive support from the federal government, the railroads borrowed from state and city governments. Increasing numbers of foreigners turned to American railroad bonds for investment. By 1890 about one-third of all American railroad stocks and bonds were held abroad. <u>In the scramble of railroad construction, overexpansion was inevitable and did much to contribute to the depression of the seventies. The building up of the great railroad empires was a haphazard, brutal, and often corrupt process.</u> Empire builders of the stripe of Huntington and Cooke and Vanderbilt did not hesitate to break their rivals or to bribe public officials to obtain charters or grants. Promoters, speculators, and politicians were on hand to take their slice of the railroad melon. In the struggles for freight traffic, large shippers received rate cuts and rebates to the angry and impotent dismay of farmers and small proprietors.

<u>No federal government under any conceivable circumstances would have undertaken the necessary railroad construction or other industrial expansion on its own. The robber barons were not always attractive, but they served a purpose."</u> *

We may have trouble, so far removed from the time and places, calling up the Edwardian grandeur of the Metropolitan Club in New York City on May 31, 1901 – here gathered two of the ultimate moguls of the Gilded Age of the railroad and finance boom that created great fortunes but also great financial and operating chaos, J. P. Morgan and E. H. Harriman. At this luncheon meeting Northern Securities was created "to rationalize" the railroads in the west, to eliminate "confusion", and "competitive excesses" and most important to avoid that excess of competing demands for capital and especially the great fluctuations in stock prices of the railways associated with contests for control of the "systems".

* [Russell, <u>The Confident Years</u>, p. 144, American Heritage Publishing]

This meeting to resolve "western issues" was in some respects a pale imitation of the earlier meeting on Morgan's yacht, <u>The Corsair</u>, to which the main competitors in the east were summoned and an array of rail properties were "rationalized" under Morgan's direction, with the principal roads – the Pennsylvania and New York Central directed by him to "buyout" nuisance competitors.

Although Northern Securities as a holding company was dissolved by order of the Supreme Court in 1904, a pattern of total industry management by insiders with their investment managers was established and was the precursor to the railroad industry committees which initiated and controlled the rail nationalization we discuss today.

Creation of "trusts" – such as Northern Securities – the Steel Trust, the Oil Trust, the Tobacco Trust, all based on the Standard Oil Model – facilitated this form of scientific management and went on until the Supreme Court in a series of cases in the first decade of the 20th Century dismantled them and reinstated the member competitors as independent entities, or so it seemed. In practice the collaborators continued their informal arrangements except for the "nuisance" smaller competitors which had to be dealt with separately and eventually.

Railroads resisted and obstructed efforts of shippers and local governments to stop the rate and service predations of the carriers. The ineffective ICC, created toothless in 1873 was ultimately given teeth by statutes, not by judicial decree. The Interstate Commerce Act, forbidding rebates, pooling, discrimination in rates and, empowering shippers, setting rates at "reasonable" levels was intended to address excesses of railroad behavior but was largely ineffective. The Hepburn Act of 1906 made the 1876 law enforceable and more effective to address the inadequacy of ICC.* After 1906 ICC regulations, coupled with the rise of labor, (the eight-hour day was ordered by the government in 1917), imposed a ceiling on rail rates and stifled rail access to capital; just and reasonable rates" of ICC doomed rail capital investment and reinvestment.

When the traffic boomed with commencement of WWI in 1914, the roads were poorly equipped to respond to the new demands placed on them. The ports were jammed, the cars could not be unloaded and returned to service, and export demand boomed everywhere: there was silk and machinery for the U.K., and cotton and barbed wire and locomotives to Russia. Inflation in wages and the price of food was rampant – wheat went from 40 cents to $1.65 per bushel.

As the war began in Europe in August 1914, the arsenal of democracy in U.S. became "property" of the railroad business. In the flood of traffic railway operating attitudes -- "keep it on my line", "embargoes", "don't move it empty" – led to congestion of all lines leading to ports preferred for service to allies.

Several approaches, inherited from the 19th century, were pursued to address the confused situation. Cartelization of American industry and the rise of "Scientific Management" were phenomena of the late Gilded Age in the run up to World War I. Both were powerful, even controlling, influences in the decisions to nationalize U.S. railways

*[Jensen, History of Railroads in America, page 283-284, American Heritage 1975]

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The impulse to rationalize disorderly competitive industries had its intellectual and academic supporters among those who were committed to principles of "scientific management". Under the influence of "social Darwinism" and eugenics there were wide-spread attempts to find the means to address "too much unbridled competition" in all industries. Not surprisingly the industry cartels that emerged from varied industry experiences re-emerged as silent partners of the government in public private partnerships to regulate commerce during the war and afterwards.

The Path Toward Nationalization

Railroads on the brink of war reflected the over building of the Gilded Age. Attempts at consolidation and standardization and use of the Standard Oil Trust (1879) as the model "holding company" were much in the air. The major railroads attempted to address these difficulties through their own joint action. They named a "Railroad War Board" made up of industry leaders to cooperate with government and which was to have absolute authority over the entire industry. The Board was a continuation of the 1915 "Committee of Five" formed by big systems to coordinate railroad help to the U.S. Army in the Mexico/American border unrest.

The "War Board" was ineffective, however, for two major reasons: First, the railroads themselves could not act together or constructively. Smaller lines proceeded independently, continuing the rate cutting, rebates, and preferences which the larger lines had attempted to suppress;

efforts to keep traffic on one's own lines and to embargo traffic from "uncooperative" lines added to route congestion and clogged yards. Second, each government department sought operating and competing preferences through a scheme of "priority tags" which then became much abused. Those railways privileged to be on the War Board naturally directed its policies and actions to favor their own lines.

Though the industry leaders and government officials tried to resolve such conflicts, agreement among themselves or with various government agencies was not achieved. An appeal for government "control" in which the industry would, as a practical matter, run the combined and consolidated system, under the "leadership" of the largest lines was the result. Wilson's order of 12/26/17 followed.

Civil War Antecedents

While the order appeared bold and unprecedented, its antecedents made it less so. Congress earlier acted – on August 29, 1916 – to authorize the President "in time of war" through the Secretary of War to take possession of any transportation system or systems, or any part of such systems to operate for war purposes.

This 1916 statute looks back to the Civil War experience. President Lincoln was authorized in January 1862 to take over railroads and telegraph for military use in the conduct of the Civil War. The rail lines seized were to be operated by a War Department Agency, the U.S. Military Railroads (USMR). The USMR, however, only applied its authority to southern rails captured in the course of the conflict. In practice because of a lack of experience, the rails both north and south continued to be run by civilian executives who managed railroads "as a profession". These executives were commissioned as military officers and despite the conflicting orders of competing and overlapping government agencies, they, in fact, ran the properties with success.*

For both north and south the railroads had been constructed to operate "autonomously" i.e. without interconnections or considerations of long-haul traffic; they had originated as local feeder lines to bring traffic and passengers into cities or ports. Cities might be served by multiple rail lines but there were not necessarily connections between them. Indeed, the separate lines were built and operated to monopolize the trade of those passengers and shippers they served. Consistent with this business model, the separate lines opposed or frustrated terminal railroads or facilities that promoted interconnections. In a local example, Arthur Stilwell in 1888 conceived of a Kansas City terminal railroad to link the several lines together for interconnection and enhanced customer access in the rapidly growing Kansas City market. He laid rails by day but they were torn up by night by employees of railroads which did not want connections for fear they would lose business, failing to see that interconnections enhanced every line's traffic. Stilwell ultimately prevailed to create a model terminal railroad, widely copied in other places.

*[Gabel, Railroad Generalship: Foundation of Civil War Strategy, provides an excellent assessment of these practices]

War Management

With few exceptions the "network" in operation in 1914 was not much different from that in place after the Civil War and the problems of handling the war traffic were inevitable, made worse by the volume of traffic and the urgency of the situation.

Much had happened since the war began. On April 4, 1917, Wilson's war message committed the U.S. to "total mobilization" and in effect to the work of a variety of war socialism. Kansas City native George Creed was recruited to mobilize the "free republic". Earlier in March 1917 Congress created United States Railway Administration (USRA) as "standby" to coordinate and manage railroad service – members from Committee of Five and the industry War Board and council of National Defense were members. Precedents for this approach in scientific management stemmed from "avoidance of unbundled competition" where Darwin's "fittest for survival" had already been identified by investment bankers and the leading rails.

This talk started with Wilson's order taking over the railroads. That order went into effect December 28, 1917. The accompanying proclamation is worth further study in the light of the order's antecedents. There the President declared that the order applied to:

"<u>each and every system</u> 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, engaged in general 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, telegraph and telephone 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. That the possession, control, operation, and utilization of such transportation systems shall be exercised by and through William G. McAdoo, who is hereby appointed, and designated Director General of Railroads. Said Director may perform the duties imposed upon him so long and to such an extent as he shall determine <u>through the boards of</u> <u>directors, receivers, officers and employees,</u> of said system of transportation."

President Wilson also issued an explanation with this proclamation**:**

"This is a war of resources no less than of men, perhaps even more than of men, and it is necessary for the complete mobilization of our resources that the transportation systems of the county should be organized and employed under a single authority and to simplify methods for coordination which have not proved possible under private management and control. <u>A committee of railway executives</u> who have been cooperating with the government in this all-important matter, have done the utmost that it was possible for them to do, but there were differences that they could neither escape nor neutralize. Complete unity of administration in the present circumstances involves upon occasion, and at many points, a serious dislocation of earnings, and the committee was, of course, without power or authority to rearrange charges or effect proper compensations in adjustments of earnings. Several roads which were willingly and with admirable public spirit accepting the orders of the committee, have already suffered from these circumstances, and should not be required to suffer further. <u>In mere fairness to them</u>, the full authority of the government must be substituted. The public interest must be first served, and in addition the railways must be brought under a common direction. The

financial operations of the railway need not, then, interfere with the borrowings of the government, and they themselves can be conducted at a great advantage. Investors in railway securities may rest assured that their rights and interests will be as scrupulously looked after by the government as they could be by the directors of the several railway systems. Immediately upon the reassembling of Congress shall recommend that these different guarantees be given. The Secretary of War and I are agreed that, all the circumstances being taken into consideration, the best results can be obtained under the immediate executive direction of the Honorable William G. McAdoo, whose practical experience peculiarly fits him for the service, and whose authority as Secretary of the Treasurer will enable him to coordinate, as no other man could, the many financial interests which will be involved, and which might, unless systematically directed, suffer very embarrassing entanglements."
[Emphasis Added]

The effect on the stock market of the Presidential order and his proclamation, especially with its guarantee of pre-war earnings and its guarantee of the railroads' capital (confirmed by the Act of Congress ratifying the President's action in March 1918), was highly beneficial to the railroads – short sellers rushed to cover their "shorts" and the market value of the railways very quickly was raised more than three hundred fifty million dollars.

The federal government had prominent partners in this unprecedented initiative. Since 1912 the U.S. Chamber of Commerce had been the leading advocate of cartelization of U.S. industry under the banner of "Scientific Management"– a public private partnership in its view. J.P. Morgan, as promoter for this objective, acted as agent for British and French governments during the war and became one of several advocates for industrial mobilization. McAdoo, Wilson's son-in-law and Treasury Secretary, former promoter of Hudson Railroad and Manhattan Railroad and allied with JP Morgan, was named Administrator of the USRA.

The Council of National Defense (CND) in 1916 created several industry specific committees charged with organizing services for sale to government in war and for fixing prices of those services – all pursuant to a charge to various industries originated by Bernard Baruch "to get their resources together". Each committee represented a cartel of "leaders" in each industry. Wilson endorsed CND as "most effective way to organize whole industrial mechanism". After the war started, the CND was succeeded by War Industries Board (WIB) which became the engine and autocrat (thru Baruch) of U.S. "war collectivism". The WIB board populated by the eminences of industry and Wall Street included Robert Lovett of the U.P. in charge of "U.S. priorities" and Dan Willard of the B&O in charge of the railroad industry.

For those industries which objected to the new regime, ostracism and exclusion from financial and business participation and profit were the consequences. WIB price fixing and its guarantee of "fair profit" should have been incentive enough to keep quiet as it stabilized markets, moderated competition, eliminated market fluctuations and volatility and guarantees of market share for the duration of the war.

In this general climate and context of government sanctioned industry cartels, the Railroads War Board functioned separately from the WIB, but with the same goals of industry stabilization and achievement of "Scientific Management" long advocated by rail leaders.

McAdoo's leadership of the USRA, created in March 1917 for managing rail nationalization, embraced industry managers. It included top rail executives. While the order and McAdoo's authority were implemented immediately in the USRA, the practical operation of that authority followed the Civil War experience: the government depended on the industry itself for implementation. The railroads' War Board was abolished but McAdoo appointed an advisory board from the railways to assist him, consisting of John Skelton Williams, Controller of the Currency; Hale Holden, President of the Chicago, Burlington and Quincy Railroad; Henry Walters, Chairman of the Board of Directors of the Atlantic Cost Line; Edwards Chambers, Vice-President of the Santa Fe Railroad and head of the transportation division of the United States Food Administration; Walter D. Hines, Chairman of the Executive Committee of the Santa Fe and became the de facto operating head of the USRA. Specific duties were assigned to the various members of this committee. Mr. Williams was to deal with the financial problems; Mr. Holden to assume direction of committees and sub-committees, and other phases of the work were allotted to others members. Mr. Walter D. Hines was made assistant to the Director General. Hines was to succeed McAdoo when he retired at the Armistices. The pre-war committee of five continued its influence.

The USRA exercised its "government powers" almost immediately after its constitution and in the spring of 1918 installed a 28% across the board freight rate increase -- without hearings or consultations from any shippers or state commissions, the regulatory powers of which were thereby by- passed.

The railroads were also divided into three Divisions: East, West and South and their service offerings and competing services on different former railroads were cut back. Terminals, facilities and shops were shared.

Over 100,000 railroad cars and 1,930 steam locomotives were ordered at a cost of $380 million, all of new USRA standard designs, which were up-to-date and standardized types, designed to be the best that could be produced to replace much outdated equipment and to achieve standardization.

The ICC's powers over rails including rate making were transferred to this public/private agency with the results long sought by the principal railroads and their investment bankers:

"**As in the case of the War Industries Board, the USRA used its coercive governmental powers to minimize diversity and competition, in the name of "efficiency" and standardization. Again, over the opposition of shippers and small carriers, the USRA ordered the compulsory standardization of locomotive and equipment design, eliminated "duplicate" (i.e. competitive) services, shut down off-line traffic offices and ordered the cessation of competitive solicitation of freight by the railroads.**

All of these edicts reduced railroad services to shippers who had little or no say on the matter. There were still other coerced reductions of service. One ended the shippers' privileges of specifying freight routes – and thereby of specifying the *cheapest* routes for shipping their goods. Another upset the peacetime practice of making the railroads liable for losses and damages to shipments; instead, the entire burden of proof was placed upon the shippers. Another USRA ruling – the "sailing day plan" – ordered freight cars to remain in their

terminals until filled, thus sharply curtailing service to small-town shippers. Burden of proof for damaged goods was put on shipper and away from rails."*

On March 21, 1918, the Railroad Control Act became law; it guaranteed the return of the railroads to their former owners within 21 months of a peace treaty, and guaranteed that their properties would be handed back in at least as good a condition as when they were taken over. It also guaranteed compensation for the use of their assets at the average operational income of the railroads in the three years previous to nationalization. This act lay down in concrete that the nationalization would be only a temporary thing; before, it was not defined as necessarily so.

*[Rothbard, War Collectivism in World War I (2005)]

Both wages and rates for both passenger and freight traffic were raised by the USRA during 1918, wages being increased disproportionately for the lower-paid employees, which proved unpopular among more senior ones. To accompany wage increases and work rules to ensure labor supply and dampen labor opposition, as noted, the USRA also raised rates (28%) (previously denied by ICC).

The USRA also inherited and pursued a plan for U.S. rail consolidation and system "rationalization". The USRA's vision for the national rail system guaranteed by this unique public/private partnership of government and rail industry included a plan for "consolidation" of rail lines assigning to the principal carriers the responsibility as "consolidators" without permission of the lines to be consolidated. The list is interesting:

Railroad Consolidation:

The U.S.R.A. had a plan to consolidate the nation's railroads into nineteen railroad systems. The planned railroads were as follows:

1. **Boston and Maine Railroad**; Maine Central Railroad; Bangor and Aroostook Railroad; Delaware and Hudson Railroad
2. **New Haven Railroad**; New York, Ontario and Western Railway; Lehigh and Hudson River Railway; Lehigh and New England Railroad
3. **New York Central Railroad**; Rutland Railroad; Virginian Railway; Chicago, Attica and Southern Railroad
4. **Pennsylvania Railroad**; Long Island Rail Road
5. **Baltimore and Ohio Railroad**; Central Railroad of New Jersey; Reading Railroad; Buffalo and Susquehanna Railroad; Buffalo, Rochester and Pittsburgh Railway; 50% of Detroit, Toledo and Ironton Railroad; 50% of Detroit and Toledo Shore Line Railroad; 50% of Monon Railroad; Chicago and Alton Railroad (Alton Railroad)
6. **Chesapeake and Ohio**-Nickel Plate Railroad; Hocking Valley Railway; Erie Railroad; Pere Marquette Railway; Delaware, Lackawanna and Western Railroad; Bessemer and Lake Erie Railroad; Chicago and Illinois Midland Railroad; 50% of Detroit and Toledo Shore Line Railroad
7. **Wabash-Seaboard Air Line Railway**; Lehigh Valley Railroad; Wheeling and lake Erie Youngstown Railway; Norfolk and Western Railway; 50% of Detroit, Toledo and Ironton Railroad; Toledo, Peoria and Western Railroad; Ann Arbor Railroad; 50% of Winston-Salem Southbound Railway
8. **Atlantic Coast Line Railroad**; Louisville and Nashville Railroad; Nashville, Chattanooga and St. Louis Railway; Clinchfield Railroad; Atlanta, Birmingham and Coast Railroad; Mobile and Northern Railroad; New Orleans Great Northern Railroad; 25% of Chicago, Indianapolis and Louisville Railway (Monon Railway); 50% of Winston-Salem Southbound Railway
9. **Southern Railway**; Norfolk Southern Railroad; Tennessee Central Railway (east of Nashville); Florida East Coast Railway; 25% of Chicago, Indianapolis and Louisville Railway (Monon Railway)
10. **Illinois Central Railroad**; Central of Georgia Railway; Minneapolis and St. Louis Railway; Tennessee Central Railway (west of Nashville); St. Louis Southwestern Railway (Cotton Belt Railway); Atlanta and St. Andrews Bay Railroad
11. **Chicago and North Western Railway**; Chicago and Eastern Illinois Railway; Litchfield and Madison Railroad; Mobile and Ohio Railroad; Columbus and Greenville Railway; Lake Superior and Ishpeming Railroad
12. **Great Northern-Northern Pacific Railway**; Spokane, Portland and Seattle Railway; 50% of Butte, Anaconda and Pacific Railway
13. **Milwaukee Road**; Escanaba and Lake Superior Railroad; Duluth, Missabe and Northern Railway; Duluth and Iron Range Railroad; 50% of Butte, Anaconda and Pacific Railway; trackage rights on Spokane, Portland and Seattle Railway to Portland, Oregon

14. **Burlington Route**; Colorado and Southern Railroad; Fort Worth and Denver Railway; Green Bay and Western Railroad; Missouri-Kansas-Texas Railroad; 50% of Trinity and Brazos Valley Railroad; Oklahoma City-Ada-Atoka Railway
15. **Union Pacific Railroad**; Kansas City Southern Railway
16. **Southern Pacific Railroad**
17. **Santa Fe Railway**; Chicago and Great Western Railroad; Kansas City, Mexico and Orient Railway; Missouri and North Arkansas Railway; Midland Valley Railroad; Minneapolis, Northfield and Southern Railway
18. **Missouri Pacific Railroad**; Texas and Pacific Railroad; Kansas, Oklahoma and Gulf Railway; Denver and Rio Grande Western Railroad; Denver and Salt Lake Railroad; Western Pacific Railroad; Fort Smith and Western Railroad
19. **Rock Island-Frisco Railway;** Alabama, Tennessee and Northern Railroad; 50% of Trinity and Brazos Valley Railroad; Louisiana and Arkansas Railway; Meridian and Bigbee Railroad

This plan was not abandoned by the USRA until 1940.

Although Wilson dissolved the WIB governing industry in general governing industry in May 1919, remnants of war collectivism which carried on mainly in the USRA, surviving until March, 1920. It was the most important carry-over of war collectivism, and the government's operation of the nation's railroads. William Gibbs McAdoo resigned as head of the USRA at the end of the war, but he was succeeded by the previous *de facto* operating head, railroad executive Walker D. Hines of the Santa Fe.

There was no call from the rails for immediate return to private operation, because the railroad industry generally agreed upon drastic regulation to curb or eliminate "wasteful" railroad competition and coordinate the industry, to fix prices to ensure a "fair profit," and to outlaw strikes through compulsory arbitration. These sentiments captured the overall thrust of postwar railroad political action. Being in effective control of the U.S.R.A., the roads were in no hurry to return to private operation and jurisdiction by the less reliable ICC. Although McAdoo's plan to postpone by five years the given 1920 date for return to private operation gained little support, Congress proceeded to use its time during 1919 to tighten the market power of the railroads.

Again, in the name of "scientific management," Senator Albert Cummins (R., Iowa) proposed to grant the railroads' fondest dreams. Cummins' bill, warmly approved by Hines and railroad executive Daniel Willard, ordered the consolidation of numerous railroads, and would set the railroad rates according to a "fair," fixed return on capital investment. Strikes would be outlawed, and all labor disputes settled by compulsory arbitration. For their part, the Association of Railroad Executives submitted a legislative plan similar to the Cummins Bill. Also similar to the Cummins Bill was the proposal of the National Association of Owners of Railroad Securities, a group composed largely of savings banks and insurance companies. In contrast to these plans, the Citizens National Railroad League, consisting of individual railroad investors, proposed coerced consolidation into one national railroad corporation, and the guaranteeing of minimum earnings to this new road.

All of these plans were designed to tip the prewar balance sharply in favor of the railroads and against the shippers. As a result, the Cummins Bill, in passing the Senate, ran into trouble in the House. The trouble was fomented by the shippers, who demanded a return to the status quo ante when the shipper-dominated ICC was in charge. Furthermore, for their part the wartime experience had embittered the shippers, who, along with the ICC itself, demanded a return to the higher quality service provided by railroad competition rather than the increased monopolization provided by the various railroad bills. Unsurprisingly, however, one of the leading non-railroad business groups favoring the Cummins Bill was the Railway Business Association, a group of manufacturers and distributors of railroad supplies and equipment. The House of Representatives, in its turn, passed the Esch Bill, which essentially reestablished the prewar rule of the ICC.

President Wilson had put pressure on Congress to make a decision by threatening the return of the railroads to private operation by the given date of January 1, 1920, allowed under the 21 month rule, i.e. before 12/28/20. Under pressure of the railroads that were anxious to push the Cummins Bill, Wilson extended the deadline to March 1. Finally, the joint conference committee of Congress reported out the Transportation Act of 1920, a compromise that was essentially the Esch Bill returning the railroads to the prewar ICC, but adding the Cummins provisions for a two-year guarantee to the railroads to set rates providing a "fair return" of five and a half percent on investments. Furthermore, on the agreement of both shippers and the roads, the power to set *minimum* railroad rates was now granted to the ICC. This agreement was the product of railroads eager to set a floor under freight rates, and shippers anxious to protect budding canal transportation against railroad competition. Furthermore, although railway union objections blocked the provision for the outlawing of strikes, a Railroad Labor Board was established to try to settle labor disputes.

With the return of the railroads to private operation in March, 1920, nine months after the treaty ending the war June 28, 1919, war collectivism seemed to pass from the American scene. But pass it never really did; the inspiration and the model that it furnished for a corporate state in America continued to guide Herbert Hoover and other leaders in the 1920s, and was to return full-blown with the New Deal, in the mechanisms of the National Industrial Recovery Act, and in managing the World Ware II economy.

<u>Financial Aspects of Nationalization</u>

The financial impact of the war prior to Wilson's order must be kept in mind. Prior to nationalization the railroads had approximately $11 million in bonds outstanding. Because of government's control of the security markets, the railroads could not refinance the bonds. An assumption of those bonds by the government was, as McAdoo said, "an essential part of our financial structure".

By the time of Wilson's 1917 order, the effect of the war on income from rail operations was significant: income increased from $704 million in 1914 to $728 million in 1915 to $1,043 billion in 1916 to $1,069 billion in 1917. The more important aspect of the unification of the railroads (promoted by railroad leaders, the ICC and investment bankers) was the pooling of revenues according to government operation that had to and did guarantee rail income.

We are left with assessing the costs of railroad nationalization. The cost to the government was not entirely easy to calculate and remains a subject of controversy to scholars interested in the subject. This confusion is due to the dual commitment of the government to return the properties in as good as condition as they were when the properties were taken over and to guarantee the earnings previously enjoyed by the rails. The former commitment involved the vagaries of right-of-way and equipment of the individual properties; the prewar condition of each of the affected properties was also not without controversy in itself. Of course the earnings commitment was thought to be somewhat less controversial, but even as to that, subtleties as to the calculation for each property generated questions. In the end the cost to the government of the nationalization with these commitments is estimated at $1.12 billion in 1920, approximately $15 billion in current dollars.

The cost to the railroads of the nationalization is another subject. While the railroads benefited from across the board rate increases, they were burdened with across the board wage increases which in percentage terms exceeded the rate increases. Wage adjustments and work rule adjustments favoring the unionized workforce survived the denationalization in some cases until the Staggers Act was passed in 1980, frustrating the railroads' capacity to adjust to changes in technology and infrastructure. The railroads also struggled to adjust to new equipment and routings among other things which came out of government ownership.

Winding Down

In early 1920 the Interstate Commerce Commission's powers over the railroads were substantially increased, in readiness for the USRA's disbandment in March 1920. They were given powers to approve or reject railroad mergers, to set rates, to approve or reject abandonments of service, and much else. The government also made financial guarantees to the railroads after control was handed back to them, to ensure their financial survival after the restoration of control.

On March 1, the railroads were handed back to their original owners and the USRA disbanded. USRA survived in private membership, however, as did its goals of consolidation and stabilization.

Conclusions

As noted, it is estimated that the USRA and the nationalizing of the American railroads between, December 28, 1918, and March 1, 1920 cost the United States government $1.12 billion dollars, a huge amount of money back then. The USRA is generally seen as having been effective in getting things moving for the war effort, but at a steep price.

The locomotives the USRA built, the USRA Standard designs, were immensely successful, and after the war were copied in great numbers, becoming the closest thing the U.S. locomotive builders came to standard designs. Indeed, the last steam locomotive built for a Class I railroad was a USRA copy, a 0-8-0 for the Norfolk & Western Railway. More controversy exists about their freight car designs, but they were certainly an improvement on many outdated cars in service before the USRA regime. The influx of new and modern locomotives and cars "for free" assisted in the revival of the railroads' hitherto shaky fortunes and set up, in the years between the Great War and the Great Depression, a somewhat "Golden Age" for railroading.

The experiment was not repeated. In WW II, the private railroads handled the war effort admirably, though one could argue that some major East Coast railroads impoverished themselves in so doing, setting up the later railroad collapses in the region.

The "long shadow" of the rails short nationalization joined other long-term effects of the war. Paris 1919 offers the following summary:

"Again some of the most intractable problems of the modern world have roots in decisions made right after the end of the Great War. Among them one could list the four Balkan wars between 1991 and 1999; the crisis over Iraq (whose present borders resulted from Franco-British rivalries and casual mapmaking); the continuing quest of the Kurds for self-determination; disputes between Greece and Turkey; and the endless struggle between Arabs and Jews over land that each thought had been promised to them. Armies, navies, railways, economies, ideologies, history, all these are important in understanding the Paris Peace Conference."

To the list thoughtful observers add the arousal of a general right of "self determination", which continues to animate people around the world. With all these issues in total you have a fair start toward assessing the consequences of the peace of Versailles.

A footnote to all railroads: Interstate highways (1954) and World War II technology, in the face of a static rail industry, changed post war transportation in America. Between 1916 and 1960 more (railroad) mileage was abandoned than built, total operating mileage declined, and the modern truck on Interstate Highways took its place.

The National World War I museum is responsible for the opportunity to consider the unique United States' experiment in industrial nationalization. Tony Judt, in his recently published Reappraisals: Reflections on the Forgotten Twentieth Century, criticizes France and Britain as countries that have lost their past, that have confused commemorating with remembering. And, he observes that the proper role of the museum in such countries is not to remind people of what they already knew or thought they knew (as they are currently self-satisfied in doing) but to tell them about the things they do not know or have never learned. Cliché memories of singular incidents, without context, antecedents, or prospects become "mis-memories".

This series of talks, of lectures, of reflections, is a part of this great museum's mission to restore the reality of what many believe the controlling commencement of essential and abiding themes of the 20th century. Industrial nationalization, and our experience with it, is one such theme.

Thank you.

Landon H. Rowland
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INNOVATIONS OF WWI **Attachment A**

***Hardware*:**
1. Command of time – as exemplified by the wristwatch and timetables

2. New materials – aluminum, formerly an expensive metal, now replacing others; the rise of the chemical industry

3. Personal convenience – as exemplified, with smoking, by matches, lighters, and cigarettes

4. Movement above ground – the use of the airplane to add a new dimension to the battlefield; aerial photography

5. Optics – new advances and imaginative uses in all areas of the war

6. Caterpillar treaded tractors – for hauling and for tanks

7. Modern personal body armor

***Systems*:**
1. Assembly line – applied to the manufacture of the tools of war and the processing of men and materiel; training techniques in the camps

2. Medical advances – trauma and triage; from trench to field hospital (see assembly line); plastic surgery; modern prosthetics

3. Communication – telephones to radios / messages via wire and those sent and received wireless

4. Mass persuasion – use of newly-developed chromolithography / color printing to mass produce cheap prints and patriotic posters

5. Fuel / energy sources – going from coal to oil; from horse to internal combustion engine

6. Women in the workplace – use as replacement labor in the factory

7. Logistics – moving millions of men across an ocean

8. Record-keeping – keeping massive amounts of statistics on the war and the warriors; the U.S. Census as a precedent on a national scale

9. Chromolithography – posters and color prints as a mass medium of persuasion
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