

COLLECTIVE BARGAINING FOR ENGINEERS

By WALDO E. FISHER

THE accompanying address was presented by Dr. Waldo E. Fisher on February 20, 1946, at a dinner-discussion meeting held in the Music Room of the Biltmore Hotel, Los Angeles, under the auspices of the Industrial Relations Section. Dr. Fisher's analysis of this problem supplements two articles published in the March, 1944, issue of *Engineering and Science Monthly*: "Organization of Engineers for Collective Bargaining" by Franklin Thomas, and "The Engineer in the Labor Picture" by Robert D. Gray.—Editor.

WHY ENGINEERS JOIN LABOR ORGANIZATIONS

COLLECTIVE bargaining for engineers is a recent innovation in the United States. We are not accustomed to thinking of engineers, who have an absorbing interest in scientific knowledge and principles, and who have a strong urge to bring about a more effective utilization of materials, machines, human beings, and natural and mechanical forces, as members of labor unions. Why are engineers and other professional employees joining or forming such organizations?

In answering this question, let us apply the case method and examine two specific situations. In August, 1944, the National Labor Relations Board held an election at two plants of a nationally known company manufacturing electrical equipment. The engineers were given the opportunity to decide whether they desired to be represented by the Federation of Architects, Engineers, Chemists, and Technicians (F.A.E.C.T.), C.I.O., for purposes of collective bargaining. Of the 131 eligible engineers employed in these two plants, 97 participated in the election. Roughly two out of three voted for the F.A.E.C.T.

Why did these engineers designate this C.I.O. affiliate as a bargaining agency? A talk with fifteen of them disclosed the important considerations which led them to take this action. Sometime earlier, the shop employees had signed up with the United Electrical, Radio, and Machine Workers of America, C.I.O. Later, the United Office and Professional Workers of America (U.O.P.W.A.), also a C.I.O. affiliate, appeared on the scene, conducted an organizing campaign, and sought to represent professional as well as office employees. Some of the engineers, afraid that professional employees would be drawn into the U.O.P.W.A., urged engineers to sign up with the F.A.E.C.T. on the grounds that this organization would protect their rights more effectively than the U.O.P.W.A. Many engineers were convinced that membership in F.A.E.C.T. was the best way to forestall membership in the U.O.P.W.A. It was the desire to keep out of a heterogeneous labor organization controlled by non-professional employees that led many of the engineers to vote for the F.A.E.C.T.

Other considerations were also present. Some of the engineers felt that their wages were out of line with those paid shop employees and they were anxious to correct the existing inequities. In several departments, the supervisors in charge, while professionally competent, were arbitrary in their handling of professional employees. The grievances of professional men were

frequently neglected while those of the shop employees under the leadership of the United Electrical, Radio, and Machine Workers of America were given prompt attention. Promotions were not always based on merit, and not infrequently engineers with average ability who "played politics" and made it a point to "string along with" their supervisors were pushed ahead of much better men who insisted upon maintaining high engineering standards. Finally, supervisors were sometimes by-passed by management and their recommendations with respect to design and other engineering matters disregarded.

Many of these professional employees now regret their decision. They find themselves out of sympathy with a number of the policies and methods being employed by C.I.O. unions. In their own organization, they are outnumbered by draftsmen and technical employees, who, for the most part, have no professional training and whose interests align them more nearly with clerical and shop workers than with professional employees. They now seek a bargaining unit which will be restricted to professional employees. They have discussed the matter with the Regional Director of the N.L.R.B. and have been informed that any request for a change in the bargaining unit must be supported by very convincing reasons. They are now trying to ascertain what the Board will consider convincing reasons so that they may obtain both a bargaining unit and a bargaining agency that will meet their present desires.

Let us turn to case No. 2. Early in 1944 the F.A.E.C.T., C.I.O., also conducted a campaign to organize the engineers and technical employees in one of the establishments of another large electrical company located in the east. The C.I.O. affiliate succeeded in persuading 20 per cent of the 320 design and development engineers, and 48 per cent of the 470 technical employees to sign cards indicating support of the union. Late in April a group of the engineers got together to discuss the situation; they found that some of them did not want any organization and others did not want to be included in a heterogeneous bargaining unit. A number of them went to the Regional Labor Relations Board to ascertain their rights under the Wagner Act. Early in May they decided to form a Committee for Professional Personnel. This Committee canvassed the professional personnel. It found that many of these men did not want to be included in the same bargaining unit with the technical employees.

The basic reasons for the position taken by these professional men may be summarized as follows: (1) the interests of the two groups are not the same; (2) the work of the engineers is more creative than that of the technical employees; (3) they frequently carry on their work outside of working hours; (4) their work cannot be measured quantitatively; (5) their salaries are substantially higher; (6) they have professional status and take pride in their work; and (7) they are numerically in the minority and can be outvoted by the technical employees. These engineers believed that if they were included in the same bargaining unit they might be committed to action which would conflict with their professional standards and best interests.

A questionnaire was circulated, asking the engineers

whether they would like the Committee for Professional Personnel to represent them at the hearings before the board. About two-thirds of the 320 engineers designated the committee to represent their interests, and the committee decided to intervene at the hearings and to present the wishes of the engineers to the board. Even though the committee did not seek recognition as a labor organization, the board permitted it to intervene and to assist in determining the appropriate unit.

An investigation led the board to conclude that the engineers and technical employees could function either as separate bargaining units or as a single unit. It decided, therefore, to postpone its determination of the appropriate bargaining unit until the desires of the employees were expressed under a Globe election. At the election almost two out of three professional employees (64 per cent) voted for a separate bargaining unit.

Sometime after the election, the engineers formed the Association of Professional Engineering Personnel. Later, this association was certified by the board as the result of a consent cross-check determination, and was recognized by the company as the bargaining agency for its professional employees.

What may we conclude from these and several dozen other experiments in collective bargaining on the part of engineers? One important conclusion that may be drawn is that the drive for organization is supplied not so much by engineers as it is by outside labor organizations, or by the fear that such an organization might seek to include professional employees in a bargaining unit for which it might be the exclusive bargaining agent. There is a growing pressure to bring professional employees into heterogeneous unions comprised of professional and technical employees or even clerical employees. Already mentioned are the International Federation of Architects, Engineers, Chemists and Technicians, C.I.O., and the United Office and Professional Workers of America, C.I.O. Reference should also be made to the International Federation of Technical Engineers', Architects' and Draftsmen's Unions, A.F. of L., the United Clerical, Technical and Supervisory Employees Union, affiliated with the United Mine Workers of America, and the American Federation of Office Employees International Council, A.F. of L. Finally, some of the international industrial unions, such as those in the automobile, steel, oil, and electrical industries, are expected to attempt to extend their jurisdiction to include clerical and professional employees.

The movement to organize professional employees is not an American innovation. Physicists, chemists, and engineers, have resorted to collective bargaining in both England and Sweden. In this country the pressure to bring professional and technical workers into labor organizations has been greatly augmented by the existing split in the American labor movement. Both the A.F. of L. and the C.I.O. are anxious through their affiliates to enhance their leadership by expanding their jurisdiction and increasing their membership. Faced with the threat of unionization by an outside agency, engineers frequently seek a bargaining unit and a bargaining agency which they can control and which will serve their best interests as they see them.

Management, however, must not conclude that this is the only important reason that has led engineers to organize. The writer's own study would suggest that a growing minority of engineers is definitely interested in collective bargaining through the medium of strong labor organizations. It is surprising how often from 30 to 36 per cent of the engineers vote for an A.F. of L. or C.I.O. affiliate in an N.L.R.B. election. In Canada, a committee representing fourteen engineering and scientific or-

ganizations sent an 8-point questionnaire to the members of these organizations. The committee reported that 92 per cent of those replying were in favor of collective bargaining under a new order in council which would permit engineers a separate bargaining unit and an agency of their own choosing. More significant, however, was the desire of 35 per cent to be included in heterogeneous bargaining units under the then existing order in council if a separate bargaining unit and independent bargaining agencies could not be obtained. The comments of the Burbank Chapter of the Engineers' and Architects' Association, independent, in their brief to the N.L.R.B., are also significant:¹

The pertinent findings of a recent questionnaire, filled in by 1,145 engineers employed by a very well-known and well-managed manufacturing concern in the east, should be of special interest to employers. One out of five engineers (22 per cent) was planning to leave the company at first opportunity or intended to "shop around" for a new job. One out of four engineers (27.5 per cent) stated that his obligation ended with his normal day's work, or expressed an even less constructive attitude about his obligation to the company. One out of three (31.6 per cent) stated that he was either "generally or extremely dissatisfied with his salary." Three out of four engineers (76.7 per cent) believed that 30 per cent or more of their time was spent doing routine clerical, testing, or other work which a competent semi-technical assistant could handle. Approximately one out of two engineers (47 per cent) stated that he was seldom or never informed on company matters of interest and importance to engineers.

Considerable dissatisfaction was expressed by these engineers with the supervision they received. One out of five (23.1 per cent) stated that his responsibilities were poorly defined. Two out of five (40.7 per cent) believed that their supervisors had little or no concern for increasing the engineers' usefulness to the company or for helping them to get ahead. One out of four (24.8 per cent) considered his division head to be evasive or unreliable in answering questions concerning company policies, salaries, etc., and one out of three (32.0 per cent) stated that his supervisor never let him know where he stood.

Even working conditions were subject to a surprising amount of criticism. One out of five engineers (21.3 per cent) was dissatisfied with the lighting on the job; one out of five (22.1 per cent) with the sanitation; two out of five (43.6 per cent) with the space allotted to them; two out of five (44.2 per cent) with luncheon facilities; one out of two (49.3 per cent) because of the noise on the job; three out of four (75.9 per cent) because of the dirt on the job.

If these findings are at all representative, employers may expect a growing interest on the part of their professional employees in unions and collective bargaining.

STATUS OF THE ENGINEER UNDER THE WAGNER ACT

What is the status of the engineer under the Wagner Act? This query can probably be most effectively dealt with by consideration of a few carefully selected questions.

¹Quoted in Technologists Stake in the Wagner Act, pp. 142-143.

The graduate engineer with \$10,000 invested in university training cannot be happy on \$300 a month while he engineers the work for maintenance electricians who average \$450 a month with no investment in education. Working Sundays without pay, he supervises engineering projects for which labor is paid double. . . . If the engineer is not to become extinct, the profession will have to seek the protection and benefits of the National Labor Relations Act which is the declared policy of the United States.

1. *Are engineers entitled to the protection of the Wagner Act?*

The Board has ruled that engineers are employees under the Act. They have the right, therefore, to organize and bargain collectively, and management must respect those rights. In support of its ruling, the Board has said that engineers, in common with other employees, have a need for collective bargaining and that this right cannot be denied them because they act in the interest of management and exercise judgment and discretion in their work.² There is no reason to believe that the Board will alter its position in the near future.

2. *Must engineers join a union if they do not desire to do so?*

No, they need not join unless they are in a bargaining unit which is represented by a labor organization that has been given a union or closed shop.

To illustrate, let us suppose that the F.A.E.C.T., C.I.O., seeks to represent the professional and technical employees of a given company, that the F.A.E.C.T. requests the board to certify it as the bargaining agency for that group of employees, that the board includes engineers in the bargaining unit, and that the F.A.E.C.T. wins the election. Under these circumstances, engineers would not have to join the union. However, if the employer should later grant the F.A.E.C.T. a union or closed shop, then the engineers would either have to join the union or quit their jobs.

In passing, it may be advisable to distinguish between a bargaining unit and a labor organization. A bargaining unit comprises those classifications of employees that are to be included for purposes of collective bargaining. It may be defined by specifying the classes of jobs or groups of workers to be included in it, or the classes of jobs or groups of workers to be excluded from it. It may be a craft, plant, company, or a subdivision thereof. A labor organization, on the other hand, is "any organization of any kind, or any agency or employee representation committee or plan, in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours of employment, or conditions of work."³ The board defines the bargaining unit but does not determine the composition of the labor organization. How the organization shall be composed is of no concern to the board, provided the organization keeps itself free of employer domination.

It should be kept in mind that the bargaining unit and the membership of the labor organization need not be coextensive and frequently are not. A labor organization may bargain for all its members or only part of them. In other words, the employees decide upon the scope and composition of their labor organization and the board determines the character of the bargaining unit.

3. *Has the board established a formula for determining an appropriate bargaining unit?*

The board has not established a formula for determining the bargaining unit. It holds that it is its duty under the act to decide "each case on the basis of all the facts and circumstances." While the board has not formulated rigid rules, it has set up a number of criteria which it uses as a guide in the making of a decision. The board attaches "great weight" to two of these criteria: namely,

²See 1 N.L.R.B. 164, Chrysler Corporation, and 22 N.L.R.B. 1043, Bull Dog Electric Products Company.

³National Labor Relations Act, Section 2. (5).

"the relative homogeneity of the unit sought," presumably as reflected by a recognizable identity of interest, similar or closely related skills and functions, common working conditions, and similar factors, and the history of collective bargaining in the plant or industry. The board states that "unless counterbalanced by other elements, bargaining history is often a controlling factor."

The desires of the employees set up a third criterion which is given considerable weight in those situations in which considerations favoring a craft or professional unit and those favoring a more comprehensive unit are substantially the same. In these circumstances, the board applies the Globe doctrine. Under this doctrine, the employees concerned are permitted by secret election to specify whether they want a separate craft or professional unit, or desire to be included in a more comprehensive bargaining unit. It must not be assumed, however, that the wishes of employees are always determinative, because "the board makes its findings of the appropriate unit upon the entire record, including the desires of the employees as reflected by the election results."⁴

4. *If a union or closed shop has not been granted, and the engineers do not join the union, may they negotiate their terms and conditions of employment with their employer on an individual bargaining basis?*

They may not if they have been included in a bargaining unit for which a bargaining agency has been certified. If they have been assigned to such a bargaining unit, their terms and conditions will be negotiated for them by the union, even if as individuals they do not belong.

5. *Has the board shown a willingness to establish bargaining units for professional employees?*

The board has definitely shown a willingness to exclude both professional employees and related technical employees, such as draftsmen, checkers, detailers, tracers, and research assistants of various kinds, from bargaining units of production and maintenance employees, and from units of clerical and office workers. Professional and technical employees have been excluded from heterogeneous bargaining units in well over a dozen cases. There have been exceptions. In at least two of these exceptions, however, the professional or technical employees did not seek a separate bargaining unit.

The board has also shown a disposition to recognize "the appropriateness of units of professional employees." It has permitted engineers to express their desires as to inclusion in a more comprehensive unit in cases involving the Aluminium Company of America, the Lockheed Aircraft Corporation, the General Electric Company, the Radio Corporation of America, and the Shell Development Company. It has refused, however, to recognize "artificial or arbitrary lines of demarcation in determining the scope of the bargaining unit." Bargaining units based purely on the desires of the employees who petition are not appropriate in themselves. In the case of the Curtiss-Wright Corporation and the United Office and Professional Workers of America, C.I.O.,⁵ the board would not approve a bargaining unit which classified the company employees as individuals according to whether or not they possess a specified degree of education or experience. In other words, to quote the board, "a unit delineated upon the basis of the scholastic (or equivalent) history of individual employees rather than on the basis of their function would in our opinion be

⁴Ninth Annual Report of the National Labor Relations Board, 1944, fiscal year, p. 34.

⁵Case No. 9-R-1738, 1945.

unworkable and inappropriate for collective bargaining purposes." It would appear then that job content or function and not education attainments is the primary prerequisite for the determination of a bargaining unit. This is a matter which should be given careful study by both employers and professional employees.

6. *What about graduate engineers when they are employed on non-professional work? May they be included in a professional bargaining unit?*

In the matter of the Phillips Petroleum Company, the board refused to make a distinction between graduate engineers and other production employees doing the same work. In this case, however, the company desired the inclusion of these graduate engineers in the bargaining unit of production workers. This decision seems to conform with the principle that a bargaining unit must be delineated upon the basis of the functions performed and not the scholastic (or equivalent) history of individual employees.

7. *What is the status of engineers in supervisory positions? Do they come under the act?*

The N.L.R.B. has been as changeable as a weather vane in its treatment of foremen and supervisors. Recent decisions, however, have shown a high degree of consistency.⁶ The board now holds that supervisors come under the act. Its chairman states that they hold a dual role: they are representatives of the employer, and at the same time they are employees. They are, therefore, entitled to the rights granted in Section 7. The board has declared that foremen do constitute an appropriate bargaining unit, and that foremen in all industries subject to the act, regardless of their duties and responsibilities, are entitled to protection under the act.

In the matter of the Jones and Laughlin Steel Corporation, Vesta-Shamopin Coal Division, and the United Clerical, Technical and Supervisory Employees Union, U.M.W. of A., the board ruled that foremen may be represented by an agency which in turn is affiliated with an organization that includes nonsupervisory employees in its membership. As yet the board has not ruled on the question of representation by an agency which also includes rank and file employees in the same locals. The Supreme Court has not had occasion to review recent rulings of the board.

8. *This brings us to my last question—Given conditions as they are, including the Wagner Act, what policies and measures may management consider in dealing with its professional employees?*

With respect to that phase of industrial relations that has to do with the right to organize and the choice of a union, the employer had better do nothing. The board, in innumerable cases, has declared that "an employer is not permitted to participate in the establishment of a labor organization or its administration nor to contribute to its support." The Act makes action along these lines an unfair labor practice. Steps taken to advise or direct engineers in the exercise of their right to organize may not only prove embarrassing to them, but may act as a boomerang. The employer had better keep hands off. Professional employees would do well to turn to their own professional societies for guidance and assistance. Most of these societies, separately or jointly, are studying the problem. They may be counted upon to assist their members to the extent that they can, under existing legislation.

The employer may be of help in those situations in which a heterogeneous bargaining agency desires to include engineers or professional employees in a bargaining unit with technical employees or non-professional workers. In such a situation, the employer may quite properly insist that the engineers be excluded from the bargaining unit. Such action will give rise to a representation dispute. It will require the board to determine an appropriate bargaining unit, which will take time and give the engineers an opportunity to formulate a course of action. What course of action should be taken is a matter for the engineers to decide. It should be determined on the basis of their personal preference and convictions and the circumstances in which they find themselves.

It would also be helpful if the company would examine its classification of salaried jobs and, where necessary, revise them so that engineers and other professional employees are given job assignments which will enable them to group themselves in a bargaining unit based on the functions performed. Engineers who are assigned to jobs also performed by non-professional employees will find it difficult to win a separate bargaining unit.

There is an area of industrial relations in which the employer can do a great deal. Employers must know that they are faced with competitors who seek the goodwill and loyalty of their professional employees. Engineers, chemists, and physicists, like other employees, have hopes, desires, and wants, that they hope to satisfy. The employer cannot afford to disregard these basic wants. Let us examine some of the more important of them.

Near the top of the list is the pay envelope. Professional employees are deeply concerned with its size, but they also have a genuine interest in the relation of their pay to that of hourly-rated and office employees. The war and post-war wage adjustments have disturbed pre-war wage differentials. Time-and-a-half and double-time frequently have placed the professional employee at a disadvantage. An examination of professional salaries and take-home pay would seem to be much to the point at this time.

Attention to the compensation of professional employees, while important, is not enough. The farther a person moves from the subsistence level, the more important non-financial considerations become.

What are some of the non-financial considerations that have significance for professional people? Important is the desire for recognition and an open road for ability for a chance to get ahead under an organized promotional system based on merit, effort, and service. There is also the desire for efficient, understanding, and impartial supervision, which is always important where human beings are involved, but even more so when professional people are concerned. There is the craving for economic security. The Research Director of the Fortune Survey of Public Opinion states: "The American workman wants first of all security. In using the word, however, I do not mean government sponsored security. The right to work continuously at reasonably good wages would come closest to a definition of the security envisaged. . . . Steady employment is a paramount consideration to ten times as many workers as is high pay."⁷ While the emphasis may not be the same, one would expect professional employees to share with shop employees this concern for economic security.

Effective handling of grievances is also an important consideration. Wherever people work in groups, per-

⁶The decisions relating to the Packard Motor Corporation, the L. A. Young Spring and Wire Company, and the Jones and Laughlin Steel Corporation, Vesta-Shamopin Coal Division.

⁷*What American Labor Wants*—American Mercury, February 1944, p. 181.

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part in extra-curricular activities. He was a member of Tau Beta Pi and Sigma Xi, as well as an energetic worker on the Tech staff and the Big-T staff.

Dr. Ernest O. Lawrence, Nobel prize winner and head of the University of California's radiation laboratory, said that the new synchotron is as important a development in atom-smashing as was the cyclotron. With the aid of the new equipment scientists hope to study the fundamental forces which hold matter together. The announcement said that the new atom-smasher may produce energy equal to that of the cosmic rays, which are the most powerful forces yet encountered by science.

The synchotron will accelerate electrons to energies of 300,000,000 electron volts, thus converting them into cosmic rays. At that velocity, Lawrence said, atom smashing "will mount a new threshold."

THE MONTH IN FOCUS

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ing speed up to four times the velocity of sound now exist, one of them at C.I.T. However, the Caltech experiment is the first involving hypersonic speeds where air velocities up to seven times the speed of sound are produced.

The new president of C.I.T., Dr. Lee DuBridge, who supervised a staff of 3,900 to develop radar during the war, declared on his recent visit to the campus that the most important duty ahead for Caltech and similar institutions is that of supplying the nation with research engineers. Looking toward a future where man will at least have realized some of his cherished dreams of peace and security, Dr. DuBridge said, "The world is not going to disappear in a cloud of atomic dust, nor will an atomic bomb ignite the nitrogen in the atmosphere to give birth to another blazing sun." This danger, often expressed, he declared, has been scientifically disproved. But atomic energy is one million times greater than any form of energy yet known to man, and to determine how intelligently this will be used is the job of the research engineers and the research scientists of England and Russia and the United States, and of all other countries, working together with industries and governments.

Careful integration of all existing specialized knowledge with the avowed purpose of making it best serve the needs of civilization, plus unflagging concentration on basic research, would seem to be the scientific approach to disentangling the confusion and indecision among our contemporaries. For it is only by such a controlled method that we shall be able to avert the inherent dangers of too much specialized knowledge.

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sonal friction, irritations, and misunderstandings are bound to develop. The professional employee is no exception. Prompt, intelligent, and impartial handling of complaints and grievances is essential to the development of loyalty and morale. Other non-financial considerations include a clear statement of duties and responsibilities as well as the engineering standards that are to be attained, adequate information concerning company policies, programs, and other matters of concern to engineers, working conditions and treatment on the job which measure up with the job's importance and which will buttress the engineers' desire to be regarded as an essential part of management.

In closing, the writer would stress the fact that a majority of American engineers still believe that they can count on management to help them to achieve their basic wants. They still prefer to "go it alone." How long they will continue to feel that way about it depends on a number of factors. Perhaps the most important single factor is management itself. Will management have the foresight to create working relationships which will make for understanding, confidence in each other's honesty of purpose and fair dealing, a will to cooperate, and mutual accommodation when conflicts of interests arise? Such a relationship may not forestall unionization. Engineers may still find it necessary or advisable to establish or join labor organizations. In that event, however, the relationship described above would be no mean asset and should help to make collective bargaining a constructive force within the company.

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