"We are a family" and "We have a job to do" remained central and clearly articulated themes across the B&O during the twenties, as they had been during the preceding decade. Beginning in 1923, though, a principle that previously had been just a corollary of those larger precepts was pushed up to independent and equal status. "Suggestions are always in order" acquired the power of an expectation: employees not only may make suggestions but should make them. Himself responding to the suggestion of others, Willard established a program to encourage employees to become more actively involved in the business—to help the family to do its job better both by offering ideas for improvement and by participating, through their union officers, in evaluating those ideas. The program was called the Cooperative Plan.

This chapter begins with a broad definition and overview of the Cooperative Plan (or more simply, the Plan), followed by a discussion of its origins. Internal antecedents and both general and specific external factors in its creation are discussed; particular attention is paid to the role of consultant Otto Beyer and to the catalytic impact of the Shopmen's Strike of 1922. The initial cooperative experiment at Glenwood Shops and the subsequent adoption of the Plan in all B&O shops are described; perceived early benefits and some early problems are recounted. Typical local cooperative meetings are outlined in some detail. The spread of the Plan to other departments of the B&O and to other companies, and its attendant publicity, are described. Finally, the first four years of the Plan are assessed in terms of tangible results.

What was the Baltimore & Ohio Railroad Cooperative Plan? The short answer is that it was a systematic program of representative quality circles,
jointly sponsored by unions and management, developed primarily in company repair shops. As such, it was a major step forward in labor relations—sufficiently important in itself to justify the writing of this book. Everything accomplished by Daniel Willard’s presidency up to this point simply qualified him to be considered an excellent railroad executive, in the highest echelon of his profession but not necessarily alone there. With the Cooperative Plan, Willard set himself apart.

Before the origin and development of the Plan are discussed, the term quality circle must be defined. As it came to be understood in the 1980s, a quality circle is a formalized group of workers and managers who meet regularly to attempt to find ways in which the quality of their firm’s products or services may be improved. As a rule, any proposal directed toward this end is a proper matter for discussion by the group. Most commonly, proposals or issues raised in the meetings fall into the categories of product or service design, machine design, machine or plant layout, plant and equipment maintenance, work methods, productivity-related working conditions, work scheduling, materials or product flow, materials waste control, and quality control standards and techniques. The majority of the circle’s membership normally is drawn from the ranks of labor; the remainder includes the workers’ department or plant manager and plant staff representatives. Recent practice has been to establish numerous circles within a given facility, involving as many workers as possible. However, a single representative circle (for which workers elect peers to represent them) follows the same form and, it may be argued, serves essentially the same function. Quality circles typically operate in a context of substantial employee job security, which contributes to the achievement of higher-quality output by improving employee morale.¹

The quality circle concept is commonly associated with a set of management approaches and techniques ascribed to the Japanese. The “Japanese management system,” credited by many for the substantial gains of Japanese manufacturing firms against their American competition since the early 1970s, is discussed more fully in chapter 5. Here, it is sufficient to note that those who work in or under it (generally the full-time male employees of large corporations) enjoy great job security, advisory participation in decision making, and a broadly supportive corporate climate evocative of a sense of family. Quality circles are practically standard to the system.²

Therefore, it has been widely assumed that quality circles are a Japanese innovation. It is understandable that this should be the case. Until Japanese quality circles began to be noticed and copied by American corporations during the early 1980s, there were no large, well-organized, and highly visible post–World War II American examples of quality circle programs, and the Japanese were generally not hesitant to take credit for their existence. A book
on quality circles published in Tokyo by the Asian Productivity Organization in 1972, for example, states, "Quality circles are an innovation peculiar to Japan,", dating from about 1960; it contains no reference to William Edwards Deming, the American statistician and quality control specialist who helped the Japanese to establish their quality circles during the 1950s, nor of successful efforts to establish similar programs in other countries before that time. Because most American businesses and business schools are not especially historically minded, there were no noteworthy efforts to probe corporate records or memories of older employees for American antecedents of the Japanese development. Had there been such efforts, it might have come to be understood that the Japanese properly may take credit only for the full development and widespread application of the concept, not for its first use.

Present evidence indicates that the B&O Cooperative Plan was adopted earlier and lasted longer than any other major American antecedent of the late-twentieth-century quality circle. It began in 1923, and some of its remnants remained in effect until 1962. Directly involving thousands of employees over the years and indirectly involving tens of thousands, it certainly qualifies as a major effort. Whether Deming and the Japanese knew about it, and then copied and improved upon it, is an open question; there is no question that Willard’s B&O had the concept first.

The Cooperative Plan was born as a small, tentative pilot program at the B&O’s equipment maintenance shops at Glenwood, on the south side of Pittsburgh, in February 1923. It was brought into being and developed jointly by the B&O and the Baltimore & Ohio System Federation No. 30, the latter representing the B&O local chapters of the shop crafts unions (the International Association of Machinists; the International Brotherhood of Boilermakers, Iron Ship Builders, and Helpers; the International Brotherhood of Blacksmiths, Drop Forgers, and Helpers; the Amalgamated Sheet Metal Workers’ International Alliance; the Brotherhood of Railway Carmen of America; and the International Brotherhood of Electrical Workers). The purpose of the program was to improve the service and efficiency of the company, hence the returns to shareholders and to employees. The preamble to the agreement between B&O management and Federation No. 30 that formally sanctioned the Glenwood experiment, signed in May 1923, stated:

The welfare of the Baltimore & Ohio Railroad and its employees is dependent on the service which the railroad renders the public. Improvements in this service and economy in operation and maintenance expenses result chiefly from willing co-operation between the railroad management and the voluntary organizations of its employees. When the groups responsible for better service and greater efficiency share fairly in the benefits which follow their joint efforts, im-
provements in the conduct of the railroad are greatly encouraged. The parties to this agreement recognize the foregoing principles and agree to be governed by them in their relations.⁴

Joint worker-manager meetings were to be held biweekly to raise and to evaluate service-quality-related issues and suggestions. The primary specific subjects to be entertained were shop, yard, and engine terminal operations; materials supply, distribution, care, and saving; work methods; job analysis; quality standards and control; coordinating, scheduling, routing, and planning of work; work group and overall shop performance records; conditions of shops, grounds, tools, machinery, and buildings; and department and shop morale. Not to be discussed at these meetings were individual grievances, work rules, wages, or any other matter normally handled in contract negotiations between company and union.⁵ These biweekly shop meetings, or cooperative conferences, were to be attended by the shop superintendent, a few of his immediate subordinates, and the six local union representatives who constituted the regularly functioning federated shop crafts committee. Management dominance in terms of numbers of attendees was to be avoided. As the program evolved at Glenwood, meetings usually were attended by five managers or staff people and the six union men. It was encouraged and expected that the bulk of the ideas considered at the meetings would come from workers on the floor of the shops, channeled through their respective craft representatives.⁶

After a rough start, the pilot program produced results that were judged to be satisfactory by all parties to the agreement. On February 24, 1924, the program was extended to all forty-five of the B&O’s shop facilities, and the Cooperative Plan was firmly established.

What was the origin of the Cooperative Plan? It did not spring full-blown from nothingness; it was the culmination of a number of preliminary steps and prior forces both inside and outside the company. Within the B&O was an evolving corporate ethos: sense of family, concern for the worker, service to customers, pride in the railroad. Such notions of what the B&O was about were intertwined with the Relief Department, respectful relationships with the unions, the safety committees, Baltimore & Ohio Magazine, the Welfare Department, and two somewhat narrower programs not discussed in chapter 1: “cooperative claim prevention” and division superintendents’ open staff meetings. Of these elements, three were in particular respects precursors of the Cooperative Plan: safety committees, cooperative claim prevention, and open staff meetings.

The safety program was the B&O’s first comprehensive effort to obtain a
desired result through local labor-management committees. From their beginning in 1911, the safety committees had been a forum for discussions between company officials and their blue-collar subordinates. Although chaired by a fairly senior local manager, often the division superintendent, the typical committee was composed in the majority of trainmen, enginemen, firemen, shop employees, and maintenance of way workers. The safety program evolved and grew over the years, through the "No Accident Campaign" of the federal period, the formation of a separate Safety Department with traveling agents, the publication of detailed results and a "Safety Roll of Honor" in the company magazine, and, in January and February 1921, the staging of mass safety rallies featuring entertainment by local employees and the company safety film, Bulletin 70. Nonetheless, the local labor-management committees re-
mained the ongoing heart of the program, and they undoubtedly helped convince B&O management at all levels of the utility of such structures.\textsuperscript{7}

The cooperative claim prevention program established the second major set of local committees on the B&O. Created in October 1917 in an attempt to reduce loss or damage to freight shipments, it was supervised by C. C. Glessner, the company's general freight claims agent. Its committees differed somewhat from those of the safety program in that their meetings and activities tended to be dominated by local station agents. Nonetheless, all departments were represented and all employees received its bulletins. Its activities were well publicized in \textit{Baltimore & Ohio Magazine}, and employees other than committee members were encouraged to attend committee meetings as guests. As with the safety committees, the cooperative claim prevention committees were quite successful; both were able to point to measurable improvements in their respective areas of responsibility. It was with regard to the claims program that the B&O first formally used the term \textit{cooperative} to refer to a continuing program of mutual effort by top-level and middle- to lower-level employees to resolve a managerial difficulty.\textsuperscript{8}

The third major internal precursor of the Cooperative Plan was the opening of division superintendents' Monday morning staff meetings to blue-collar employees. This policy began on the New Castle (Pennsylvania) Division in February 1921, on the initiative of the local superintendent, D. F. Stevens. The goals of the policy were to improve information exchange and mutual understanding, and to establish a broader range of perspectives from which to identify problems and opportunities and to recommend changes. The first meeting was chaired by Stevens and was attended by the usual division officers and staff, plus three engineers and a conductor. Willard and Charles W. Galloway, the recently named operating vice president, apparently liked the idea immediately. Less than two months later, the New Castle plan was ordered into effect over the entire railroad.\textsuperscript{9}

The forces at work outside the company that led to the adoption of the Cooperative Plan were numerous and complex. A broad background factor was, during the first two decades of the century, a rising interest in the concept of "industrial democracy." Industrial democracy, simply defined, is a system in which substantial amounts of managerial authority are delegated all the way down to the level of the production worker. There were sporadic efforts to implement portions of the concept by some American unions in contract negotiations before World War I—the agreement signed between the United Garment Workers of America and Hart, Schaffner, & Marx in 1911 is perhaps the earliest successful example—but most of the action in the sphere of industrial democracy was in Europe during and after the war. It was a wartime event, the publication in Great Britain of the Whitley Committee report (which
recommended that joint worker-management councils be established at the ind-
ustry, district, and plant levels to guide managerial decision making in Brit-
ish industry after the war), that provided the American labor movement with
both encouragement and a blueprint from which to pursue a share of manager-
ial authority. In 1918 the executive council of the American Federation of
Labor adopted as its own the basic tenets of the Whitley Committee report.\textsuperscript{10}

That report, triggered by wartime mobilization and its attendant indus-
trial upheaval in Great Britain, only reinforced parallel forces operating in the
United States. Mobilization for the war effort had led directly to the establish-
ment of the United States Railroad Administration, which in turn led to the
possibility of changes in some basic relationships in the railroad industry. The
simple fact of government control prompted many people concerned with rail-
road policy and operations to note that an opportunity had arisen: an oppor-
tunity for a fundamental restructuring of the industry, toward greater effi-
ciency and “harmony of interests” among labor, managers, shippers, and the
general public. On a narrower and more concrete level, rail union leaders saw
the chance to increase their own power, to the benefit of themselves and their
members. They seized that chance, and they were successful: under the aegis
of the USRA, especially during the highly sympathetic McAdoo administra-
tion, the rail unions gained higher wages, standardized and favorable work
rules, and considerable growth in membership.\textsuperscript{11}

Encouraged by their successes, they determined to push for more. In a
drive spearheaded by the train-and-engine-crew brotherhoods, railroad labor
by 1919 was actively campaigning for government-sponsored industrial de-
mocracy, in the form of the Plumb Plan. Under that plan the federal govern-
ment was to purchase the nation’s railroads and consolidate them into a single
system, operated under the authority of a board of directors composed equally
of representatives of labor, management, and the public. The campaign for
the Plumb Plan was abortive, but it did serve to intensify interest and to stimu-
late thinking, both among union leaders and among their rank and file, about
participating in some fashion in managerial decisions.\textsuperscript{12}

Throughout this period, one of the most active and visionary leaders of
the American Federation of Labor (AFL) constituent unions was William H.
Johnston, president of the International Association of Machinists (IAM). An
ardent believer in the promise of industrial democracy, Johnston in November
1918 met and enjoyed a lengthy conversation with Captain Otto S. Beyer, Jr.,
an army ordnance officer and former railroad mechanical department official
who held similar views on the subject. That conversation and the association
that followed were to produce the first attempt to establish a program of union-
management cooperation—prospectively the first step toward industrial de-
mocracy—in the shops of the railroad industry.\textsuperscript{13}
Beyer was thirty-two years old when the war ended, but he had already acquired considerable breadth of experience. Having received a degree in mechanical engineering from Stevens Institute of Technology in 1907, he had worked first in the engineering department of an iron and steel firm, then moved in 1911 to become a technical assistant to the superintendent of the Erie Railroad's mechanical department. In 1912 he moved west to become special motive power engineer for the Chicago, Rock Island, and Pacific Railway; in 1913, still with the Rock Island, he became general foreman of medium-heavy and heavy repairs at the locomotive shop in Horton, Kansas. It was at Horton that he first was able to observe extensively and to work directly with the railroad rank and file. Then in 1916 he left railroad employment to do related engineering research, assuming directorship of the locomotive testing laboratory at the University of Illinois. When the United States entered the war in 1917, Beyer joined the army; he soon received a commission as captain, and he was placed in charge of technical training in the ordnance department. In this capacity he became involved with an experiment in indus-
trial democracy at the arsenal in Rock Island, Illinois, wherein joint labor-management committees were given authority to review working conditions, production methods, and piecework rates. 14

During the spring of 1919, Beyer took the initiative in pushing the concepts of industrial democracy beyond the Rock Island arsenal. In March of that year, he prepared a rough draft of a union-management cooperative program that might be applied across all unionized industries. Over the succeeding months, in contact with Johnston and other AFL rail union officials, he refined his program into one directed specifically at the government-controlled railroad industry. In the meantime he was given the opportunity to put his principles into practice. Appointed director of Army Ordnance’s newly created arsenal orders department, Beyer pushed successfully for the creation of joint advisory committees at five of the army’s arsenals, and he posted two arsenal union representatives to advisory positions on his staff. His principal spare time activity was pursuing the railroad cooperative plan, both with the AFL and with Director-General of Railroads Walker D. Hines. Both parties supported the Beyer proposal, and on November 10, 1919, preliminary action was taken. Hines sent a letter to the regional directors of railroads, requesting that they favorably call to the attention of their subordinate railroad managers the Beyer plan for labor-management cooperative committees in their lines’ mechanical departments.

The Beyer plan, the essence of which closely corresponded to the B&O Cooperative Plan of three years later, basically went nowhere. By the end of 1919, it was clear that the USRA soon would go out of existence, and that federal managers soon would become or would be replaced by returning private managers. Accordingly, they were not much interested in long-range program suggestions from Hines. The great majority of federal managers never even held a serious conversation concerning the plan with their shopcrafts federation representatives. 16 It then sat in limbo for a little over two years.

During this interlude, important pertinent developments were taking place. William Johnston maintained his attachment to the program, trying several times without success to have variants introduced at manufacturing firms with which the machinists’ union had contracts. His approach to selling the program to top management, however, may have shifted subtly—and critically—during the period. The status of the shopcrafts unions deteriorated markedly during 1920 and 1921, suffering both from the abolition of the sympathetic USRA and from labor surpluses that accompanied the postwar recession. Those unions, therefore, were generally on the defensive and inclined to want “to disprove the claim that they were uninterested in production.” 17 It may be inferred that by the spring of 1922, when he and Beyer approached Daniel Willard on the subject, Johnston was more inclined to present the co-
operative program deferentially, with greater emphasis on benefits to the railroad than on benefits to his men.

Beyer and Johnston did not approach Willard and the B&O first. It was clear to Beyer that the choice of a recipient for their pitch was critical, but he did not immediately see a single obvious option. Late in 1921, after they had decided to make a determined effort to revive the 1919 proposal, Beyer wrote to Johnston, "The thing to do is to get some railroad president who is not bitten by the Atterbury bug and who appreciates the latent value of cooperative assistance from [the unions], to go into this matter in a sincere whole hearted way." He saw three such men: S. Davies Warfield of the Seaboard Air Line, Alfred H. Smith of the New York Central (NYC), and Daniel Willard. Of the last two he had one reservation: they both were involved in the Association of Railroad Executives, an industry group dominated by the Pennsylvania's W. W. Atterbury and like-minded officials." His inclination was toward Warfield, despite the Seaboard's relatively small size and southern location.

By early in 1922, though, Beyer and Johnston had worked beyond any
guilt-by-association reservations to consider Smith and Willard on their own merits. Both presidents had records in labor-management relations indicating a predisposition toward the program, and the shop workers of both of their roads were sufficiently company-oriented to raise no serious objections to the program. Moreover, their roads were large and highly visible eastern trunk-lines. Warfield was dropped from consideration, and the choice was between Smith and Willard. As Johnston and Smith had a long-standing and very cordial relationship, and as the New York Central enjoyed a somewhat higher status than did the B&O, Alfred Smith was chosen to receive the proposal first.\textsuperscript{19}

After hearing the Beyer-Johnston presentation, Smith declared himself in sympathy with it. However, when he relayed the proposal to the executives and staff of his operating department, he encountered considerable resistance. Rather than fight that resistance down the line, Smith and the NYC demurred, leaving Beyer and Johnston with their second choice: Willard and the B&O.\textsuperscript{20}

Daniel Willard by then had a broad and solid reputation for “fairmindedness on labor issues, and for the scrupulous care with which he had endeavored to adhere to the letter of [union] agreements.”\textsuperscript{21} Some people thought that he should have been Beyer and Johnston’s first choice. Interstate Commerce Commissioner Mark Potter, when asked by Beyer through Louis Brandeis to broach the subject to Willard, remarked that Willard was the one man among all American rail executives to give the proposal thoughtful consideration and to follow through with action.\textsuperscript{22} Even so, when Beyer and Johnston sat down with him in his office for preliminary discussions, Willard was initially quite skeptical. As he recounted the conversation five years later:

Well, I was suspicious of Mr. Johnston; I didn’t know Mr. Beyer, and I was curious to know just a little more about what they had in mind, and I asked Mr. Johnston to tell me a little more specifically what he wanted to do. I said, “If it is your thought to introduce some sort of a Soviet arrangement on the B&O, I am opposed to it.” And he asked me very properly what I meant by Soviet.

“Well,” I said, “I don’t know, candidly, what Soviet does mean, but I know what I think of when I use the name, and what I am thinking of is this: are you expecting to put into existence agencies, committees in our different shops, with the understanding that matters of management and shop details shall be referred to those committees to be voted on and decided, and then we are to accept their decision?” And he said promptly and finally, “By no means; they don’t propose to interject themselves into management at all.”

They saw that that responsibility rested on me, and they had no desire to remove it. What they wanted to do was to help us. They felt that the men who were doing the actual work, many of them, would be the foremen and the master mechanics and officers of the road in the future; many of them were men of
intelligence; they had behind them many years of experience; they were not being encouraged at that time to make suggestions of a constructive character, and they felt that they could make [through cooperative committees] such suggestions as would be helpful. Well, I was perfectly agreeable to that sort of a program, and so I told them, I’d put them in touch with the officers to work it out.23

Then came the nationwide Shopmen’s Strike, and the plan was put in abeyance.

The Shopmen’s Strike of 1922, perhaps the most significant railroad labor-management showdown of the era, was the bubbling over of worker frustrations that had been rising for some time. Its underlying economic cause was the monetary deflation that accompanied the serious postwar recession. Deflation and increasing unemployment since the fall of 1920 had created considerable downward pressure on wages. That pressure had been recognized and transformed into shop wage cuts by the carriers through the frontline institutional cause of the strike, the decisions of the Railroad Labor Board.

The Railroad Labor Board—established by the Transportation Act of 1920 to settle controversies regarding wages, hours, and work rules that the carriers and their employees could not resolve themselves—was not very popular with organized labor. Its problem was not so much a promanagement bias; the board often sided with the unions in matters that came before it. Its problem lay mainly in unequal implementation of board decisions. As those decisions were not legally binding, some railroads (notably the Pennsylvania) were given to flouting board pronouncements that did not serve their interests. Prolabor judgments on such roads could be enforced only by labor’s calling a strike; promanagement judgments such as a wage reduction could be implemented simply by management’s issuing smaller paychecks. Thus the weight of promanagement decisions accumulated, without any consistent balancing with effective decisions serving the interests of labor.24

The sequence of decisions that directly precipitated the strike began in the spring of 1921, when the railroads petitioned the board for a wage cut. The petition was granted; effective July 1, 1921, the wages of shopmen and other blue-collar employees were cut 12 percent. At the same time, subsequent to another decision by the board, the shopcrafts unions’ 1919 national agreements were abrogated; those agreements had standardized, across all railroads, shop wages and work rules in a manner generally considered favorable to the unions. Then early in 1922, the railroads proposed another wage reduction. Sensing that they were about to be abused for a third time, the AFL shopcraft unions at their federated convention in April 1922 began to prepare for a
strike. A few convention delegates argued that the strike should be against only those companies that had been most aggressive in their opposition to AFL shopcraft union positions, a group led by the Pennsylvania Railroad through General Atterbury. This was the minority view. The convention decided to authorize ballots for a nationwide strike of all carriers, regardless of their individual records in union relations; in this manner could the larger issue of the Railroad Labor Board and its one-sided ineffectuality be addressed most forcefully. On June 5 the board mandated a shop wage cut similar in size to that of the prior year. On June 8 strike ballots were distributed; 95 percent of the returned ballots favored a walkout. On July 1 the strike began.25

For the unions, the strike did not go well. On July 3 the Railroad Labor Board opined that the striking shopmen had voluntarily left the service of their employers, surrendering their seniority rights, and that they could be replaced by the carriers at will. Many roads did so with alacrity, thus reducing to minimal levels the strike’s disruptive effects upon their operations. The unions’ leverage was not destroyed, but it was greatly diminished. As July passed, with more and more strikebreakers reporting to work, and with some of the most strongly antiunion roads claiming near-normal operations, the unions were in trouble.26

Beginning to fail in the use of direct economic pressure, the shopcrafts organizations might have looked for help in the political realm. There was not much to be found. The Harding administration had been sharply split over the strike. Secretary of Commerce Herbert Hoover and Secretary of Labor James Davis tended to sympathize with the strikers, whereas Attorney General Harry Daugherty, and increasingly President Harding himself, viewed the strike as a serious and inexcusable threat to governmental authority and economic recovery, especially in the context of the simultaneous national coal strike. The unions’ most influential administration ally, Hoover, gradually was losing the argument to their opponent, Daugherty.27

One of the few things that Hoover could do to help the unions was to encourage his fellow moderate Republican, Daniel Willard, to break with the Association of Railroad Executives (ARE) and to sign a separate and moderate agreement. The potential for such a breakaway clearly existed. The ARE, firmly under the control of the Atterbury party, by late July had taken the position that the seniority rights of strikers were forfeit. The hard-liners were going to insist upon levying punishment. Willard, on the other hand, had adopted a conciliatory approach from the beginning. At considerable cost in traffic lost to the B&O, he had held the strikers’ jobs open for nearly a month; the B&O had not yet begun actively recruiting strikebreakers. Willard was not comfortable with the hard-line position, so he needed little prodding from
Hoover. The B&O commenced separate negotiations with the shopcrafts federation on July 25.  

Willard’s basic offer to the strikers certainly was not everything that they might have wished. Essentially, it was this: union shopmen not found guilty of strike-related violence (of which there was none to speak of on the B&O, unlike on some other roads) were to be restored to their former positions at their July 1 wages and seniority, with seniority disputes vis-à-vis nonstrikers and the few incidental new hires to be resolved by a committee composed equally of union and management representatives. The offer, presented during the course of four days of negotiations between union officers and operations vice president C. W. Galloway, from the strikers’ perspective reduced the strike to roughly the status of an unpaid vacation. The unions declined the offer, and it was withdrawn.  

The following week President Harding, swayed one last time in Hoover’s direction, offered a similar proposal as a framework for a national settlement. This time the unions accepted, seeing in a national agreement the opportunity to save the jobs of their members on antiunion roads. But the ARE rejected Harding’s initiative over the seniority issue: the hard-line faction did not wish to be denied its total victory. Harding, apparently not wishing to side with inevitable losers, then began to distance himself from the unions, aligning himself increasingly with Daugherty and the ARE. Their economic and political strength having largely evaporated, and with the active support of the more firmly established operating brotherhoods ever more doubtful, the shopcrafts unions were in serious trouble.  

By late August the strike was disintegrating. Caught between General Atterbury and a hard place, the unions were desperate, and willing to settle with anyone under almost any conditions that would preserve their seniority rights. This change of attitude was called to Willard’s attention, and soon there was formed a committee of the ARE conciliatory faction, with Willard as chairman, to seek a separate peace. After an initial failure following an ARE meeting in New York on August 25, discussions were reopened on September 2 in Baltimore. Willard, Smith of the New York Central, and Warfield of the Seaboard were the principals on the management side; Bert Jewell, president of the Railway Employees’ Department of the AFL, led labor. On September 5 they agreed upon the outline of a settlement. Announced officially on September 13, the Baltimore Agreement or Willard-Jewell Treaty, as it was variously known, contained the same basic provisos that Willard had offered the unions at the end of July. The B&O, the NYC, and the Seaboard were immediate signatories, followed quickly by the Southern. By the end of September, fifteen additional roads (the largest of which were the Chicago & North Western and the Chicago, Milwaukee, & St. Paul) had come to terms
under the agreement. Together the nineteen initial Willard-Jewell Treaty carriers and their subsidiaries constituted 23 percent of the nation’s railroad mileage.  

During the weeks that followed, other roads, most of them small ones, hopped on the bandwagon. Eventually, 176 of the roughly 310 railroads operating in the United States at the time settled with the AFL unions under the agreement or some close variant. The hard-liners, led by Atterbury and the Pennsylvania, never did; they were perfectly happy with their strikebreakers.  

The Willard-Jewell Treaty simply gave the shopcrafts unions nearly all of what they had when the strike began. By normal labor standards, then, it represented a union defeat. Even so, it prompted many unionists to look on Daniel Willard with a measure of gratitude. The explanation of this response lies in the immediate fate of AFL shopcrafts federations on those carriers that did not sign the agreement: they were either seriously weakened or obliterated. Until government-supervised union representation elections were mandated by the Railway Labor Act of 1926, much of the railroad industry dealt either with a broken and demoralized shop federation or with a “company union,” a management-dominated union substitute best exemplified by the organizations on Atterbury’s Pennsylvania (Atterbury did not succeed Samuel Rea as president of the PRR until 1925, but he was responsible for shaping and executing operating labor policy during the period). Across the country the AFL shopcrafts unions appeared to be on the run, and management was triumphant. Railway Age, the industry’s principal trade publication, editorialized about the strike with faintly concealed praise for those roads that had not signed the Willard-Jewell agreement, stating that “railways such as the Pennsylvania, the Illinois Central, the Burlington, the Union Pacific, and the Southern Pacific . . . have fought truculent labor unions to a finish and completely whipped them.” In comparison to those who would completely whip them, Daniel Willard was the unions’ friend.  

That is not to say that Willard was an ardent booster of the AFL. His view of unions during the period seemed simply to be one of diminishing wariness and a growing sense of mutual interest. As he put it himself:

Some of my friends who don’t exactly approve of my views are apt to refer to me as somewhat pro-labor and socialistic and Bolshevikistic and all the terms that are used in that connection. Really nothing was further from the truth. It doesn’t matter whether I like labor unions or not. I may not like a slippery sidewalk or a rainy day, but I don’t get mad at it; it is there, and is something to be put up with . . . .

[Before 1922, the B&O] tolerated labor unions. They came into my office; they wanted to see me. I always arranged to see them as quickly as possible and
have it over with. We talked it over, and as soon as the conference was done, I made it my business to lead the way to the door and help them out as quickly and as promptly as possible, hoping it would be a long time before they came again. I told the men that our conferences were friendly and all that, but it was simply toleration.

Well, then, the next step was cooperation. During the strike I had opportunity to do some reflecting. I looked at it this way. The B&O in the last fifteen years had spent almost a quarter of a billion dollars—nearly two hundred and fifty millions of dollars along its property, and then all at once sixteen thousand men didn’t want to work, and they didn’t work, and I believe that the other men of the service were sympathetic with the men and not with me. It was surprising how many things would happen to an engine during such a period as that that never thought of happening at any other time, indicating that sympathetic feeling between workers in all classes. And so this problem presented itself to me: what good does it do to raise money and improve a railroad if you cannot get the men to work efficiently after you have done it all, and what is wrong about our kind of management on the B&O which has brought about a condition where sixteen thousand men don’t want to work and all the rest are sympathetic with them?

So it seemed to me that inasmuch as there was an influence of some kind, whether it was the influence of the labor leaders, as some said, or whether it was a feeling of sympathy that would have been there even if there had been no labor leader, isn’t worth while discussing. The feeling was there and found expression through their leaders. So I thought if there is such a movement, such an influence, and they are going to stay here, why not work with them instead of against them? and so it seemed to me that it was a wise and intelligent thing to do, to try and get on some basis of cooperation. . . .

The Shopmen’s Strike of 1922 had three important effects upon the development of the B&O Cooperative Plan. First, it further weakened the already struggling shopcrafts unions. As their leaders (particularly Johnston and Jewell) were earnest and flexible, not manipulative and rigid, they saw that the path to strength lay in proving their worth to society, not in instigating class warfare. Their defeat in the strike simply strengthened their resolve to prove themselves. Second, it boosted Daniel Willard’s stature in the eyes of most union people. He was a good cop in a room full of bad cops. Third, as the preceding quotation indicates, it was a consciousness-raising experience for Willard. His prestrike disposition was to think that his upgrading of the property and his welfare programs had pretty well solved the old problem of employee commitment: that union-management cooperation would just make a generally good situation a little bit better. The strike dissolves that illusion. He came to see the Beyer-Johnston proposal as a potentially effective solution
to a problem that was deeper than he had thought. His commitment to give cooperation a serious trial increased accordingly.

The product of these factors was greater mutual enthusiasm for pushing the proposal to fruition. The unions were more eager to work with Willard, and he was more eager to work with them. As described in chapter 1, the origins of the Cooperative Plan antedate the strike and its origins; the strike was not a root source of the Plan. The strike was a catalyst, triggering reactions that pushed the Plan ahead more quickly and surely. Without it, the Cooperative Plan probably would have been tried on the B&O anyway, but its chances of success would have been much lower.

So Willard sat down again with Beyer and Johnston to pursue the matter of a union-management cooperative program in B&O shops. Since Willard was even more amenable to the idea than he was before the strike, it remained only to select a site at which to try the plan, and then to work out preliminary details. Beyer’s preference was for a site where the work force was conscientious and labor-management relations were good, arguing that such a favorable setting would enable them to work out any problems with program details before applying the plan across the entire system. Willard was not so sure. He recalled later: “Perhaps it was sort of a joke in my mind; I do not say what the actuating motive was, but I knew without hesitation where the worst shop was, and I suggested they try that first, and if it worked there it would be pretty apt to work any place else. So they took Pittsburgh.”

Beyer and Johnston were in no position to argue the point, but Glenwood Shops in Pittsburgh, in the fall of 1922, certainly was an inauspicious place to begin an untried program of labor-management cooperation. The facility was rife with conflict among its various ethnic groups. It was located in Pittsburgh’s notorious second ward, and the ward bosses and their henchmen in the shops almost constituted a second management structure, diminishing the authority of company officers. The bad situation was compounded by the mixing of returning strikers and remaining strikebreakers after the September strike settlement. Breaches of discipline by the various gangs in the shops were common; Willard observed that the “throwing of nuts and bolts and such things” was a frequent occurrence. The local union organization spent nearly all of its time and effort trying to settle grievances and to resolve disputes between its own members. Morale was terrible; productivity was approximately two-thirds that of comparable facilities.

After the strikers returned to work, some eight hundred men were employed at Glenwood. As the near-chaos continued into November, the company in frustration temporarily shut down the facility, prepared to engage in
the common postwar practice of outside subcontracting, if necessary. By January, the situation having cooled off a bit, the shops had been reopened with a work force of roughly 125.37

The first step taken by Willard and his mechanical department management toward the implementation of the Beyer-Johnston plan was to hold out to the men at Glenwood the promise of stabilized employment. On February 9, 1923, Willard’s executive committee approved the recall of three hundred furloughed shopmen, to be effective the day after approval of the program by the membership of the Glenwood shopcrafts locals, with more men to be called back as the program gained effectiveness. On February 12 a mass union meeting was held near the shops, at which the plan was explained and endorsed by local union officers and national officials of the IAM, Johnston’s union. The plan was approved by the men by standing vote.38

Beyer then was placed under contract to Federation No. 30 as an on-site consultant to coordinate the implementation of the project. The B&O gave him a desk and clerical help at the shops complex, where he moved in late February. His initial task was simply to help the local shop managers and union people to understand each others’ complaints. Beyer’s personal style was well suited for such a job: his “casual, homely manner” and “draggy way of speaking”39 had a calming effect on the tense and occasionally rancorous early committee meetings, attended usually by him, four shop officials, the six local federation committee members, and the federation secretary. He functioned at the beginning more as a grievance arbiter than as a program coordi-
nator; he spent considerable time on the shop floor, listening patiently to both sides of a long series of petty disputes and misunderstandings, then offering his thoughts on the relative merits of each side. His technique of “letting himself be kicked back and forth between management and men” gradually uncovered a few items that were understood to be problematic by both sides. For example, within the shops certain machines needed to be overhauled, and certain tools needed to be replaced; both management and men could agree upon that. So the necessary overhauling and replacing was done, and the possibility of some common interest began to dawn upon both parties. Then the workers suggested the addition of a footstep-saving satellite tool room, and the tool room was added.40

As the credibility of the program thus gained strength, suggestions began to flow in greater volume. Discussions moved beyond personal grievances, which thenceforth were ruled to be a contract matter outside the program. A regular biweekly meeting time for the cooperative committee was established, on company time, and a simple three-category framework for evaluating ideas was developed: accept, reject (with explanation forwarded to the originator), or defer pending collection of further information. The union committeemen began to draw from their coworkers ideas for the improvement of physical working conditions, machine layout, machining jigs and fixtures, and repair methods and fixtures—just as had been hoped. Beyer was elated. On July 26 he wrote to Johnston:

Especially during the week of July 16, further very significant developments have taken place at Glenwood, which confirm more than ever the wisdom of carrying forward the policy inaugurated on the Baltimore and Ohio. Many new improvements to the physical plant have been authorized and started. Several locomotives to be rebuilt and modernized are now in the shop, and the rank and file is responding with ever increasing enthusiasm. At the last regular biweekly meeting between the management and craft shop representatives, the latter came primed with suggestions, proposals and matters to discuss for the improvement of the shop and the welfare of the men so that the conference had to be continued way into the afternoon. It was very apparent that the men in the shop are beginning to attach great significance to these meetings, that they are thinking about ways to improve things and consequently going to their representatives to present suggestions made by them for action at the conference. The matters considered were very vital indeed and very much to the point. One could not help but be impressed with the spirit which prevailed. I am glad to say, also, that the disposition on the part of the management to act promptly and energetically to effect the betterments discussed is increasing every week. The conviction that the policy being developed on the Baltimore and Ohio is wise and sound thus receives added confirmation.41
Those workers who failed to catch the spirit of the program were subjected to appreciable peer pressure, both informal and formal; union committeemen were given the authority to request of shop management transfers of recalcitrant coworkers to less desirable jobs around the shop, an authority that they frequently exercised. The plan was working, and the company responded by recalling, in accordance with the promised timetable, the remainder of the furloughed workers.\textsuperscript{42}

Most importantly for the future of the program, productivity at Glenwood rose dramatically, achieving a level that Willard and his mechanical department officers considered entirely satisfactory. This was critical to the credibility of the program among Willard's subordinate managers, who tended to be more skeptical of any alleged positive influences of unions than was Willard, and especially jealous of their own power and perquisites. The union-management cooperative program was a threat to some aspects of that power, especially for shop superintendents and master mechanics out along the divisions, who in past decades across the industry had wielded an almost feudal authority. Many of them, therefore, had no strong inclination to uphold their half of the cooperative arrangement. The Beyer letter hints at this, and Willard himself acknowledged it directly: "Now, the problem isn't all [with] the men, by any manner of means. It was just as hard, probably, for me to get our officers to accept this idea of listening to suggestions from the men as it was to get the men to accept some of the things that came to them from management."\textsuperscript{43} Such officers presumably were less inclined to argue with their president, or to subvert his wishes, in the face of hard economic evidence.\textsuperscript{44}

The Glenwood experiment was a success, and there was no real debate as to whether it should be extended across the entire B&O mechanical department. For Willard it vindicated his belief that a right-minded empathy among management and workers could improve productivity; his executive committee concurred without notable dissent. For the unions it confirmed the practical value of being supportive of company success. The experiment was not industrial democracy as outlined in the Whitley Committee report, but it worked: the AFL shopcrafts executive council, meeting early in February 1924, endorsed the Glenwood format as a goal to be sought in all future negotiations with all carriers. Everyone was at least tentatively happy. So on February 24, 1924, the B&O and Federation No. 30 signed an agreement establishing joint cooperative committees at all forty-five of the company's shops, and the life of the Baltimore & Ohio Railroad Cooperative Plan officially began.\textsuperscript{45}

In the following weeks, the Glenwood joint committee and biweekly conferences were replicated around the system. Beyer, still in the employ of the
unions, was given responsibility for directing the development of the full program. The company, to ensure speedy implementation of adopted suggestions and to spread those with broad applicability to the cooperative committees at other shops, established the Shop Practices Bureau. The larger shops, such as Mount Clare, Cumberland, and Glenwood, had their own Shop Practices staff; smaller facilities, such as Newark (Ohio), Garrett, and Washington (Indiana), shared a traveling representative. A member of this department was one of the regularly designated management members of the committee, the others being the top manager of the facility (shop superintendent or master mechanic) and the storekeeper or stockroom supervisor; another staff member or two might be assigned to the committee as seemed appropriate. As in the pilot program, the shopcrafts union committeemen were to be the labor representatives, serving as conduits for suggestions from coworkers in their respective crafts. The federation leadership, for its part, stepped up its efforts to promote the plan among its members. Instructions sent by Federation No. 30 headquarters to each of its local lodges and shop federations stated:

Proposals, ideas, suggestions, etc., by the local shopmen for consideration at the joint local co-operative conference will naturally come to life through our
daily observations in and around our jobs, benches, machines, departments, and shops. Such ideas, suggestions, and proposals on the part of our men should be referred to their local craft committees for handling. In this connection we would suggest that the local shop committee of each craft get together occasionally at noon time or some other time convenient to all concerned and acquaint itself with various matters and suggestions referred to it by our local members for submission to the next local joint co-operative committee meeting.

We suggest, further, when each craft holds its local lodge meeting, that individual members bring their ideas for bettering things, jobs, output, conditions, etc., to the lodge room for consideration, discussion, and subsequent reference by the lodge to the proper craft committee-man for handling at the next co-operative meeting, provided, of course, the ideas receive the endorsement of the lodge.  

The shop-level meetings were the heart of the program. In addition, however, corporate-level meetings were scheduled once per quarter to monitor the progress of the Plan in the field. The first of these upper-tier meetings was held in Baltimore on April 1, under the chairmanship of chief of motive power George H. Emerson, the company's top mechanical officer. Other attendees were William J. McGee, president of Federation No. 30; the six general chairmen of the federation's constituent unions; three officers of the Motive Power Department; the supervisor of shops; and seven inspectors from the Shop Practices Bureau. The main items on the agenda were the recapitulation of the minutes of the first round of local meetings (a total of 421 suggestions had been introduced) and the specification of a standard suggestion numbering scheme and minutes format for all local committees. The consensus of the group was that "the Cooperative Plan had had a very auspicious beginning and that a general good feeling prevailed."

As the year passed, suggestions continued to flow in all over the system. On October 30 Willard offered the first official company assessment of the Plan in an address to company employees and local dignitaries at the Chicago Division shop town of Garrett, Indiana. After briefly describing the genesis of the program and lauding the conscientiousness and cooperativeness of his men and their union representatives, he presented some statistics on the program's progress. In the eight months since systemwide adoption, 657 meetings had been held. Average attendance at these meetings was twelve; average meeting length was one and a half hours. At these meetings 5,272 suggestions had been submitted for discussion; of those suggestions, 3,810—72.2 percent—were adopted. Of the remainder, 972 were still under consideration, 85 were postponed because the associated expenditures were not yet justified, and 405 were dropped after full discussion as impractical. Willard pronounced himself
pleased with those results alone, but then went on to say that particular suggestions and consequent service improvements probably were the least important accomplishments of the program. The real benefits, he felt, would be long term. He elaborated:

It may almost be said that the Baltimore & Ohio labor plan or policy which has been developed in conferences between the management and the men is little if anything more than an earnest determination on the part of each to deal honestly, fairly, and sympathetically with the other, at the same time making use of such agencies or methods as seem most likely to secure the results mutually desired. When I speak of sympathetic understanding or relationship, I do not use the word sympathetic in any maudlin sense, but rather as indicating a mutual desire to maintain a relationship based upon a friendly understanding.

Now, what is the effect of such an understanding and of such a relationship? It seems to me that there can be only one answer to that question. It gives to every employee an enlightened and enlarged view of his own worth and importance as a part of the great organization known as the Baltimore & Ohio Railroad. It emphasizes to each man the importance of the work which he himself is doing, and the responsibility which goes with his job or position, and which rests upon him personally to do good work, to do honest and dependable work, not just because it is really his duty as an honest man to give good work in return for good wages paid in good money, but because, realizing the responsibility which he shares with the management for the safe and proper operation of the railroad, he wants to do good work; he wants to do thorough and dependable work in order that he may fulfill the enlarged conception which he has of the responsibility which properly rests upon him as a part of the railroad organization. In fact, I think it has come about that the workmen themselves in greater degree than ever before are doing and doing happily the best that is in them, not just because they feel they are obliged to do it, but rather because they want to do it, understanding and knowing that it is the right and creditable thing to do.\(^{48}\)

Morale and productivity continued to rise as the Plan matured. As local shop management grew to understand how the program should work, the Shop Practices Bureau was reduced in size and visibility. Bureau representatives in the local meetings were replaced by an increased number of foremen; at the quarterly system meetings, their places were taken by officials of the car department, and by Beyer, who became a regular attendee as he was needed less by local committees.\(^{49}\)

The benefits of the Plan to the company were obvious: increased productivity, lower unit costs, higher profitability. But what was it doing for the unions and their members? The February 24 agreement had stipulated three
governing principles whereby the unions would benefit from their cooperation. First, the unions of AFL Federation No. 30 were recognized by the company as "necessary, constructive, and helpful agencies in the running of shops, repair yards, and roundhouses." Second, the company agreed in principle to the "equitable sharing between shopmen and railroad of the gains of cooperation." Third, the company agreed to seek actively to increase the employment of union members by the curtailment of outside subcontracting, and to stabilize month-to-month employment through better maintenance planning.50

As the preceding discussion of the 1922 strike may suggest, the first principle was significant in the context of the times. The AFL shopcrafts unions had been beaten badly. The B&O's dominant rival, the Pennsylvania Railroad, did not recognize the AFL unions at all, having established its own "company unions." Under the circumstances for Federation No. 30 merely to be recognized was something of an accomplishment; to be recognized as a positive force was a victory.

The second principle was significant in any time, addressing as it did the "Who gets the money?" issue. Although the agreement made only the very general statement that the workers would receive their benefits "through improvements in working conditions and wage income," without any reference to specifics of calculation. Willard could be trusted to ensure that more than token rewards were provided. The wage component, though, would not be conspicuously large. With the exception of the B&O's later (1926) restoration of the McAdoo-era time-and-a-half rule for Sunday and holiday work, well in advance of similar concessions by the rest of the industry, hourly wage rates generally were pegged closely to those of other major eastern carriers. Willard made it clear that although the results of the Plan were gratifying, they were not so phenomenal as to justify paying wages much higher than those paid by the B&O's better-situated competitors. Working conditions, however, were improved markedly; Willard reported that by the end of 1926, staff analysis of cumulative recommendations indicated that "33% of all the suggestions tend to fix things that the men want, no special advantage to the company, but are desirable from the standpoint of the men, and we have been glad to do those things because they helped bring about a state of mind which made the men satisfied."51

To the rank and file, the third principle may have been the most important. With the possible exception of safety problems, which often were at least partially created by the worker himself, the lack of assurance of a steady job for any but the most senior workers was the greatest source of dissatisfaction among railroad blue-collar employees. Through both the expansion and improvement of shops, and the creation of a system of long-range plans, bud-
gets, and reserves in the mechanical department, the B&O pledged to work
toward the goal of steady employment of a full complement of shop workers.
During 1924 the company diverted a substantial amount of heavy upgrading
work on locomotives and cars from outside firms to its own shops; the wage
component of the shifted work amounted to $347,303. The 1925 equipment
maintenance budget provided for an even more substantial diversion to com-
pany shops; the 1925 wage component increase was to be $2,722,316, ap-
approximately an 8.5 percent wage pool increase over the prior year.52

The cost of this to the unions was relatively small. The Plan did require
some time and effort of union officers at local, system, and national levels, but
this was substantially offset by a reduction in union time spent on grievance
cases. It was Bert Jewell’s estimate that through 1925, the number of local
grievance cases initiated by B&O shopmen dropped by more than 50 percent,
while grievance appeal cases (those not settled on-site) dropped by 75 per-
cent.53 The only regular variable costs assignable to the program were Beyer’s
salary and expenses. These were not exorbitant: his 1924–1925 contract was
for $9,000 per year, to be paid as monthly salary and expenses of $600 and
$150, respectively. These sums were prorated among the six unions on the
basis of membership, so the bulk of the expenses was carried by the Carmen
and the machinists, by far the largest of the six (the specific monthly break-
down was Carmen, $341.86; machinists, $213.71; boilermakers, $68.37;
electricians, $51.28; blacksmiths, $42.73; and sheetmetal workers, $32.05).54
For the unions as well as for the company, the Plan’s ratio of benefits to costs
appears to have been fairly high.

That is not to say that those benefits were always clearly perceptible at the
local level. In late spring and early summer of 1925, three incidents occurred
that indicate that the expectations of B&O workers and the positions of B&O
management regarding proper rewards accruing to the workers as the Plan de-
developed may not have been precisely consistent.

The first of these incidents centered on the publication in the May 29
issue of The Baltimore Federationist (the local AFL paper) of an article by
J. J. Tahaney, an assistant to the editor of the paper and a former carman at
Mount Clare Shops. Run under the headline “COOPERATION PROVES B&O
BACKSLIDER,” it charged B&O management with failure to share the gains
of the Cooperative Plan equitably. On June 3 George Emerson wrote to Bert
Jewell of the company’s surprise and displeasure over such a “mis-statement
of facts,” and requested that he express his opinion of the article and its con-
tents. Jewell did so, in forceful fashion. He immediately wrote to the Balti-
more Federation of Labor president, Henry F. Broening, stating that he “would
very, very much appreciate it if the Baltimore Federationist would refrain as a
part of the bona fide Labor movement, from opposing those activities being
carried on by other parts of the bona fide Labor movement.’” The same day he fired off letters to the presidents of the six shopcrafts unions, calling the article “viciously misleading” and suggesting that they write to Broening as well; William Johnston, having heard of the matter directly, had done so already. With the reprimanding of Tahaney thus arranged, Jewell replied to Emerson that he regretted the unauthorized diatribe and that an investigation and corrective action were under way; B&O system federation president William McGee at the same time wrote to Willard apologizing for the “gratuitous piece of impertinence” and disavowing any connection between the article and System Federation No. 30. Willard and Emerson apparently accepted the union response, but Jewell continued to worry that “a rattle-brain or brainless meddler” had weakened a relationship that constituted “for the first time in history a very sound foundation upon which to conduct [contract] negotiations. . . .”

The second incident arose in Philadelphia almost simultaneously with the Tahaney flap. The local shopcrafts federation there became upset with what they deemed to be the insufficiently militant posture of the system federation in contract negotiations with the company since the inception of the Cooperative Plan. On June 7 they adopted a resolution, later distributed as a memorandum to the system federation and the forty-four other local federations, charging that the former had “failed in their purpose, and seem to have substituted ‘Cordial Relations’ for ‘Dollars and Cents. . . .’” AFL leadership, having received a copy of the memo, was not amused by this breach of fraternal solidarity any more than it had been by the Tahaney article. On July 29 Bert Jewell wrote to H. L. Alberty, the secretary of System Federation No. 30, telling him to get the troops in line: “This lack of respect for properly created authority, disregard of facts and stating of untruths, as well as indiscriminate circulating of circulars by Local Federations should be stopped by your Executive Board.” No more was heard from Philadelphia on the subject.

However, before this matter was settled, an even more serious controversy arose in Cumberland. In mid-July the B&O’s motive power department decided to close the Cumberland heavy locomotive repair shop (the “back shop”) for four days per month as a consequence of a traffic slump. The reduction in work hours came on very short notice, and only a few months after the workers had agreed to reduce their work week by a halfday to prevent junior men from being furloughed. Adding to the back shop employees’ resentment was the fact that the other repair facilities at Cumberland were not cut back; comparatively junior men in the roundhouse, for example, continued to work a full six-day week, every week. A final irritant was the incompletely resolved issue of seniority rights for the 1922 strikebreakers. So in anger and frustration, the membership of the machinists’ local decided to boycott the
cooperative meetings. The machinists’ committeeman was absent from the meeting of July 22, and the electricians’ committeeman also stayed out as a gesture of sympathy. In explaining his absence to superintendent of shops John Howe in a letter dated July 23, IAM Lodge 212 president C. G. Watson complained that the company’s action “takes away from us the only material consideration that we have received as a result of our efforts in the Cooperative movement.” Back shop employees had done their best, he said, to make the B&O a more efficient and reliable carrier, “but when we ask for our share of the benefits that follow our joint efforts, the answer is—another vacation without pay.”

Watson’s complaint was legitimate, but higher union officials, Jewell and Johnston specifically, were not about to see the Cooperative Plan jeopardized over a conflict that was basically a combination of insensitive management timing and local seniority grievances. IAM district general chairman C. N. Fullerton (later to become a B&O official in a subsequent new cooperative program) was dispatched immediately to Cumberland to attempt to calm the situation. He arrived in Cumberland at 2:30 a.m. on July 25, spent the later part of the morning at the shops talking with the machinists’ committee and with Howe, and spent the afternoon and evening back at his hotel in conference with Watson, local federation president George Beisser, and union committee members. Fullerton’s basic message was that both the seniority problems and the short-notice furlough problem were already being handled through regular negotiations at the system level, and that the local men should return to the cooperative meetings while their system and national officers took care of collective bargaining matters. Evidently he succeeded in calming the machinists, but he did not completely defuse the situation; by late August the boilermakers’ union local had begun boycotting the cooperative meetings in protest over the seniority issue. Jewell and the boilermakers’ national leadership were able to cajole the local into rejoining the meetings for thirty days, while system negotiations continued. To the relief of all parties a procedure for resolving the seniority issue was worked out in principle early in September, and the cooperative committee resumed its work without any apparent further unpleasantness.

Such glitches must have been heartening to labor’s left wing. From the beginning radical unionists had attacked the Plan as “class collaboration,” traitorous and despicable. The official publications of both the Industrial Workers of the World and the Trade Union Education League had blasted the Plan as a sellout to the capitalists, doomed to end in manipulation and failure. Incidents like the one at Cumberland lent credence to the leftist argument, undermining the positions of union moderates like Jewell and Johnston. AFL leaders moved swiftly and decisively in the Cumberland case so as to
shore up their positions within their own movements, not just as a gesture of goodwill toward Willard and his company.

Fortunately, such difficulties were rare, and leftist pressure probably backfired, strengthening the program instead of weakening it. Not only did it add to Jewell and Johnston's resolve to iron out problems on the union side, but also it reminded Daniel Willard and his staff that if the Plan failed and the moderates were subsequently overthrown, then the B&O could be dealing with a truly nasty element in the union movement. It may be inferred that both sides thus took somewhat greater pains than they otherwise might have to ensure that the program and its meetings ran smoothly.

What were local cooperative committee meetings like? There are apparently no surviving firsthand narrative impressions of the early meetings, but the minutes of some of those meetings have been preserved. The local minutes were the official record of actions taken under the Cooperative Plan, and as such they were considered quite important; besides being kept in the shop offices, copies were sent to B&O central offices in Baltimore, to B&O regional offices (in Baltimore or Cincinnati, for eastern or western regions, respectively), to System Federation No. 30 (in Cincinnati), and to the local shopcrafts federation. The standard format of the minutes required the inclusion of place, date, and commencement and adjournment times of the meeting; management and employee attendees, with job titles; a summary list of all suggestions still before the committee at that meeting, indicating end-of-meeting status; and an item-by-item condensation of discussion of each suggestion. It may be possible, then, to capture something of the nature of these meetings from their minutes. To this end, the records of two reasonably typical local committees from the first quarter of 1925 will be examined here.

Ivorydale Shops, on the north side of Cincinnati, was a large (eight hundred to one thousand employees) facility with an active and well organized cooperative committee. The committee received 402 suggestions during its ten months of operation in 1924. By the first meeting of 1925, on Wednesday, January 7, only 62 of those items remained on the summary list, 52 unresolved and 10 to be reported as resolved at that meeting. The meeting was called to order at 1:00 p.m. in the office of the shop superintendent, F. L. Hall. Hall, five foremen (from the boiler, blacksmith, electrical, air brake, and car departments), and the storekeeper represented management; the local chairmen of the six participating unions represented the workers. Hall's secretary-stenographer took minutes.

The first item of discussion was the procurement of an emery polishing wheel for the new roundhouse, first recommended during the previous April, with amendments in August. Mr. T. H. Barker, the storekeeper, reported that
he had requested and received the necessary specifications on the motor needed to rotate the wheel, and that the motor had been ordered. Second was the matter of repairs to the cracked and uneven floor of the boiler shop, dating from April and June. It was reported that the maintenance of way department had partially completed the project and was working on the remainder. Next came the final holdover suggestion from April, the construction of an employee locker room and washroom building. The structure itself was reported to be completed and ready to be opened as soon as the lockers were installed. In like manner the committee moved through the remaining forty-nine pending suggestions, concluding with the last one submitted in December: the acquisition of an air pump for testing generators in the electrical shop, referred to Paul Haaf (the air brake foreman) for action by his department.  

Then the committee moved to new business. Item one for the new year was the offering of personal thanks by Hall to all of the labor committeemen, and the men they represented, for the past year’s cooperative efforts; his thanks were accepted. Item two was a request by those committeemen for the reinstatement of the previously mentioned time-and-a-half wage rate for Sundays and holidays. This topic was technically off limits to Cooperative Plan discussion, but Hall agreed to push the issue up the chain of command for further consideration. Item three was a suggestion by William Adams, the machinists’ representative, that parts and materials from the stripping of locomotives be organized and placed in specified locations, instead of being “allowed to lay around in the shop.” The suggestion was adopted, with appropriate instructions to be passed along to the proper foremen and workers. So it went through the thirteenth and last new suggestion, the repair of a drain at the crew dispatcher’s office. Called to the attention of the committee by J. L. Denham, the boilermakers’ representative, the matter was referred to the maintenance of way department for their action. The meeting adjourned at 2:45 p.m.  

The next four meetings were similar, but not exactly the same. They all began at 1:00 p.m. on Wednesday in the shop superintendent’s office, but they grew progressively longer; the March 4 meeting lasted until 3:30. There were some shifts in the makeup of the group in attendance. Hall, Barker, and H. Hill, the car foreman, were the only management people to attend all five meetings. Five of the six union people attended all five meetings; R. Bauman replaced H. Grothaus in the carmen’s seat after the January 21 meeting. One-time management attendees were a general foreman, an enginehouse foreman, the general boiler foreman, and a shop inspector from Baltimore, while the only single appearance from the union side was by a laborer named G. Townsend; generally, it appears that such attendees went simply to offer or to respond to particular suggestions. Management-to-labor composition of the
group varied little: the ratio was seven to six for the first three meetings of the year, then six to six for the fourth, and seven to seven for the fifth.\textsuperscript{63}

Likewise, there were at most moderate variations in the agenda. The January 21 meeting devoted considerable time to a discussion of federal defects (deviations from Interstate Commerce Commission maintenance standards) among locomotives serviced at Ivorydale, in response to a systemwide circular directive from Baltimore. The February 18 meeting included a complaint by Denham to Hall about the recent decision by the foreman at the old roundhouse not to allow mechanics to leave the building for materials under any circumstances. Denham considered the foreman’s insistence that all materials be obtained by helpers excessively restrictive and occasionally counterproductive, as in cases where materials selection required the mechanic’s judgment; Hall concurred, and word was sent for the foreman to modify his rule. Otherwise, the agendas were composed largely of items regarding facilities and equipment repair, capital improvements to buildings and equipment, and materials handling.\textsuperscript{64}

Of the fifty-two items on the January 7 pending list, twenty-one remained on March 4; of the thirty-one items resolved, twenty-eight had been implemented, and only three had been dropped as either impracticable or unnecessary on further investigation. Of the eight specific January 7 agenda items mentioned, seven had been resolved by the end of the March 4 meeting. Hall’s thanking of the union men was not, one would hope, a debatable suggestion, so it was cleared at the January 7 meeting. Repair of the boiler shop floor and construction of the locker and wash building were reported to be complete and were cleared from the pending list at the January 21 meeting. At the February 4 meeting, it was reported that the air pump had been installed in the electrical department, and that procedures had been worked out for the storage of parts and materials from the stripping of locomotives. The new roundhouse emery wheel finally was reported to be operational at the February 18 meeting, and on March 4, the matter of repairs to the drain in the crew dispatcher’s office was dropped. The issue of Sunday and holiday overtime pay was still under advisement at higher levels; it was not resolved until the suggestion was approved systemwide in the shopcrafts’ contract of 1926.\textsuperscript{65}

Ivorydale was typical of the larger B&O shops; reasonably typical of smaller (one hundred to two hundred employees) installations was Flora, Illinois, on the St. Louis main line. Flora Shops was not large enough to have a superintendent or even a master mechanic; the highest ranking official was general foreman T. A. Dodson. Meetings followed the same prescribed format as was followed at Ivorydale, but discussions tended to be less hurried and less formal, and minutes were less professionally kept. The minutes of the January 7, 1925, meeting indicate that nineteen suggestions from 1924 were
still before the committee, but there is no indication of total 1924 submissions. That meeting’s summary list contained forty-six items: the nineteen unresolved holdovers, twelve holdovers to be reported as resolved, and fifteen new suggestions. The meeting, as was standard, began at 1:00 P.M. in the general foreman’s office. Dodson, the storekeeper, and the enginehouse foreman represented management; the unions were represented by a machinist, a machinist’s helper, a boilermaker, a boilermaker’s helper, an electrician, and a blacksmith. The minutes taker did not identify himself.  

The discussion of holdover suggestions was not recorded; those suggestions were simply listed along with a summary of actions taken. The first item on the list was the purchase of an electric motor for the roundhouse turntable, submitted in August; that proposal had been sent up the chain of command for funding approval. Second was a request for repair of the fence around the property, submitted in September; that matter had been referred to the division engineering office for action. Next was an October suggestion that a partition be built between the boiler room and the machine shop; this too had been referred to division engineering. Of the sixteen remaining unresolved holdovers, the last was the December request for the purchase of a supply of twenty-four-inch Stilson wrenches, a matter being pursued by the stores department.  

The first new suggestion of 1925 was the proposal by enginehouse foreman H. L. Herrin to connect shop and roundhouse downspouts to the sewer system, reducing the problem of standing water around the buildings after heavy rains. This was referred to the division engineering office. The second new item was the suggestion by machinist J. F. Grabill that machinists’ helpers who had been assigned lockers should share them with more recently hired helpers who had none. This proposal was adopted, with instructions to the machine shop foreman to make the necessary arrangements. Item three was another suggestion by Grabill, that form 2311 material cards be cut down in size to reduce paper costs. The idea was referred to the division master mechanic’s office for consideration. The discussion continued, as Grabill made five more suggestions, followed by five from E. Williams, the electrician, and one made on behalf of absent carman L. J. Burrows. The final item came from machinist’s helper C. A. George, who was of the opinion that the machine shop first aid cabinet should be moved to a cleaner location. The committee concurred, and the order was given that the cabinet be moved to the tool room the next day. Its business completed, the meeting was adjourned at 3:00 P.M.  

Subsequent meetings that winter were similar with respect to meeting time, place, length, and format; the composition of the committee, however, varied greatly. First, Dodson was unexplainedly absent from the shop for three meetings, possibly because of a temporary transfer; he was replaced for
those meetings by the acting general foreman, G. W. Bultman. At none of the first five meetings of 1925 was exactly the same management group present. L. S. Steen, the storekeeper, attended twice, and four different foremen made either one or two appearances. On the labor side Grabill, George, and blacksmith S. H. Montgomery attended all five meetings. Williams attended four of the five meetings; no other electrician sat in for him at the one that he missed. The boilermakers’ seat was occupied by three different men. The carmen’s seat was vacant at the first meeting, then occupied by two different men for the next four. There was no sheet metal shop at Flora at that time, so the sixth (or seventh, eighth, or ninth) labor seats were occupied by various pipe fitters, helpers, laborers, and whoever else had an idea to present to the committee. The management-to-labor ratio of the group varied accordingly: three to six for the first meeting, then two to six, three to eight, two to nine, and two to nine again for the meeting on March 4.  

The nature of the agenda was fairly stable over the five meetings. The items before the committee focused predominantly upon procurement of materials, equipment and building repair, and purchase or location of tools and machinery. The discussion of federal locomotive defects at the meeting on January 21 was much briefer than that at Ivorydale: Bultman handled the matter as a short end-of-meeting blueprint-aided lecture. The only other notable deviation from the normal discussion of suggestions was a short speech by Dodson at the close of the March 4 meeting, his first session back in the committee chair after his absence. The minutes record the opening of his commentary as follows (the writing mechanics are those of the original typist):

Well Boys I am glad to see you all living up to the instructions we received in a letter short time ago in attending these meeting in a neat and tidy condition. I had the pleasure of attending a meeting a short time ago and three men came to the meeting with overalls that should have been washed at least four or five months ago and I am glad to say that the Chairman of that meeting called them down strong and this probably will not happen again. I want to thank you boys for the living up to these instructions as issued.

He then spoke at similar length about his concern over recent accidents and injuries in the shop, and of the need for all employees to solicit every bit of business possible for the B&O.  

Of the nineteen items on Flora’s January 7 pending list, all had been resolved by the start of the March 4 meeting: sixteen had been implemented, and three dropped. Even more impressively, none of the fifteen new suggestions introduced at the January 7 meeting were still on the pending list on March 4, twelve having been implemented and three having been dropped.
The eight proposals discussed individually above were resolved in the following fashion. The matter of moving the machine shop first aid cabinet was reported to be accomplished as ordered at the January 21 meeting. The locker-sharing proposal was reported to be worked out at that same session, although a laborer named C. L. Boyd suggested later in the meeting that new lockers be purchased to eliminate the need for sharing; that second-round proposal was referred to higher officials, who gave their consent before the meeting of March 4. Higher officials in the engineering department apparently raised serious questions about the building of a partition between the boiler room and the machine shop, as this idea was dropped by the committee on February 18. At its next meeting, the committee decided to drop its endorsement of a smaller material card, presumably because of discouraging word from higher places. Also on March 4, it was announced that unnamed higher officials had rejected explicitly the committee’s request for purchase of an electric motor for the turntable. On the positive side, that same day both the perimeter fence repair project and the downspout-sewer connection project were officially listed as having been completed, and the Stilson wrenches were reported to have been delivered to the tool room.

It was all such mundane stuff, but the Cooperative Plan to one degree or another was doing that which it was supposed to do. As a consequence, it was not long before the program began to spread, both to other departments of the Baltimore & Ohio and to other railroads.

The first application of the Plan beyond the B&O was restricted, half-hearted, and not very successful. In July 1924, at the behest of Beyer and Johnston, the management of the Chesapeake & Ohio (C&O) signed an agreement with shopcrafts System Federation No. 41 to establish a cooperative program in C&O equipment maintenance facilities. A pilot committee was formed at the company’s Seventeenth Street Shops in Richmond, Virginia, and meetings were begun. C&O management soon lost interest in the program, however, and it was never extended beyond Richmond. The Seventeenth Street committee, for lack of corporate support, became less and less active, and it eventually disappeared.

Later that year a much more successful effort was begun to set up a cooperative program elsewhere in the industry. On November 21 the Canadian National Railways (CNR) announced that the “B&O Plan,” as it was by then widely called, would be put into effect in its shops. Discussions between Beyer and Johnston and the railroad’s president, Sir Henry Worth Thornton, had been going on for several months; the November announcement capped those discussions and specified the pilot program location to be the shops at Moncton, New Brunswick. The first cooperative meeting at Moncton was
held in January 1925. The CNR was a much larger and less unified property than the B&O, so the Plan was extended across the system relatively slowly. By September 1925, roughly one-third of Canadian National shop employees were covered by the Plan, but the last of them were not brought into the program until near the end of the decade. The CNR's most important American subsidiary, the Grand Trunk Western, had its cooperative committees organized by Beyer in 1926. Regional and corporate level committees were established in 1926 and 1927.73

The next carrier to embrace the B&O Plan was the Chicago & North Western (C&NW). The first discussion of union-management cooperation on the C&NW actually took place in the fall of 1922, between Bert Jewell and personnel vice president William Walliser, but it was not until March 6, 1925, that a program agreement was signed. Later that month Beyer was at the C&NW shops in Clinton, Iowa, to organize a pilot program. The Clinton cooperative committee held its first meeting in April; a year later, the program had been extended to all (approximately thirty) of the company's locomotive and car repair facilities.74

The last railroad to adopt the Plan was the Chicago, Milwaukee, St. Paul & Pacific. In February 1924 a locally sanctioned "mutual welfare committee" began meeting at the Milwaukee Road's shops in Deer Lodge, Montana, following the pattern that had been established at Glenwood on the B&O. It was not formally endorsed by top management, however, and for a time it was not replicated elsewhere. Then in 1925 the company was forced into receivership. Their financial straits having made them receptive to help from anywhere, Milwaukee Road executives sat down with shopcrafts union officers in August 1926 to discuss setting up a cooperative program. A formal agreement was signed on November 29, and committees began functioning early in 1927.75

Then the B&O Plan spread no further, at least among the railroads.76 Whether for reasons of ideology, or threat to management power and perquisites, or perceived lack of necessity, no other railroad in that era was to adopt it.

During this time, however, the Cooperative Plan had been expanded within the B&O itself. The success of the Plan had become apparent to operating officials outside the mechanical department well before the end of 1924, and many of them had an interest in reaping some of the benefits of cooperation in their own departments. Labor participation in the open Monday morning divisional staff meetings had been waning; the more structured, union-sanctioned Plan appeared to be just the thing to rekindle employee enthusiasm. So the approval of the appropriate unions was sought, and a cooperative plan in the conducting transportation (CT) and maintenance of way (MW) departments began to take shape. On January 8, 1925, B&O eastern
lines general manager E. W. Scheer sent a letter to his subordinates directing them to arrange monthly divisional cooperative meetings for train service, roadway maintenance, and associated support personnel “effective at once.” B&O western lines management soon followed suit.77

The CT and MW version of the Plan was considerably less tightly organized than the original, for at least two reasons. First, it required the participation not of six unions but of nine, only five of which were tied to the AFL: the Train Dispatchers, the Telegraphers, the Signalmen, the Clerks, and the Maintenance of Way Employees unions were members of the AFL, but the train and engine crew brotherhoods (Engineers, Firemen, Conductors, and Trainmen) were independent. None of them had the passionate interest in cooperation of William Johnston’s IAM. Second, and more importantly, the planning and supervision of the new program on the management side were incomplete, diffuse, and generally ad hoc. Otto Beyer—not Daniel Willard or Charley Galloway or E. W. Scheer—had worked out the details of the original plan, and Beyer was spending most of his time setting up cooperative committees in Canada. Thus there really was no strong, consistent force for standardization at the local level.

Still, it was a well intentioned effort by B&O management, and the program did function, however imperfectly and inconsistently. Each division was free to set up its own committee substantially as it saw fit, as long as it was within the spirit of the original plan. On the Charleston Division, initial cooperative committee bylaws called for the transportation and maintenance of way departments to meet separately. The Charleston CT committee was composed of the superintendent and his immediate subordinates, representatives of the company police and accounting departments, and representatives of the seven transportation service classifications: agents and station employees, brakemen, conductors, engineers, firemen, yardmasters and yard clerks, and dispatchers and operators. Each committee member or his alternate was entitled to bring one other employee, regardless of rank or department, to meetings as a guest. Potential attendance thus might be well over twenty. The chairmanship was to be rotated every other meeting, with the outgoing chairman replaced by the vice chairman elected from among the members two meetings earlier. Meetings were to be held at 8:00 p.m. on the first Monday and the first Tuesday, alternately, of successive months; meeting locations likewise would alternate between the crew bases of Weston and Gassaway, West Virginia. Business at meetings was to proceed in regular order: roll call, approval of minutes, unfinished business of the whole committee, reports and unfinished business of suggestion subcommittees, introduction and referral of new suggestions to suggestion subcommittees, review of pertinent industry data and papers, other matters of instruction or entertainment, and “open dis-
cussion of subjects pertinent to the transportation industry and good fellow-
ship of employees.\textsuperscript{78} They hoped to adjourn by 10:00 p.m.\textsuperscript{78}

The more common pattern was for CT and MW departments to meet in a
single committee. With maintenance of way employees and managers added,
divisional cooperative committee meeting attendance often exceeded forty.
Such size could be unwieldy; when the Charleston Division adopted the single
committee approach, its use of subcommittees for preliminary evaluation of
suggestions surely became even more helpful than it had been initially.

Despite any unwieldiness, the committees did produce useful sugges-
tions. Transportation department members contributed ideas in a wide variety
of areas pertaining to train operation, including condition of cars and motive
power, purchase and conservation of supplies, fuel economy, delay reduction,
smooth train handling, condition and placement of signals and lights, track
conditions, on-line communication, interline coordination of operations, and
adequacy of freight and passenger facilities. Among the most successful in-
stances of cooperative committee proposals from the CT side were the sugges-
tion of a Chicago Division engineer that cylinder cock levers in locomotive
cabs be moved to a less obstructive location, where they did not obstruct the
engineer's seat box, and the suggestion of a Toledo Division engineer that the
hazards of road engines backing up at night be reduced by mounting a small
headlight on the rear of the tender. Both proposals were tried, accepted, and
made standard over the entire system. Maintenance of way employees partici-
pated less actively, possibly as a result of the generally lower educational lev-
els and organizational status that prevailed among track workers. They did
make contributions, however, mostly in the areas of tool needs and materials
economy.\textsuperscript{79} So, although the reasonable assessment is that the Cooperative
Plan as applied in the transportation and maintenance of way departments was
less resoundingly successful than it was in the mechanical department, it still
could be termed a success.

The success of the Cooperative Plan was not kept secret by the B&O or
by the railroads that followed its lead. Although the Plan was not really at the
forefront of public discussion during the period following its introduction, it
did attract a decent amount of attention across the country. That attention was
mostly quite favorable. There were some muted mumblings about Bolshevism
from the Right and some rantings about class betrayal from the Left, but main-
stream commentary on the Plan viewed it as a very promising development.

The main reason for this assessment surely lies in the virtue of the Plan
itself: it was an open-minded, reasonable, and carefully executed effort to
reconcile two legitimate but often opposing sets of interests. Virtue was
helped along, however, by the publicity efforts of the principal architects of
the Plan, especially Otto Beyer. Whenever anyone in the press showed interest in the matter of union-management cooperation, Beyer apparently was eager to tell the story. In some cases, editors were willing to let Beyer tell the story directly: during the program’s first four years, articles by Beyer appeared in *Railway Age, The Survey, The American Federationist, and The New Republic.* Willard and Johnston did not maintain quite so high a profile, but they did their parts. Each wrote a sizable article for *Railway Age,* and Willard made at least two major speeches on the subject to outside groups (to an assembly of labor magazine editors—“the first railroad president in captivity” to do so—and to the National Civic Federation). \(^8^1\)

Certainly not all of the Plan’s favorable publicity was self-generated. A variety of periodicals published positive articles on the subject, authored by in-house staff or independent writers. Francis Westbrook in *Outlook,* George Soule in *The Independent,* and Whiting Williams in *Collier’s* all wrote of the Plan in laudatory terms. *The Nation* reported on the Plan supportively. Publications of moderate to liberal inclination generally viewed the mutual efforts of the AFL and the B&O with clear approval, and they gave the Plan a fair amount of play. \(^8^2\)

The matter was of particular interest to professional engineering and management groups; as might be expected, they played an active role in noting, studying, and publicizing the Plan. At the center of these groups was the Taylor Society, named for the master of the speedup, Frederick Taylor, but by the mid-1920s the home of a more sensitive breed of scientific management proponent. Taylor Society members saw in the Plan and its offspring a means to reconcile scientific management’s traditional focus on production efficiency with organized labor’s concern for the needs of workers. Like Willard, they regarded union-management cooperative programs as a means to satisfy both sets of concerns simultaneously. \(^8^3\) Accordingly, in February 1926 they devoted an entire meeting to a discussion of such programs. Beyer (himself a member of the society), Jewell, and Sir Henry Thornton of the Canadian National were the principal speakers. The conference, held jointly with the Metropolitan Section of the American Society of Mechanical Engineers, was very well attended and widely publicized. A transcript of the main addresses was published in the Taylor Society’s *Bulletin,* and excerpts were reprinted in *Railway Age.* \(^8^4\)

To reiterate a preceding summary point, then, the B&O Cooperative Plan was no secret. Indeed, by the time the Plan was four years old, an educated manager would have had to be living under a rock not to have heard of it.

If there was any time at which the Japanese might have taken note of the Plan, then it almost surely was this time. Even though they evidently did little with the idea for a generation, they certainly had an interest in such matters in
general, and the opportunity to be informed about the Plan in particular. During the teens and twenties the Japanese were keen students and thorough practitioners of scientific management, especially on the government-owned railway system. Officials of that system monitored the progress of scientific management approaches and techniques in American railroad shops very closely. Railway Age apparently was read by more than a few, and no doubt someone at the Ministry of Railways received the Bulletin of the Taylor Society. Another possible conduit, albeit probably less credible than professional publications, was the scientific management consultant Harrington Emerson. He and his family, having lived in Japan early in the century, had numerous contacts and investments in various Japanese firms, including some in the transportation industry. Later in the 1920s, he made two professional speaking tours of Japan. In 1928 he tried to hustle a consulting contract from the Ministry of Railways, bragging about his role as past consultant and continuing “counselor” to the B&O. All of this, of course, is circumstantial evidence; there is no known proof of the transmission of the Cooperative Plan or its ideas directly to Japan. Still, the possibility remains intriguing.85

However, there is clear evidence of the transmission of the Plan, in the wake of its publicity, to a few American firms outside the railroad industry. One subsequent program was established across a group of Philadelphia hosiery manufacturers in 1927, but it was not so fully developed as another scheme begun that same year: that of the Naumkeag Steam Cotton Company of Salem, Massachusetts: the Pequot Mills program. Early in 1927, with both the company and its unionized workers under increasing economic pressure from southern competition, the “B&O Plan” was chosen as the model for a cooperative program to improve Naumkeag’s operating efficiency. In return for stabilized employment, good working conditions, and wages deemed fair by local standards, members of the AFL United Textile Workers participated actively in production time studies and methods improvements, in plant layout changes, and in product sales efforts. The Naumkeag program worked quite well, until, like all other major American cooperative programs but the B&O’s, it was weakened and finally destroyed by the wage and employment cuts of the Great Depression.86

At this point, one might ask explicitly a question brushed over previously: if the Cooperative Plan was so successful and so well publicized, why did so few companies adopt it? The answer cannot lie exclusively in industry characteristics or in a firm’s position within its industry. Too many firms in too many industries held competitive positions similar to that of the B&O (or Canadian National, or Naumkeag) yet did not sit down with organized labor to work out such a program. Without stretching an argument, the most that can be said about economic determinants is that some amount of competitive pressure was
a necessary condition for cooperation, but certainly not a sufficient one. Some firms probably shunned cooperation because they were already making handsome returns on their investment, and attempting to work in concert with the unions simply was not worth the bother. But other, weaker firms shunned cooperation when it probably was worth the bother. Why?

The answer must have something to do with personal character—the character of the individuals of power or influence on both sides of the management-labor divide. This, it may be argued, was the second and decisive determinant: that the leaders of both the company’s management and the unions representing its workers be persuasive people of wisdom and broad vision, able to see beyond their own short-run self-interest, and of resolute commitment to do the right thing. Daniel Willard, William Johnston, and Bert Jewell were such people. But to find such people in control on opposite sides of a bargaining table was as rare then as it is today.

How much were firms that ignored the Cooperative Plan really missing? Just how successful was the Plan? As the B&O program settled into a steady routine, contemporary assessments of its results continued to be very positive. Cornell University economics professor Sumner Slichter, after having spent seven days late in the summer of 1926 observing cooperative committees and talking to workers and supervisors in Pittsburgh and Cumberland, judged the Plan to be very effective. Employee satisfaction was up, shop output was up, and quality of workmanship was much improved over pre-Plan levels. A steady stream of suggestions was reaching the cooperative committees, and the acceptance rate was very high. Aggregate measures of the volume of useful new ideas generated by the Plan were quite impressive. Willard reported early in 1927 that through the end of 1926, roughly 18,000 suggestions had been submitted in the shop program alone. Of those submissions, approximately 15,400 had been accepted and implemented. Roughly 500 were still under investigation, and 2,100 had been rejected, 500 by management as too expensive and 1,600 by the committees as impracticable. The overall acceptance rate was approximately 86 percent.

Accurate and comprehensive quantitative measures of the impact of those suggestions were not developed at the time, and they are virtually impossible to develop from surviving data now. Viewing the issue in narrow terms, it is interesting to note that in 1925, the percentage of B&O locomotives required after federal inspection to be withdrawn from service for repairs was 4.0 percent, whereas the corresponding percentage for the B&O’s most important competitor, the vigorously anticooperation Pennsylvania Railroad, was 8.4 percent. Moreover, the B&O’s advantage with respect to this criterion increased as the decade passed. Clearly, B&O shops under the Plan gained a
quality advantage over those of the PRR. As indicative of the Plan's success as that result is, though, it is only one measure of the achievements of half of the program in one department. It is not the desired comprehensive indicator.

Of course, the ultimate comprehensive indicator is "the bottom line." What was happening to the profitability of the Baltimore & Ohio Railroad Company during this period? The impact of the Cooperative Plan upon corporate net income cannot be isolated precisely, as the B&O was taking other steps at the time to improve its performance. Willard was continuing his program of physical upgrading of the property; the B&O's net investment in transportation property and equipment increased by 13 percent from the beginning of 1923 to the end of 1926. However, competing carriers were doing the same thing: the corresponding figure for the Pennsylvania was 17 percent.90 Indeed, it is defensible to declare that everything that the B&O was doing during the period to improve itself was matched or exceeded by its competition, except the Cooperative Plan. That alone was distinctive. If that is true, then a great portion of any relative improvement in the B&O's profitability may be attributed to the Plan. There was such improvement—marked improvement.

Beyer was fond of citing the B&O's absolute revenue and profit figures, but that approach was not very sophisticated: such numbers reveal little here. B&O corporate net income took a huge jump upward in 1923, from $2 million to $20 million,91 but 1923 was a year of general industrial recovery and economic expansion, and the B&O's overleveraged balance sheet greatly amplified fluctuations in net railway operating income. If return on equity—the ratio of net income to the common shareholders' investment in the firm—is used as the profit measure, the same distortions may remain. With the use of such a ratio, however, absolute profit figures are adjusted for size of the firm, and comparisons between firms in an industry become possible. As general economic forces usually affect firms in a given industry and in a particular region more or less equally, we thus have a means of looking past the impact of those forces. Figure 2-1, then, is informative. B&O shareholders would have been gratified to see it showing B&O return on equity well below that of the Pennsylvania before the Glenwood experiment, jumping to half again that of the PRR in 1923, and holding an advantage as the Cooperative Plan went into full operation, despite the economic slowdown of 1924 and 1925. Figure 2-1 is not the most accurately revealing one, though, as it still reflects the exagerrated influence of financial leverage.

The way to remove the impact of the B&O's excessive debt is to use a net income figure computed before the deduction of interest charges, and to avoid any ratio that uses the B&O's relatively small equity base. Net railway operating income measures the earning power of the railroad, not the company; as
Figure 2-1 Return on Common Equity
Figure 2-2 Net Railway Operating Income—Index Numbers
(Base = 1921–22 average)
such, it is a proper numerator for measuring the effect of a change in the rail-
road. A proper denominator is again net railway operating income, but from
some base period before the change in question. The result, with reference to
the B&O and PRR during the first four years of the Cooperative Plan, is fig-
ure 2-2, indexed net railway operating income. It shows clearly that the Balti-
more & Ohio improved the net efficiency of its railroad more than did the
Pennsylvania after the base period 1921–1922. If they saw such a graph,
B&O shareholders no doubt were quite pleased, as were Daniel Willard,
William Johnston, and Otto Beyer.