

Unions, Seniority and Pensions:
A Historical Study of on the Railroads

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ABSTRACT

Railroads were the first "modern" business enterprises, with complex and hierarchical management structure. While this had important organizational benefits it also allowed for capricious treatment by lower-level management of an increasingly skilled labor force. In attempts to deal with labor unrest, railroads introduced various fringe benefits including pensions. At the same time workers organized brotherhoods to negotiate for strong seniority rules in their contracts. Whereas the pensions had originally been designed to reward the disabled and long serving superannuated worker, it evolved into a tool to impose mandatory retirement and move out the higher paid (by reason of seniority rights) older workers.

Introduction

In the middle of the 19th century railroads expanded at an extremely rapid rate and quickly became larger than any previous organization except the government. In many ways they were not comparable to other businesses in terms of their operating costs, capital requirements, and the number of employees they hired. In the process of their expansion they popularized the corporate form of ownership, more formal use of security markets, and development of the modern hierarchical management structure.

In the beginning some (smaller) railroads hired out their work on a contract basis. Engineers were paid by the mile and required to hire the crew, supply the fuel and water, and even maintain the equipment. Henry Varnum Poor, editor of the American Railroad Journal, wrote many articles supporting this method.¹

The contracting method, however, did not achieve wide use as most railroads created central control over operations that internalizing most of their operating costs with most tasks being done by hired employees. To deal with the immense size of work force, early leaders such as Dan McCallum of the Erie, set up complicated organizational plans with detailed descriptions of the chain-of-command. Most jobs became formalized with rule books that told workers the line of authority, what was proper behavior, and detailed instructions on how to do various tasks.²

As the work of Alfred Chandler (1977) has explained, this new hierarchical structures evolved so that subordinate managers were in charge of the day to day operating activities while the officers were more concerned with the strategic planning. The size of the railroads and their new corporate structure were the catalysts that led to a pattern of labor relations which created the first strong national unions, the first seniority contracts, and the first industry wide pensions.

A Synthesis

The creation of pensions was a seven step evolution of the relationship between the railroads and their workers as described below.

1. After the Civil War nearly all railroads had abandoned subcontracting and were hiring by the job. This period experienced two factors that contributed to the increased specialization of its workers. One was that the equipment became more complicated, many

¹ Licht (1983) p. 20

² Licht (1983) p. 81

jobs required increasing skill and experience to handle. The other was the growth in the size of the operations.

The specialization of tasks meant that there developed a wider range of pay in the work force, and the skilled move up the ladder toward engineer or conductor. Those in the more skilled positions, achieved some job stability, but for all workers employment was uncertain as weather and seasonal fluctuations dictated the availability of work. For those on the trains, when they did work, the hours were long and conditions dangerous.

2. The structure of management and the size of the operations meant that hiring and firing decisions were made by lower level management. These local superintendents and foreman were less concerned with the company's overall profits and more with maintaining their own position, and the opportunity to extract favors from workers and others.

3. Conflicts arose between increasingly skilled workers and their immediate superiors who were perceived as capricious. The outcome was that during the development of a union movement from the 1870s on, one of the most important issues was the establishment of seniority and job security.

4. To improve employee relations and combat turnover some of the railroads introduced relief departments that provided medical care, disability insurance, saving programs and pensions. At the same time unions were competing for worker loyalties by introducing many of the same programs.

5. Railroads began to recognize the unions, and to bargain and sign contract agreements with them. From the first, these contracts contained provisions that established seniority rights.

6. Over the years seniority rights grew more extensive which was a mixed blessing to management. There was more firm loyalty as the workers felt more secure that they were not subject to the capriciousness of the immediate supervisors. On the other hand, management lost some of the flexibility to reward merit and dismiss the mediocre. They also lost the flexibility to move the older worker who had declining productivity to a lower level position [with a lower pay]. During this time the labor force on the lines was growing older, with most of the workers being career railroaders.

7. When pensions were started, one motive was to reward the faithful and long serving worker. It was thought that the promise of this reward would reduce turnover, an important concern of management. To achieve these ends the railroads instituted maximum hiring age and designed the pensions to require from 10 to 30 years of minimum service to qualify.

A second motive was to facilitate the removal of the superannuated and infirmed. This was directed at another major concern of management: the reduction of costly accidents

thought to be connected with these workers. It is not surprising that retirement for reason of incapacity was the most often stated provision for receiving a pension.³

However, management found that the turnover of workers with long service records was very low regardless if they had a pension or not, and younger workers did not seem to care about a promise so far in the future. After the turn of the century, the increased use of signaling devices and improvements in mechanical control of trains reduced accidents in general, and experience proved that older workers caused fewer accidents on average; hence there was little reason to remove them on that ground.

Motives changed from safety, and trying to establish goodwill and better employee relations, to cost factors. With the rise of seniority and the change in age-wage profiles associated with it, the motive became the imposition of mandatory retirement for what management called "payroll relief." In modern terms, the worker near retirement was earning a wage in excess of his marginal product. The "saving" was the difference between the lower wage of the younger worker who moved up and the high wage paid to the older worker who had "earned" it by right of seniority.

Job Conflicts

Job conflicts in the later half of the nineteenth century were numerous and several times violent. Many demonstrators were killed and many more injured in the strikes of 1877, 1886 and 1894. There was also substantial damage done to the railroads by the demonstrators; often state and federal troops were called in to control the yards.

As detailed in Walter Licht's Working for the Railroad, a significant complaint underlying the friction was the capricious rule of the foremen.

...during the Pullman Strike of 1894, the arbitrary power of supervisors was the common denominator of complaint. An official demand of the strikers was an end to the 'constant harassment of foremen.' A federal commission established to investigate the disorders later collected testimony and was inundated by tales of favoritism and nepotism, the violent tempers and brutal acts of foremen and their despotic character. The revelations came as something of a surprise, since the investigators had expected wages and hours of work to be the only grievances of note. . .

The United States Strike Commission of 1895 also heard ...'In a large number of roads,...there was a feeling among the employees that they were almost in a helpless condition to stand against the oppression of the petty officials, and the petty officials took advantage of that feeling and deviled the men, just as their particular temperament at the moment led them to do so.' Licht (1983) pp. 254-55

³ Of the 48 plans Latimer (1932a) surveyed 32 had provision for compulsory retirement, 10 voluntary, 19 discretionary, and 45 for reason of incapacity.

In his dissertation on the railroad seniority system, Dan H. Mater also cites the many abuses reported by the workers.

On the subject of petty bribery, W.S. Carter, during certain arbitration proceedings (*in 1913*), after inquiring rhetorically of a railroad official if he knew what conditions had driven the employees to demand seniority, 'informed' him that division officials in early days 'accepted' a steady stream of little tokens of esteem from admiring subordinates at Christmas time, birthdays, and on other occasions. There is evidence that jobs were actually sold by petty railroad officials... Mater (1940) pp. 400-01⁴

The officers of the railroads were opposed to the behavior of their subordinates, if only on the strategic grounds that it promoted unrest and high turnover. One response was to institute seniority rules for promotion and work assignments.

Thomas C. Cochran reproduced memos from various CEOs with directives to their subordinates to, for example, "when necessary layoff the younger and unmarried men first." One memo from James C. Clarke, president of the Illinois Central, to his superintendents in 1883 show a commitment to seniority, but also refers to the problem of lower management abuse, a reluctance to give employees control over their working conditions, and a discussion of job sharing.

It is not the interest of the Company to overtax the physical abilities of its Employees, at the same time engineers nor no other class of employee can be permitted to say how or in what manner the road is to be operated. It is due to every Employee in the Service high or low position to have fair and even handed justice done to him. Then we have a right to demand full & faithful performance of duty from every man in the service.

2. No officer controlling men should have any favorites, or permit his personal feelings to enter into his official duties.

3. Merit should be fully recognized . . . Seniority in Service should have preference.

4. When work upon the Road does not give employment for all there my judgement is, it should be fairly divided so as to do the best we can for all. . .

14. Let it be distinctly understood we dont want discontented men to work for this company, but request them if any to quit our service." Cochran (1953) p. 295

The success of management installed seniority, however, was limited by its execution. As Mater reports workers welcomed a seniority system, but they felt it was also a place of supervisor abuse.

The practice of discrimination against employees who received high wages is illustrated by the following description of the 'Q' system then in general use (*from 1889 references*). This system, which supposedly was originated by the management of the Chicago Burlington and Quincy Railroad, was in reality a type of seniority or an extension of the apprenticeship principle. The system was a method of paying engineers on the basis of their length of service. The engineers claim not to have objected to the

⁴ Italics added

principle, but rather to its abuse. Under this system of gradual promotion it took nine years to 'make' a first-class engineer. After an employee had been a satisfactory fireman for six years he was promoted to fourth-class engineer. Thereafter he was advanced one grade each year provided that his record had been perfect during that year. The abuse was that not only was it difficult to get to be a first-class engineer, but also first-class engineers frequently were dismissed for incompetence--and a few days later rehired as fourth class engineers. Mater (1940) pp. 401⁵

The Establishment of Relief Departments

The strike of 1877 was a shock to many railroad executives. Thus, in another way to deal with worker unrest, some of the lines instituting various fringe benefits. The most formal response was on May 1, 1880 when the Baltimore and Ohio created an organization that would be incorporated two years later as "The Baltimore and Ohio Employees' Relief Association."⁶ Membership was compulsory of all employees and this gave rise to much hostile criticism. When the State of Maryland withdrew its charter for the relief association, the railroad took over its assets and liabilities and established a relief department within the company. This department was the model used by several of the other roads.

The motive for establishing these departments was both altruistic and for efficiency. As reported by Emory Johnson⁷ :

In 1889, Mr. E. P. Ripley, who was at that time general manager of the Chicago, Burlington and Quincy, reported to the Interstate Commerce Commission that "the object of the company in establishing a relief department was to enable its employees to make provision for themselves and families at the least possible cost to them in the event of sickness, accident or death. The company has established this department not only because it has the interests of its employees at heart, but because it believes that the department will serve to retrain and attract a good class of employees, lessen the amount of litigation in cases of accident, and increase the good will of the employees toward the company and their confidence in the good will of the company towards them."*

*Third Annual Report of the Interstate Commerce Commission.
Johnson (1895) p. 72

Hace Tishner feels that the motives were less humanitarian and more a legal defensive move.

George B. Elliot, a lawyer for the railroads, conceded when questioned, that to guarantee the recipients of the relief fund the right to sue would reduce the fund to a philanthropy and thereby lead to its dissolution by the company. "What we want to do"

⁵ Italics added

⁶ Johnson (1895) p.69

⁷ Johnson was a professor of economics at the University of Pennsylvania and served on the U. S. Industrial Commission of 1899.

declared another railroad spokesman "is to avoid litigation, that is the whole object of the relief department. . ." Tishner (1971) p. 72

Tishner points out that many union leaders saw the purpose of these relief associations "to undermine and ultimately destroy the brotherhood." Unions were quick to compete by establishing their own benevolent associations that provided health, accident and burial insurance. Their motive included increased member loyalty to the union. By the turn of the century, three of the big four brotherhoods had made membership in these associations compulsory to their members.

Membership in the relief associations was required by some lines and was optional on others. Some of their functions had employee input and even control. Only the pension aspect, however, spread to most of the rest of the railroads. Though some aspects of the company relief departments were run with some worker participation, the pensions were always totally controlled by management.

Seniority and the Unions

By the the 1930's "seniority is as inseparable a part of a railroad as wheels and whistles."⁸ As of June,1939 there were 4061 railroad collective agreements with their unions. They covered the working conditions of every railway worker in the country below the management level. In investigating these agreements Mater (1940) found that not a single agreement did not contain some seniority provision and on average 20 to 30 percent of the points in each were devoted to the subject.

According to Mater the lack of consistent promotion and retention of more senior workers, even when called for in company rules, was a major factor in the creation of the unions. To test this hypothesis he asked:

whether or not a period of time usually elapsed between the dates when the various unions were able to obtain their first agreements and the dates when they were able to obtain their agreements which contained seniority, during which period they either were not desirous of seniority or were unable to overcome the resistance of the management toward its inclusion. Mater (1940) p. 394

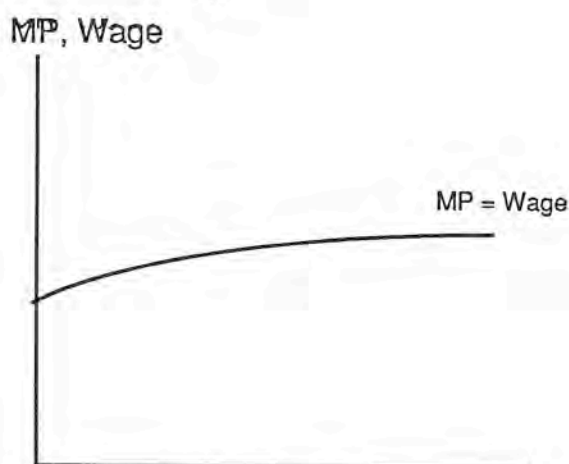
Mater surveyed 17 unions, 12 of which reported they had an agreement with at least one railroad. His results are reproduced in Table 3. The table reveals that, without exception, the first agreement of every union contained seniority.

Why did Railroads accept Seniority?

⁸ Mater (1940) p.388

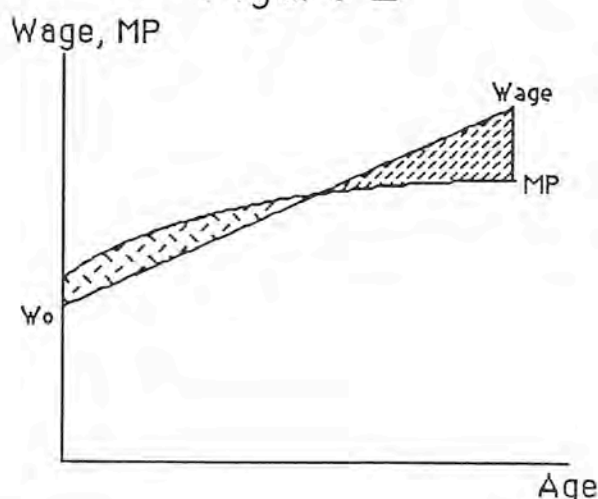
It is probable that in the post Civil War period most employers, including railroads, paid workers their marginal product each period and when the productivity declined with age, their wages did as well.¹ This is the age-wage profile depicted in figure 1.

Figure 1



Seniority imposed a different profile such that long tenured workers earned no less, and usually more than when they were younger. An example of this wage profile is depicted in figure 2, a type of a bonding agreement where workers give up some of their current wage in return for a wage greater than their marginal product in the future. Over their lifetime they still receive just the value of their marginal product, i. e., the dotted area is equal the lined area in the figure.

Figure 2



¹ While there is little systematic evidence one way or another on wages and productivity during this period, there is no evidence that employers were paying "efficient wages" which would produce the wage profile in figure 2.

Why would workers and companies choose this alternative? There are many hypotheses about this question in the labor economics literature. They include the notion of reducing turnover, and the reduction of cheating or shirking.⁹

Though railroads incorporated seniority rules such as the "Q" system to reduce turnover of their more experienced workers, it is probable that in most cases the wage profile reflected the productivity of the worker as in figure 1. Superannuated workers were moved to "less dangerous" jobs with lower pay, while others loyal employees were pensioned off under informal plans.

It is possible that the firm "discovered" the bonding wage profile of figure 2 as an additional way to reduce turnover. However, it is more likely that it was imposed on them by the unions and the seniority agreements.

Both the firm and workers would prefer the profile in figure 2 to figure 1 because of its impact on worker shirking or cheating. In both figures workers receive their marginal product over their lifetime, but the marginal product will be higher in figure 2. The hypothesis is that if a worker is paid his marginal product throughout as in figure 1, then he may easily find that it is worthwhile to steal something from the firm get fired and start working for another firm, where he will again receive his marginal product. Since this behavior is costly to the firm, the wage it pays its workers must compensate for the expectations of these losses.

When the contract is such that there are increasing rewards to staying with the firm as in figure 2, then it is costly to workers who get dismissed for cheating since they will lose the high income in the latter part of their tenure. Because of this, workers are less likely to cheat and there is a saving to the firm.

The cost to the firm of a worker shirking (e.g. an expensive accident) may well exceed its value to the worker. Thus the firm can offer a lifetime wage that exceeds the value of what the worker would gain from shirking or cheating plus his wage when he is paid his marginal product throughout as in figure 1. Since the firm and the worker can split this saving they both prefer this type of contract.¹⁰

This kind of contract is designed to reduce worker shirking; however, it must also compensate the worker for the probability that the firm will default. This default risk became much less when the railroads signed seniority agreements with their unions. This

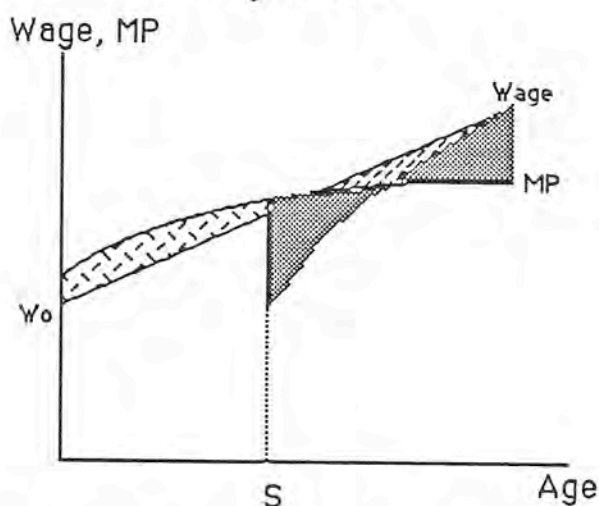
⁹ Cheating can be something of financial gain such as stealing something to resell, while shirking might represent carelessness that causes expensive accidents, or just not giving a "honest effort".

¹⁰ In a competitive world the worker will receive all the saving, but the firm that does not offer this profile will be driven out of business. See Lazear (1981).

lowers the reservation wage that workers will demand to accept this kind of contract, making it more attractive to both parties.

As can be seen in figure 2, at all times after the start of the contract and before the moment of retirement, the present value of what the firm has promised to pay the worker exceeds the present value of his marginal product. It would be to the firm's advantage to default on the contract if it could negotiate a new contract with these same workers when they lost their seniority and had to start over at the starting wage.

Figure 3



For example, if the firm could start over at age S in figure 3 with the worker losing his seniority and starting at W_0 again, the firm would be willing to now pay a new wage profile that would equate the present value of the wage and the marginal product of the worker only over the rest of his life, and the worker would have lost the shaded area to the left of S .

In "normal" times the railroads were prevented from defaulting because they had signed seniority agreements which had become binding. When there were strikes, however, it would be advantageous to "default" with the strikers and hire them back after the strike with no seniority. This is exactly what happened in the 1922 nation-wide strike of railroad shopmen.

Because of a procedural disagreement between the shop crafts and the Railroad Labor Board, within 3 days after walking off, strikers were declared "no longer employees of the railways, and they had lost all rights they possess under their agreements and under the decisions of the board including seniority." Gadsby (1922) Seniority became the key issue of the strike and since there was no national settlement, if striking workers when rehired retained their seniority or not was determined on the basis of each railroad's individual

settlement. Gadsby reported that the "carriers offer to reemploy striking shopmen, who have not been guilty of violence, without their seniority rights but with their pension-right privileges intact,...". This is certainly rational for the firm which wants to negotiate a new contract with its experience workers, and still be able to impose mandatory retirement.¹¹

Why was there seniority on the railroads earlier than other industries?

Railroads led the way in creating a hierarchical structure of management. Large organizations such as a railroad or an army need a chain of command down to the lowest level, and rules for promotion in such large organization become necessary. The problems of these type structure are that they sometimes provide the opportunity for lower-level management to be more concerned for their own interests than the interests of the firm. Thus there is the capricious behavior, nepotism, etc. that the unions complained about.

Mater feels that "absentee ownership" was also an important factor. His reasoning is that after the depression of 1873 railroads a large number of mergers and combinations had created an ownership that "knew little about railroad operation; indeed, many of them were interested only in speculative profits or quick operating profits." His evidence to support this view is, however, the behavior of the "hired" managers. But this is just a different version of the argument of the dichotomy between upper management concentrating on strategic questions and lower management in charge of operations.

Why a Pension?

In being one of the first industries with widespread seniority, the railroads also became the first industry with a growing number of permanent employees, those who were with the company for life. By the turn of the century the the railroad worker had aged.

The original purpose for the establishment of pensions on the part of the companies was to provide an attraction which would draw able men into their employment for long and faithful service. In addition the companies also wanted a device which would facilitate removal from the payroll with as little friction as possible workers who were superannuated and more likely to have accidents. The pension was the tool to allow for routine retirement of these workers, eliminating the necessity for individual executive action on each case, and preventing age discrimination, with the consequence of improving relations between employees and their company.

¹¹ The railroad could also started the workers over in their accumulation of years toward their pension, however, as many of the strikers might then not have the minimum years to qualify making the enforcement of mandatory retirement more difficult.

Other motives include the attraction of a better quality worker, the reduction of strikes through the threat of losing pension privileges, the creation of a pool of strike breakers by the employing the retired pensioners, and the weakening of the brotherhoods and strengthening company unions. Latimer (1932a) investigated these issues through questionnaires, letters, etc. and concluded that though he had no strong quantitative evidence, none of these were very important motives. Modernization of equipment that reduced accidents, and the seniority system negotiated by the brotherhoods had change the role of the pension for the railroad.

The main motive for the pension and mandatory retirement was no longer to remove the dangerous, superannuated worker, but to be able to move him out for "payroll relief", and to open channels of promotion which would other wise be blocked.

Characteristics of the Railroad Pensions

As shown in Table 1 the railroads were the first industry to have pensions in substantial numbers and as the chart and Table 2 show most of the growth in coverage took place at and shortly after the turn of the century as the Pennsylvania and other large systems followed the lead of the Baltimore and Ohio of 16 years earlier.

Latimer's (1932a) massive study of industrial pensions through 1929 includes reports on 48 railroad companies. Most of them had provisions for voluntary, compulsory, and discretionary retirement based on age and years of service. Table 4 show that 28 companies had mandatory retirement at age 70, and 3 more at 65. In addition 18 companies reserved the right to impose (at their discretion) retirement if they chose at the age of 60 or above. The advantage of discretionary retirement was that the pension board could retire simply discharge a worker over the minimum age, while a worker protest a ruling of incapacitation. All but three companies retired workers who were incapacitated, and on eight only the incapacitated received a pension.

The length of service requirement was varied but the most frequent was 20 years. The three largest companies each had different requirements; The Baltimore & Ohio retired at 65 with 10 years of service and incapacitated (voluntary), the Pennsylvania retired at 70 (compulsory) or at 65 with 30 years of service and incapacitated, and the New York Central retired at 70 with 15 years of service (compulsory) or 65 with 40 years of service (voluntary) or incapacitated after 20 years.

The amount of the pension was much more uniform. All were defined benefit plans and 43 of the 48 paid 1% of the last 10 years average annual pay times the number of years of service. In contrast to some of the other benefits run by relief departments, all of the

pensions were run by management, none were funded by a separate trust fund, and only one, a Canadian line, required workers to contribute part of their pay to qualify.

Conclusions

Pensions developed industry wide in the railroads first, because railroads were the first modern corporations with a hierarchical organizational structure. This structure was the catalyst for the development of the first formalized seniority system. Seniority created a labor force that became life time employees. As these employees aged, pensions were created to take care of these employees in their old age. Thus the railroad pension, which may have been originally designed to reduce turnover, became a tool to impose mandatory retirement for the standard arguments used in the modern labor supply literature.

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TABLE 1

Pension Plans and Employees Reported in 1929
Classified by Industry and Accumulated by Period of Establishment, 1874-1929

	1874-00	1901-05	1906-10	1911-15	1916-20	1921-25	1926-29
TOTAL MANUFACTURING	0	217,023	335,636	675,567	1,017,255	1,189,323	1,283,217
BANKING	7,325	8,403	8,457	23,940	29,763	34,880	35,791
INSURANCE	0	0	0	49,743	52,461	78,813	83,865
RAILROADS	386,843	841,626	1,148,726	1,198,446	1,478,252	1,569,710	1,572,628
TOTAL PUBLIC UTILITIES	5,172	11,474	44,064	495,740	601,812	630,759	696,975
MINING	0	7,491	7,491	10,301	30,949	30,949	35,672
MERCHANDISING	0	947	4,947	22,180	22,970	31,024	31,855
TRANSPORT AND STORAGE	0	0	0	0	3,377	3,377	3,377
MISC.	0	0	0	200	600	1,488	2,038
GRAND TOTAL	399,340	1,086,964	1,549,321	2,476,117	3,237,439	3,570,323	3,745,418

	1874-1900	1901-1905	1906-1910	1911-1915	1916-1920	1921-1925	1926-1929
TOTAL MANUFACTURING	0.00%	16.91%	26.16%	52.65%	79.27%	92.68%	100.00%
BANKING	20.47%	23.48%	23.63%	66.89%	83.16%	97.45%	100.00%
INSURANCE	0.00%	0.00%	0.00%	59.31%	62.55%	93.98%	100.00%
RAILROADS	24.60%	53.52%	73.04%	76.21%	94.00%	99.81%	100.00%
TOTAL PUBLIC UTILITIES	0.74%	1.65%	6.32%	71.13%	86.35%	90.50%	100.00%
MINING	0.00%	21.00%	21.00%	28.88%	86.76%	86.76%	100.00%
MERCHANDISING	0.00%	2.97%	15.53%	69.63%	72.11%	97.39%	100.00%
TRANSPORT AND STORAGE	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%
MISC.	0.00%	0.00%	0.00%	9.81%	29.44%	73.01%	100.00%
GRAND TOTAL	10.66%	29.02%	41.37%	66.11%	86.44%	95.33%	100.00%

Percent of the Number of Employees
as of 1929

TABLE 2 RAILROADS WITH PENSIONS BY DATE OF PLAN

RAILROAD	YEAR PENSION STARTED	NUMBER OF EMPLOYEES IN 1924		TOTAL
		MALE	FEMALE	
Grand Trunk	1874			*
Baltimore & Ohio	1884			77329
Pennsylvania	1900			254096
Chicago and North Western	1901			44000
Illinois Central	1901			58339
Louisville & Nashville	1901			
Delaware, Lackawanna & Western	1902			24205
Reading Company	1902			*
Buffalo, Rochester & Pittsburgh	1903			7174
Canadian Pacific	1903			*
Central Railroad of New Jersey	1903	15706	499	16205
Southern Pacific Company	1903			53799
Union Pacific	1903			51341
Atlantic Coast Line	1904			*
Chicago, St. Paul, Minneapolis & Omaha	1906			*
Atchison, Topeka & Santa Fe	1907			75334
Canadian National Railways	1908			*
Delaware & Hudson Company	1908			15000
Chicago, Rock Island & Pacific	1910	36396	1604	38000
Minneapolis, St. Paul & Sault Ste. Marie	1910			13657
New York Central	1910			165000
North Western Pacific	1912	2327	66	2393
St. Louis & San Francisco	1913			#
Nashville, Chattanooga & St. Louis	1914	9275	125	9400
New York, Chicago & St. Louis	1914	8050		
Boston & Maine	1916			*
Chesapeake & Ohio	1916			29085
Florida East Coast	1916			#
Great Northern	1916			27000
Lehigh Valley	1916			#
New York, Ontario & Western	1916			*
New York, New Haven & Hartford	1916	3000		
Western Maryland	1916			#
Central of Georgia	1917	9204	325	9529
Denver & Rio Grande Western	1917			10000
Kansas City Southern	1917			3066
Missouri Pacific	1917			35778
Norfolk and Western	1917			30000
Missouri-Kansas-Texas Lines	1918			*
Lake Superior & Ishpeming	1920			*
Terminal Railway Association	1920			*
Chicago, Burlington & Quincy	1922			50000
Colorado & Southern	1922			*
Fort Worth & Denver City	1922	2427	98	2525
Northern Pacific	1922	31581	1345	32926
Richmond, Fredericksburg & Potomac	1923	3650	150	3800
Texas Pacific	1925			*
Spokane, Portland & Seattle	1926			*

TABLE 3

The Appearance of Collective Bargaining in the Various Employee Groups in Relation to the Introduction of Seniority into their Agreements*

Craft Group	Union	Date Organized	Date of First Agreement	Date of First Agreement With Seniority	Railroads With Which Agreement Was Made
Locomotive Engineers	B.L.E. O.R.C.	1863 1868	1875 -	1875 -	N.Y.C. & H.R.
Conductors	B.L.F. & E.	1873	1876	1876	I.C.
Locomotive Firemen	I.B.B.I.S.B.	1880	1892	1892	A.T.S.F.; U.P. C. of N.J.
Boilermakers	B.R.T.	1883	1887	1887	C.P.
Brakemen	M. of W.	1886	1902	1902	A.T.S.F.; L.E.S.L.; S.L. & S.F.
Trackmen	O.R.T.	1886	1892	1892	A.T.S.F.; U.P.
Telegraphers	I.A.O.M.	1888	1892	1892	
Machinists	S.M.W.I.A.	1888			
Sheet-metal workers	I.B.B.D.F.	1889	1892	1892	A.T.S.F.; U.P.
Blacksmiths	B.R.C.A.	1891	1901	1901	C.P.
Carmen	I.B.E.W.	1891	1917	1917	C.M. & St.P.
Electricians	S.H.N.A.	1894			
Switchmen	B.R.C.	1898	1906	1906	I.C.
Clerks					
Stationary firemen	I.B.F.O.	1898			
and others	A.F. of R.W.	1901			
Railroad industrial	B.R.S.A.	1901	1907	1907	N.Y.N.H. & H.
Signalmen					

Source: Mater, Dan H. "The Development and Operation of the Railroad Seniority System", The Journal of Business of the University of Chicago, Vol. XIII, October 1940, p. 395.

NUMBER OF RAILROAD WORKERS
AND NUMBER
COVERED BY PENSIONS

