

Productivity (1950)

Trade Unions **AND** **Productivity**

**THE REPORT AND
RECOMMENDATIONS**

of a team of

British Trade Union Officials
who investigated the role of unions
in increasing productivity in the
United States of America

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Trade Unions and Productivity

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on behalf of a team of British Trade Union Officials
who investigated the role of unions in increasing productivity
in the United States of America

Foreword

BY THE GENERAL SECRETARY OF THE TRADES UNION
CONGRESS: SIR VINCENT TEWSON CBE MC

THE British Trade Union Movement is vitally interested in problems of production and productivity. The standards of life and employment of its organised millions and their security in their jobs depend upon an increasing output from industry and a higher level of efficiency. One of the channels of trade union activity in this field is through the Anglo-American Council on Productivity. This body, amongst other things, is responsible for sending teams from the various industries in this country to the United States to examine for themselves the American way of doing things, and to understand the tremendous strides which productive industry has made in the United States.

Soon after these team visits got under way, the suggestion was made that good results might accrue from the sending of a trade union team to see particularly how the American trade unions are co-operating in dealing with productivity problems. Although the Anglo-American Council on Productivity were informed of this proposal they were not directly responsible for it, but it was approved by the T.U.C. General Council. Organisations affiliated to the T.U.C. were invited to appoint representatives to the team and a team of ten trade union officials was formed. This report records the team's experience in the six weeks they spent in the U.S.A.

The same principle has been adopted in the case of this team as was followed by the teams that have crossed the Atlantic under the auspices of the Anglo-American Productivity Council. That is to say, the team themselves are responsible for the contents of the report and for the views expressed.

The publication of this report has been undertaken by the T.U.C. as part of its service in furtherance of the effort to improve productivity. There is much in the views expressed which merits the attention of trade unionists, and may excite useful discussion on many productivity problems. The factual information will be of interest to industry in general and to our affiliated organisations in particular.

I hope the report will have a wide circulation and that it will stimulate consideration of how trade unions can function most effectively in present day conditions and of the methods that can be used to improve the productivity and the efficiency of industry, so vital to the standard of life of the individual and the nation.


Vincent Tewson

Background to the Report

BRITISH trade unionism, to repeat what almost amounts nowadays to a platitude, is standing on the threshold of a new social, economic and industrial order—a situation which has been created in part by the trade unions themselves. The way has been long and arduous, but “mass” and “hard core” unemployment and social insecurity, characteristics of social injustice, have, we hope, disappeared for good.

BRITISH PRODUCTIVITY

But what lies beyond this threshold of Labour Movement achievement? Trade unionists are looking for the answer with the same sense of responsibility as that exercised in their contribution to the reconstruction and stabilising of the national economy. By and large the answer has been found. It is to seek a rising standard of life for all, achieved through increasing industrial productivity or output per man hour. This then is the real problem confronting trade unions: to find ways and means of increasing productivity—a problem concerned mainly with industrial policy and action as distinct from the political pressure to achieve full employment and economic stability.

TRADE UNION ROLE

Productivity has shown a long-term tendency to rise but trade unions have not in the past claimed any direct responsibility. During and since the war, however, trade unions and the Trades Union Congress have sought, through joint consultative and advisory machinery from national to shop floor levels, to increase productivity.

Officers of trade unions are contributing to the work of the National Production Advisory Council on Industry and its Regional Boards and District Committees. The attention of appropriate authorities has been drawn to particular production problems; considerable efforts have been made by the T.U.C. to promote the establishment of Works Councils and Joint Production Committees in all places of work; affiliated unions have been called into conference to discuss ways and means of overcoming problems in individual

industries; and courses of instruction and training in management and related subjects have been initiated to improve the efficiency of union officials and shop stewards when dealing with production matters “on the shop floor.”

There has grown up among some unions nevertheless a desire to play a more specific role—a role not confined only to the participation of their workshop representatives in the settlement of day-to-day problems through formal and informal consultative machinery. Some unions have indeed been obliged to take action following requests from shop stewards and district officials for advice and assistance on new problems arising out of the use by management of time and motion studies and other “scientific management” techniques.

INVESTIGATING TEAMS

Another way in which the T.U.C. has contributed to increased productivity in British industry has been through the Anglo-American Council on Productivity which was established in 1948 following a suggestion by the Chancellor of the Exchequer that advantage be taken of Marshall Aid facilities to promote the exchange of industrial techniques and ideas between Britain and America. Under the auspices of the A.A.C.P. more than a score of teams comprised of equal numbers of supervisory, technical and operative grades in individual industries or sections of industry have already visited their corresponding industries in the U.S.A. A number of specialist teams interested in matters common to many industries such as mechanical handling and lifting equipment and simplified practices and standards have also studied American methods. Each team publishes a report of its findings and makes recommendations calculated to induce greater efficiency and output in the industry concerned.

TRADE UNION TEAM

It was appropriate that the T.U.C. should seek to supplement the work of the A.A.C.P. by sending a specialist team comprised of trade union officials

to study the part played by American trade unions in helping to achieve and maintain the high average rates of productivity in American industry. Nothing very specific was known about American union activities in this respect, but it was said that they were co-operating with management on questions of production efficiency in a way entirely unknown in Britain. Instances were quoted where companies in economic difficulties had been financed to keep them going and so serve union interests by continuing to provide employment for their members. In other cases, unions had completely reorganised factories, improved machinery layout, used time and motion study and "scientific management" techniques and in fact performed all the functions normally associated with industrial consultants and production engineers. British trade unions obviously had much to gain by studying such American trade union practices as these at first hand.

Subsequently the General Council of the T.U.C. approved a proposal that each affiliated union be invited to submit the nomination of a full-time official from which a team of ten could be selected who would visit the U.S.A. under the auspices of the Economic Co-operation Administration and the T.U.C. The composition of the team as finally selected was as follows:—

G. I. Brinham	... Amalgamated Society of Woodworkers	Full-Time Member of Executive Council
W. Cotter	... National Society of Operative Painters	Chairman of Executive Committee
G. H. Doughty	... Association of Engineering and Shipbuilding Draughtsmen	Divisional Organiser: Western Division
F. C. Fitzpatrick	Amalgamated Engineering Union	Full-time Executive Council Member
L. Green	... National Union of Operative Heating, Domestic and Ventilating Engineers and General Metal Workers	Assistant General Secretary
W. E. Hopkin	... National Union of General and Municipal Workers	District Secretary (South Western District) and National Chairman
W. E. Jones	... National Union of Mineworkers, Yorkshire	Area General Secretary
T. McKinney	... United Society of Boilermakers and Iron and Steel Shipbuilders	Executive Council Chairman
C. Schofield	... Amalgamated Association of Operative Cotton Spinners and Twiners	General Secretary
L. E. T. Wright	Amalgamated Weavers' Association	President (and Secretary of Ashton-under-Lyne Weavers' Association)

R. Harle, Assistant in the Organisation Department of the T.U.C., was appointed secretary to the team; F. M. Paradise, a member of the Labor Division staff of the Economic Co-operation Administration in London, was appointed by E.C.A. to travel with the team as project manager.

Mr. Paradise earns our gratitude for his thorough and untiring efforts to ensure that no last minute difficulties were encountered in the course of our travelling, and more important when carrying out our investigations in the many offices and factories we visited.

We record, too, our appreciation of the services of Mr. Harle, not only as secretary to the team throughout the tour but also in the assembly of the information and opinions embodied in this report.

Sterling costs for the project, covering transport to and from New York City were borne by the unions of appointed team members. Dollar costs which included railway fares in the U.S.A. and a daily allowance for hotel and personal expenses were met out of E.C.A. funds. The cost of publishing this report has been met by the T.U.C.

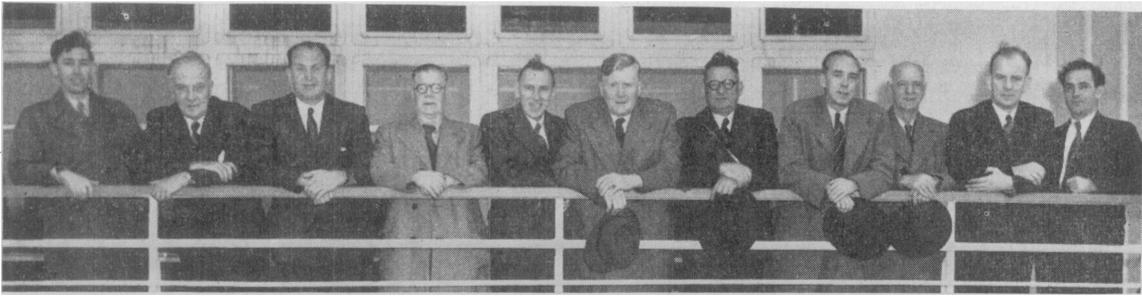
A briefing meeting was held in the T.U.C. headquarters in London on October 13, 1949, attended by Sir Vincent Tewson, General Secretary of the T.U.C., and Mr. James Killen, head of the E.C.A. Labor Division, London office. During the meeting W. E. Jones was elected team leader.

We sailed from Southampton on the *Queen Elizabeth* the following day, October 14, and arrived a day overdue in New York, after a rough passage, on October 20. We left New York on the *Mauretania* six weeks later on December 2, arriving in Southampton on December 8. Several meetings were held on board both ships at which we discussed various aspects of the project, including terms of reference, and the presentation of the report.

TERMS OF REFERENCE

Whilst the general idea of the project had been outlined at the briefing meeting the actual terms of reference were left to our discretion. We decided that they should be:

1. To study the part played by American trade unions in the achieving and maintaining of the high average rate of industrial productivity operating in the U.S.A.



THE TEAM ARRIVES IN NEW YORK

Above, left to right, are George I. Brinham, Amalgamated Society of Woodworkers; Frederick C. Fitzpatrick, Amalgamated Engineering Union; Leonard Green, National Union of Operative Heating, Domestic and Ventilating Engineers and General Metal Workers; William Cotter, National Society of Painters; Charles Schofield, Amalgamated Association of Operative Cotton Spinners and Twiners; William E. Jones, National Union of Mineworkers; William E. Hopkin, National Union of General and Municipal Workers; Lewis Wright, Amalgamated Weavers Association; Thomas McKinney, United Society of Boilermakers and Iron and Steel Shipbuilders; George H. Doughty, Association of Engineering and Shipbuilding Draughtsmen; and Robert Harle, team secretary.

2. To consider if or to what extent similar methods and activities, or modifications of them, could be applied or introduced in British industry by British trade unions.

ACKNOWLEDGMENTS

The six weeks we spent in the U.S.A. will remain long in our memories as a most stimulating experience. Indeed it is impossible to emphasise sufficiently the tremendous amount of work being done by the Americans in handling the visits of British teams of productivity investigators. Truly the success of these visits and industrial studies owes a great deal to the attitude of our American friends in government and industry and particularly in trade union circles. The enthusiasm and interest in our job of work shown by everyone with whom we came in contact amazed us, and the goodwill and hospitality was almost embarrassing. It would be impracticable to mention by name all the people to whom we owe our gratitude but we feel it a great privilege and honour to have met and associated with them.

SCOPE OF INVESTIGATIONS

Our report is based mainly on the unique opportunities afforded us of observing the operations and techniques of a number of American trade unions in their administrative functions and in the factory, together with the stimulating and thought-provoking discussions (official and otherwise) with trade union leaders and officers and with research and production engineering officers in particular. We also had many interesting and informative talks with

government departmental officials dealing with the work of the Department of Labor and its various bureaux and divisions. Our experiences were further enlarged by visits to a variety of industrial plants where we met American workers on the job and were able to appreciate the immensity and organisational problems of some large-scale industrial units and the highly mechanised nature of American production.

The course of our journeying took us, following a ten-day stay in New York City, to Cleveland where we attended the convention of the Congress of Industrial Organisations; then on to Detroit. From Detroit we went to Washington where we visited the headquarters of the American Federation of Labor and the Congress of Industrial Organizations. Thence to Pittsburgh where a pensions award to the steelworkers had just ended a major strike; and back again to New York. Individual members of the team and small groups visited factories and union and Local offices in Boston, Philadelphia, Thompsonville, Indianapolis, Chicago, Baltimore and Covington, Virginia.

The work involved in arranging all the details of these visits and discussions was obviously very considerable. We pay special tribute therefore to Mr. William A. Kimbel, Field Director of the Technical Assistance Arrangements Branch of the E.C.A. and his staff, particularly to Mr. G. Warren Morgan, Labour Adviser, in the New York Field Office.

Throughout the project we enjoyed the satisfaction of contributing in a small way to a better American understanding and appreciation of British problems and achievements.

FORM OF THE REPORT

In presenting our report we have kept strictly to the terms of reference and we have limited ourselves mainly to reporting on the work, organisation and methods of the research and engineering departments or staffs of unions definitely engaged or involved in production engineering or "scientific management." It would be unrealistic, however, to consider these technical activities of American unions in isolation. The functions, organisation and structure of any trade union must influence or reflect the work of the technical staff and in drawing up our conclusions we found these factors very important indeed. Two chapters therefore, are devoted to a description of the "average" American worker and some general aspects of American trade unionism which helps to put union research and engineering activities into their proper perspective. Unfortunately, it is possible to give only a very sketchy outline because institutions, organisations and ways of

living are even more diversified in the U.S.A. than in Britain. A bibliography of American trade unions is included in the appendix for those who wish to pursue the subject more thoroughly.

The conclusions and suggestions in the final chapters are the result of much thought and discussion in which account had to be taken of the fact that the social, economic and industrial conditions in the U.S.A. differ widely from those in Britain. American and British unions therefore are operating in greatly dissimilar environments. Nevertheless we are convinced that some unions in the U.S.A. are making a valuable contribution to increasing productivity.

Whether British trade unions can make a similar or equally valuable contribution and what form it should take under economic and industrial circumstances such as exist in Britain is a matter for serious consideration by our entire Movement. We hope that this report will stimulate further thinking and action.

What We Found in the U.S.A.

IN commenting on the part played by trade unions in helping to achieve and maintain the high rate of productivity in American industry and offering suggestions worthy of consideration by our colleagues in Britain, we are conscious of two factors.

LIMITS OF INVESTIGATION

The first is that in spite of the number of workplaces we visited, the miles we travelled and the trade unionists, government officials and many others with whom we conferred, there was a limit to what could be seen, done and absorbed in six weeks.

In fact we saw only a part of the U.S.A., and a very small percentage of the total number of factories and workplaces and met only a few individuals of the millions of Americans who contribute to the American way of life. However representative or typical the places we visited and the people we met, it is conceivable that "round the corner" was an entirely different place or factory—where attitudes were correspondingly different. We do not doubt that there are many exceptions to our findings; we soon learned the danger of generalising about the U.S.A.

ATTITUDE TO PRODUCTIVITY

Second, in pursuing our terms of reference we were concerned primarily with attitudes. We were trying to discover—and this is a more difficult task than examining production methods—the psychological attitude or reaction of the trade unions and their members to the introduction of new machinery and technical processes. Is their attitude such as to encourage rapid technical developments? Do they actually seek to increase productivity? If so, what are their reasons and methods? These were the questions to which we were seeking answers.

We knew, of course, that the average output in American industry was higher than in Britain. We knew that this higher output was due to various factors, including greater use of mechanical power

and machinery and handling and lifting gear, and a more intensive breaking down of jobs. We knew that "scientific management" was more widely practised. But the use of these methods and techniques does not explain why they are used and we were concerned to find out if this industrial development took place *in spite* of the trade unions or *because* of them, and what lessons, if any, we could learn.

The problem therefore could only be resolved by conferring with trade unionists at all levels, by trying to find out what they did and thought about different aspects of productivity and by reading trade union literature and union-company agreements and rules. This in itself was far from being a mechanical procedure but our reporting and commenting difficulties were accentuated because what was said and written about productivity did not always correspond with attitudes and behaviour on the job.

SUMMARY OF FINDINGS

The following summary of our findings is based mainly on the characteristics of unions with which we came in contact. It includes items detailed in the body of our report and not only those points in our final summary and conclusions.

UNION ORGANISATIONS

1 Trade union organisation in America is as diversified as in Britain although industrial unionism is a more common feature in America particularly among unions organised since the nineteen-thirties.

2 There is little industry-wide collective bargaining; most negotiations are conducted on a union-company basis.

3 Union Branch or Local memberships are frequently comprised of all the operatives irrespective of skill, trade or grade in any plant. Where a number of small employers or plants are grouped together there is a tendency to form craft or trade Locals.

4 Locals have considerable autonomy, especially in regard to administration and sometimes (with building trade Locals, in particular) in the negotiation of contracts with employers.

5 In some cases there is a discrepancy between union rules and policy and production practices adopted by Locals at the shop floor level.

6 Only three unions have engineering departments in a strict sense, the first being established as recently as 1937. Other unions, however, do production engineering in the field on behalf of their members.

7 Emphasis is laid on the advantage of training trade union members to be production engineers rather than trying to make trade unionists of engineers who have been trained in college or university.

TIME STUDY

8 Shop stewards and committee-men are well versed and experienced in the use of time study and regard it as an everyday affair in the plant.

9 In most cases they are trained in time study techniques at classes organised by the union. In other instances arrangements have been made with employers to allow shop stewards to spend six to eight weeks in the company's engineering or time study department.

10 Without exception, unions refuse to accept time study and job evaluation techniques as scientific and wholly accurate methods of determining work loads or standards.

11 We formed the impression that "scientific management" in its rigid interpretation is being "pushed" by industrial engineers and consultants rather than by employers many of whom are no more concerned with the theory, as distinct from the results of "scientific management," than are the unions.

12 We are convinced that it is efficient managements who set the pace of productivity in American industry and that unions make a major contribution to increasing the efficiency of less competent companies.

13 Although deploring the way time studies are frequently used unions do not offer serious opposition provided there is suitable machinery for resolving disputes and grievances.

14 Where time studies are used as a means of determining work standards unions insist that they should only be used as guides to collective bargaining.

15 No unions, with the exception of the International Ladies' Garment Workers' Union, make time studies—except in the "last analysis." Time study is regarded as a tool of management and unions merely check the results. We suspect, however, that the "last analysis" occurs more frequently than implied.

PAY SYSTEMS

16 Unions' acceptance of time study and their willingness to fix work loads is determined largely by the nature of the industry in which they organise.

17 Generally unions prefer high hourly wage rates to piece-work especially in the highly mechanised industries where output is largely determined by the speed of machines or assembly belts. They are less concerned with the number of machines attended by their members and the speed of the assembly than they are to ensure that their members are not obliged to do more than a reasonable day's output or work with undue fatigue or strain.

18 In some industries, however, piece-work based on time studies is accepted. The I.L.G.W.U. in particular, owing to the very highly competitive and small scale character of many of the firms in the ladies' garment-making industry, makes time studies and sets up work standards which in effect determine the amount of work performed for a given piece price. Negotiated piece prices are usually influenced by earning opportunities.

19 Incentive schemes, individual and group bonus and profit-sharing schemes are used in American industry, but not to the same extent as in Britain at the present time. Only 30 per cent of the American manufacturing industry labour force, according to the Labor Bureau of Statistics, is paid on incentive rates. American unions regard incentive schemes with the utmost suspicion and favour straight piece rates or hourly wage rate systems, depending on the industry.

REDUCING COSTS

20 Paradoxical as it may seem we found most American union officials and members, in spite of their engineering departments and activities, less

concerned about the need to increase productivity than trade unionists in Britain because in the main they can rely on management to be sufficiently progressive.

21 American unions press for increased wages to make labour dear; they expect the forces of competition to compel vigorous, enterprising and aggressive employers to reduce total labour costs through the use of more machinery and improved production techniques. If, therefore, employers wish to maintain or increase profits they are obliged to find ways of increasing productivity to reduce unit costs of production.

22 There is inherent in this union approach an assumption that decreasing production costs will lead to lower consumer prices which in turn will create new and expanding markets sufficient to absorb workpeople displaced by technological advance and changes.

INCREASING EFFICIENCY

23 There is no serious opposition by the unions to the introduction of new machinery or production methods. In factories we visited operatives' pride in using modern machinery was very noticeable.

24 Moreover direct opposition to technological change is to some extent offset by the generally established system of seniority where the "last one in is the first one out." An accepted practice, however, is that shop stewards are given top seniority whatever their length of service although it is usual for agreements to lay down that shop stewards may not be appointed until they have been employed by the firm for two or three years.

25 Where employers are unwilling to increase plant efficiency in line with other employers in the industry they are likely to be caught up in a wage claim. A company's offer to show its accounts to the union to prove that a wage claim could not be met would probably receive the reply that if the company wished the union to be a party to its financial position then the union reserved the right to recommend changes in the production methods used in the plant calculated to make savings which would help to meet the wage claim.

26 Unions claim to have a vested interest in the competitive efficiency of plants of which they hold representation rights.

27 Many unions keep records, in so far as available information permits of the financial position of companies within their representation and employ competent accountants to do the necessary research work.

JOINT CONSULTATION

28 We found very little evidence of formal joint consultative machinery in American industry. Usually unions do not expect to be taken into consultation when technological changes are intended although there is an awareness among some trade unionists of the advantages of formal consultative machinery.

29 Informal consultation appears to work satisfactorily and grievance machinery and procedure is well established. Where all the workpeople in one plant are in one union there is a high degree of co-operation both among union members and between union and management. Personal and day to day contact between Local officials, shop committee-men and shop management does much to smooth out difficulties before they grow into disputes. Frequently these officials and committee-men although paid by the company are employed full time, handling production and other problems on behalf of union members. Companies obviously find it worth while to employ union officials in this manner.

WORKSHOP CONDITIONS

30 Except in a few very isolated cases we saw nothing to suggest that Americans work harder than their opposite numbers in Britain. It was apparent, as has been stressed by previous British productivity teams, that owing to the greater use of machinery, mechanical handling and lifting equipment, and various other factors, the American operatives' work is more effective.

31 It seemed to us that both operatives and management pay less regard to safety and health in the factory than is the case in Britain.

PUBLIC RELATIONS

32 We formed the opinion that many unions in their negotiations and dealings with employers were very conscious of the need to secure public support and sympathy. Public relations were highly developed and two unions have built radio broadcasting stations.

WORKERS' EARNINGS

33 There is a legal minimum wage of 75 cents an hour and a maximum straight time working week of forty hours operating throughout American industry.

34 Average hourly earnings are high in comparison with those in Britain:—

October, 1949

Manufacturing Industries	\$1·409	(10s. approx.)
Bituminous Coal Mining	\$1·915	(14s. „)
Retail Trade	\$0·951	(7s. „)
Building	\$1·922	(14s. „)

In terms of purchasing power the difference is not so noticeable,* but in any case accurate comparison is difficult owing to the different patterns of domes-

* See page 13 for some food prices and rents.

tic expenditure. It is apparent also that the range of income levels especially between skilled and unskilled operatives and between organised and unorganised is considerably greater in the U.S.A. than in Britain and that average wages therefore convey a correspondingly less accurate indication of actual wage levels.

35 American trade unions have tended to regard comment on employers' profits as outside their province and have campaigned against them only when feeling they were not getting a fair share.

36 The postwar inflation has considerably diminished the purchasing power of American workers' wage gains and has led to an increasing interest in consumer prices and consequently an awareness of the need for more direct trade union political action.

The American Worker

A GROWING number of Americans are staying at school until they reach 18 years of age. The total number is not great as yet but a minimum school-leaving age of 16 is already enforced by 22 States (five of them impose a minimum of 18 years), among which are those with large industrial populations. A noticeable feature about many of the offices and factories we visited was the absence of office boys. In a small number of hazardous occupations, such as mining, Federal law forbids the employment of anyone under 18 years of age.

Whether starting as a trainee in a mine or production plant or serving an apprenticeship to a skilled trade, the average 18-year-old will receive a wage which largely removes financial dependence on parents.

WAGES AND PRICES

American wage levels generally, on a normal currency exchange basis, seem extraordinarily high in comparison with those in Britain. In October, 1949, workpeople in bituminous coal-mining and building were receiving on an average \$1.915 and \$1.922 an hour respectively (equal approximately to 14s.), while the manufacturing industries paid \$1.409 an hour (approximately 10s.) and the retail trade \$0.951 an hour (approximately 7s.). These high average wages are considerably offset, however, by the high cost of living. Beef and butter each at 4s. 7d. per lb., eggs 5s. a dozen, jam 5s. 4d. for two lbs., sugar 7½d. per lb.—these give some idea of food prices in Detroit. Prices in other cities we visited varied only slightly.

HOUSING

Payment for rent and electric light is estimated to be in the region of 20 per cent of an average working-class income. This makes it about 4 per cent or 5 per cent higher than in Britain. Contrary to the impression gained from many American films only a small percentage of American workers and their families live in tenements. Modern houses are increasingly being built in brick but prewar detached and semi-detached houses for

working-class occupation are mainly wooden. Central heating is used in more than 40 per cent of American homes. Many items of clothing and household equipment and electrical and mechanical gadgets, radios, refrigerators and motor-cars are cheap in relation to rents and hourly wage rates.

STANDARDS OF LIVING

Comparisons of respective American and British standards of living are very difficult—first, because there seems to be a greater discrepancy in the levels between organised and unorganised workpeople* in the United States, and second, their pattern of expenditure in certain respects tends to differ from ours. Owing to the weather and distances, refrigerators and automobiles are often necessities rather than luxuries. Of the 70,000 employees at Fords in Detroit, 27,000 own cars and travel up to 40 miles each way to work every day. Many miners travel similar distances so that they can live outside mining towns.

What seems at first to be an anomaly in the United States is the existence of a legal minimum wage of 75 cents per hour (5s. 3d.) and a maximum 40-hour straight time working week**. Its purpose is precisely that of the minimum wage rates enforced by the Wages Councils in a number of British industries—to prevent exploitation of labour, especially in small and scattered industries difficult to organise. It also ensures that competition among employers shall not be developed at the expense of the social and physical needs of working people. As prices are, at present, the minimum weekly wage of \$30, if a full week is worked, does not ensure a very good standard of living.

Research carried out by the Amalgamated Clothing Workers of America suggests that, for a family of four, \$1.50 an hour for a 40-hour week for 50 weeks in the year (\$3,000 annually) is

* Note the difference in the average hourly wage rates of the workpeople in the retail distributive trades—largely unorganised—and those in the highly organised mining and manufacturing industries.

** Excluding certain groups of workpeople, the largest of which is employed in agriculture.

necessary to maintain reasonable living standards. This income would not provide a car or refrigerator and permits in fact, the head of the family only one suit every other year and an overcoat every six years, his wife two rayon dresses every year, one woollen dress every five years and a heavy coat every four years, and only one trip every third week to the cinema for two members of the family. Some idea of the range of incomes in the U.S.A. is indicated by the fact that in 1948, 21 million families received annual incomes of \$3,000 and over. For more than 8 million families, annual incomes ranged from \$2,000-3,000. Of 10 million families receiving not more than \$2,000 (£715), 4 million had incomes of less than \$1,000 a year.

The "average" American worker is difficult to find even in terms of social welfare and security owing to the fact that of all the programmes under the Social Security Act only the old age and survivors insurance is wholly Federal; all the other programmes are administered by the States under laws passed by them to meet Federal standards.

PENSION SCHEMES

The Federal old age and survivors insurance is financed by contributions paid by employer and employee based on the first \$3,000 of employees' annual earnings in covered employment. Each contributes at the rate of one per cent of employees' earnings. These contribution rates are scheduled to rise. Benefits in general are based on the individual's average wage calculated from 1936 to time of retirement or death. Monthly benefits, paid under the system in December, 1948, averaged nearly \$25 for retired wage earners, plus \$13 for his wife if living, plus another \$13 for a child under 18 years of age. Death benefits paid to a widow with one child averaged \$35.50 and with two children nearly \$49 per month. Maximum family benefits are \$85 per month.

UNEMPLOYMENT INSURANCE

Unemployment insurance provisions, although administered by all States vary considerably from State to State. Most States exclude agricultural workers, domestic workers, public employees and self-employed. In November, 1949, out of a total working population of 64.3 millions, 33 millions were employed in jobs covered by unemployment insurance. The benefit formulae of all States relate benefit amounts to workers' prior earnings in covered employment. Amounts

paid range from \$15 to \$36 per week and provision is sometimes made for dependants. In 40 States the maximum payments are at least \$20 per week.

The number of weeks a worker may receive benefit during a current year is determined usually by his wage and employment record. In 40 States the maximum duration is 20 to 26 weeks and the maximum annual benefits range from \$210 to \$676 without allowances for dependants, and to \$792 with maximum allowances for dependants. Generally a week's waiting period is enforced before unemployment insurance is paid and various disqualification provisions exist in all States. In only two States have workers to contribute to unemployment insurance. The "normal" contribution paid by employers in the other States is 2.7 per cent of their employees' earnings. A smaller percentage is payable by firms which have good employment records.

SICKNESS BENEFITS

The American social security programme differs from those in other countries in that there is no general social insurance provision under Federal law to compensate for wage losses due to sickness and disability or to meet the cost of medical care. Many workpeople, therefore, purchase small industrial life insurance policies. As members of trade unions, American workpeople are usually insured to some extent against sickness and disability and obtain medical care or financial assistance through facilities provided by unions, or through schemes funded jointly by employers and union members.

WORKING CONDITIONS

American workers exert no greater physical effort than their British counterparts, even if the higher average output from better organisation and flow of work gives that impression. The average operative usually has the advantage of being well supplied with labour-saving devices and power-driven hand tools; where he is trained his skill is more highly utilised than in the average British factory.

Generally, working conditions, cleanliness, etc., are good and in most industries holidays with pay, usually written into union-company agreements, are provided. There are very few canteen services available in American plants other than those provided by slot machines or snack bars. Catering contractors sometimes take mobile canteens into

plants. Outside most plants however, are ample facilities for obtaining meals which, if not so cheap as in British canteens, are nevertheless reasonable in relation to earnings. In any case the usual mid-day meal break is only half-an-hour and the tendency is to have a snack on the job, a practice which to most British workers would appear undesirable and unhealthy.

Another feature of American factories is the insufficient regard for personal safety in making special provisions for guarding machines and belting. There is no provision in Federal law laying down safety codes and measures for employers to observe, although, with wide variations of adequacy, the States enforce certain safety standards. Nor is there any compulsion on employers to accept disabled men, a circumstance based on a belief in voluntary methods in industry.

In government and other circles there is a growing awareness of the need to counter the belief that disabled workpeople cannot perform skilled work, and vocational rehabilitation is developing rapidly to take care of people who have been injured in industry and require re-training for other jobs.

The most significant development in American industry in the last 15 years has been the expansion of trade union membership and activity and the average American worker in industry is nowadays a member of a union from which he hopes to obtain help if necessary and through which he seeks greater job security in its broadest sense. The next chapter outlines the extent of trade union activity and is followed by a chapter in which are given some examples of union techniques and attitudes in industry designed to maximise employment opportunities.

American Trade Unionism: I

A GENERAL SURVEY

IN Britain the Trades Union Congress acts as a single national trade union centre. In the United States there are two national trade union centres—the American Federation of Labor and the Congress of Industrial Organizations. In addition a number of railwaymen's organisations operate through the Railway Brotherhood and there are certain other large organisations, notably the United Mine Workers of America and the International Association of Machinists, who are not at present affiliated to either the A.F. of L. or C.I.O.

THE NATIONAL CENTRES

Prior to 1935 the American Federation of Labor operated as the only national centre with affiliated unions organised strongly in a number of skilled trades. Between 1920 and 1930 it experienced a fall in membership of about a million—from four to three millions. The membership of the trade union movement in this country also suffered a fall during the same years. In 1920 the T.U.C. had an affiliated membership of six and a half million which, owing to conditions in the inter-war years, had dropped to 3,740,000 by 1930.

This ten-year period in the U.S.A. saw the intensification of large scale mass-production methods and the continued rapid breaking down of skilled work into work of a semi-skilled or unskilled character. It also saw an intensive and prolonged anti-union drive by American big business using spies, "black lists," "blacklegs," "scabs" and "yellow dog contracts" to crush trade union organisation. During this period the American Federation of Labor continued its organising efforts on the traditional craft union approach, and attempts to organise industries like steel, automobile and rubber, with a high percentage of semi-skilled and unskilled workers, were not very successful.

Following the advocacy of Samuel Gompers, its President for many years, the American Federation of Labor was loath to take specific

independent action in the political field. It placed its reliance on the exercise of organised economic power by their skilled and strategically placed unions.

A turning-point in American trade unionism occurred as a result of the 1929–31 depression and the New Deal social and labour union legislation of the Roosevelt administration which followed. In 1933 the National Recovery Act became law; thereafter workpeople were to "have the right to organise and bargain collectively through representatives of their choosing" without employer interference. The "right to organise" was to be determined in each plant by an election organised by the National Labor Relations Board and could be initiated by either the employer or workpeople. Each election result was to be decided by a simple majority vote. The Act, however, was declared unconstitutional in 1935; in any case its terms were such that it tended to encourage only existing unions to organise and enlarge their memberships. Mining and clothing workers did indeed make considerable advance but little progress was made in the mass-production industries. The National Labor Relations Act, or the Wagner Act, more clearly worded and possessing enforcement powers, took the place of the National Recovery Act in 1935.

Thereupon a group of union leaders, under John L. Lewis, President of the Mine Workers, attempted to organise the mass production industries within the American Federation of Labor. Difficulties arose and there was established, in 1936, what was known as the Committee for Industrial Organizations. After some very intensive organising drives, and against some violent opposition, first the rubber industry, then the automobile, steel, glass and electrical industries succumbed to the Committee of Industrial Organizations, which in 1938 adopted a permanent constitution and became the Congress of Industrial Organizations.

Membership of both the American Federation of Labor and the Congress of Industrial Organiza-

tions have grown rapidly until now their combined membership is about 14 millions. In calculating the total trade union membership in the United States it is necessary also to add to this figure the membership of the other large and independent organisations previously mentioned.

ORGANISATION

A noticeable development in recent years has been the work of the American Federation of Labor in organising on an industrial as well as a craft basis and the acceptance by the Congress of Industrial Organizations of affiliations from craft unions. It is an undoubted fact that the organisational differences which were the real cause of the division between the two bodies are fast disappearing.

The A.F. of L. is a national federation of affiliated, and largely autonomous, International Unions and Federal Local Unions. An International Union is no more than a national union with membership in the U.S.A. and Canada. Also affiliated (or registered as we would say in this case) to the central body are State Federations of Labor and City Centrals, which to all intents and purposes are the two-tier equivalent of the Trades Councils of the T.U.C. Membership is confined to delegates from Local Unions. The structure of the C.I.O. is very similar—both International and Local Industrial Unions affiliate direct and the affiliated delegate bodies are the State and City Industrial Union Councils.*

A Federal Local Union (A.F. of L.) or a Local Industrial Union (C.I.O.) is a union concentrated in a small area and catering for workpeople in one plant or craftsmen employed in a number of plants and having no direct association with an affiliated international union.

Local unions (as distinct from the A.F. of L.'s Federal Locals and the C.I.O.'s Local Industrial Unions) are to an international union what British trade union branches are to their national union—with important differences as shown below. In industrial unions, Locals or union branches are usually comprised of all the operatives, whatever their skill or grade in any given plant. Where there are a number of small employers in a locality it is not uncommon for craft or trade Locals to be established and for the various Locals to be

affiliated or closely associated with a District Local or Joint Board for negotiation purposes. In many towns and cities there are Trades Councils which centralise some of the functions and administrative duties of building trade Locals.

The internal departmental organisation of the A.F. of L. and C.I.O. headquarters has much in common with the T.U.C., although on account of the structure of external organisation they offer more direct services, such as assistance in negotiations, to Federal Locals and Local Industrial Unions.

LOCALS

The essential difference between American Locals and British trade union branches is the degree of autonomy exercised by the former. They often have their own offices and full-time clerical staffs, do their own administration, handle disputes and grievances insofar as they are able and frequently conduct negotiations with "their" companies. In many cases Locals determine much of their own policy—within the framework of the union rules and conference decisions—and seek the advice and assistance of the international head office only when difficulties arise. Under such circumstances the role of an international union towards its Locals often consists of meeting their special needs. Indeed, the policy of some unions is so to educate and instruct their Local officials that Locals, as far as industrial activity is concerned, can become virtually independent.

Much of the autonomy exercised by Locals is directly associated with the practice of collective bargaining on a plant or company basis, as distinct from an industry-wide basis as in Britain, and the bargaining right elections provided by the law. This latter provision has also contributed to the formation of industrial unions. When an election is held in a plant and the majority of workpeople agree to be represented by a union then only that union can negotiate with the company on their behalf. Needless to say there is often keen competition among unions to win the bargaining certification in a plant. Election results are valid for at least 12 months after which the bargaining rights can be challenged by rival unions and won if supported by a simple majority of the workpeople concerned.

Memberships of Locals of industrial unions are closely related to the number of employees in individual plants. Sizes of Locals therefore vary

* See Appendix C for diagrammatic illustration of A.F. of L. and C.I.O. structures.

considerably; in the steel industry they range from 15 to 15,000, whereas one Local of the United Automobile Workers (Local 600, catering for Ford's employees) has a membership of 62,000 which, however, is broken down into 16 departmental units.

The administration and functioning of an industrial Local is greatly facilitated by the fact that its members work in one plant. Contacts are easy to maintain, personal relationships are close and, above all, the Local is concerned with only one employer. Consequently, the Local tends to feel its interests to be closely associated with the company's wellbeing and is sensitive to the company's economic position.

Though we saw little evidence of formal joint consultative machinery or joint production committees during our visit, an important feature of Local and plant organisation is the practice whereby companies employ officials (elected or appointed by the unions) to work full-time inside the plants handling members' production grievances* and, if necessary, taking them up with the management.

UNION-COMPANY CONTRACTS

The negotiating of union-company contracts is practised very extensively throughout American industry. It is attributable to the trade union policy of "divide and conquer" by which they attempt to obtain better terms from progressive and efficient companies, and the American dislike generally of industry-wide bargaining. To some extent this policy is possible owing to the rugged individualism of American employers, reinforced by the influence of the Anti-Trust legislation which discourages employer association on questions of output and commodity prices. More competition than might otherwise have been the case has thereby been promoted. In restraining employers from forming price rings and arrangements the law has probably, indirectly, restrained them getting together for wage-negotiating purposes.

DUES AND FINANCES

As in Britain, the weekly and monthly dues or subscriptions vary considerably from union to

* See Appendix B for diagrammatic illustration of grievance machinery operated in ladies garment making industry.

union. Dues are invariably collected through the "check off" system by which employers deduct the dues from members' wages and transfer them to unions' accounts. In the C.I.O. unions dues range, in the main, from \$1 to \$2.50 per month. As a rule, about half of this sum is retained by Locals and the remainder paid to the international union which then pays 8 cents a month to the C.I.O. for each member. Initiation fees usually range from \$2 to \$10, but are, in some cases, considerably more.

Many of the A.F. of L. unions have similar rates of subscriptions, although the per capita tax for international unions to the A.F. of L. is only 3 cents per month. This tax varies, however, according to the type of affiliation and the value of services offered by the A.F. of L., and can be as much as 37 cents for Federal Locals affiliating direct. Average subscriptions in the craft unions tend to be higher mainly because they pay more and higher benefits. Their initiation fees, too, are higher and the limiting of initiation fees to ten times a member's daily earnings, as is sometimes the case, does not prevent some Local unions imposing, in effect, financial restraints on intending members. It is claimed that this prevents new members taking undue advantage of past efforts to secure present wage levels and working conditions.

Many international unions employ qualified auditing staff to visit Locals and check their accounts every six months or so. This staff often maintains union records and prepares statistical statements.

Salaries paid to American trade union officials are often unfairly commented upon. Some salaries, particularly those paid to union presidents, are undoubtedly high by British standards; John L. Lewis of the Mine Workers, William Green, President of the A.F. of L., and Philip Murray, President of the Steelworkers and C.I.O. are all reputed to receive salaries of \$25,000 or more. Among C.I.O. unions half the presidents are receiving more than \$6,500 per year (equivalent at present to approximately £2,300—although it should be remembered that the cost of living is considerably higher in the U.S.A. than in Britain). The majority of elected and appointed union officers however, receive salaries which, taking into account the difference in the cost of living, are no higher than those obtained by their opposite numbers in Britain.

WELFARE

Trade union welfare in America is what we in Britain understand as union benefit schemes. Welfare, therefore, usually covers sickness and disability allowances, hospital fees, death benefits and pensions; but rarely is any provision made for unemployment. State insurance systems, to which employers alone contribute, pay up to a maximum of £26 per month unemployment benefit, and there is a Federal old age pensions scheme.

Hospital and doctors' fees are high in America and many types of schemes are operated by unions to alleviate possible distress among their members. An outstanding example of resourcefulness and union enterprise in looking after its members in this respect is the International Ladies Garment Workers' Union's health centre in New York. Here a staff of 100 physicians (12 of whom are employed full time) and 25 nurses provide ambulatory care and diagnostic services, including pre-union medical examinations, at the rate of 500,000 a year. Services provided are essentially for outpatients who must be members of the union. X-ray equipment has also been installed. (A recent examination of 40,000 union members for evidence of T.B. disclosed an incidence of only one-half per cent.)

82 per cent. of the cost of running the centre is met by a 3½ per cent contribution from the garment making industry employers' pay rolls. The union meets the remainder of the cost as it did the original capital expenditure of two and a half million dollars.

To supplement the work of the centre the I.L.G.W.U. run a vacation camp in the Pocono Mountains where approximately 6,000 families take advantage of the facilities each summer.

PENSIONS

Lately there has been a move by American unions to press employers to establish company-funded supplementary pension schemes. The painters and electricians in New York City for instance have agreements with their employers whereby the latter pay sums equal to 2 per cent of their payrolls into the unions' pension schemes. The big strike by the steelworkers in September, 1949, was part of their campaign to obtain old age and retirement pensions for their members—pensions in addition to those paid by the Federal Government to which both employers and opera-

tives already contribute 1 per cent each of their payrolls and wages respectively. The steelworkers were successful in their demands and the arrangement generally is that a worker shall receive a monthly pension of 1 per cent of his average monthly earnings over the previous ten years multiplied by the number of years he has served. Thus, if his monthly earnings are \$400 and he has 25 years' continuous service, he will receive a monthly pension of:

$$\frac{1}{100} \times 400 \times 25 = \$100$$

which includes the Federal old age pension payment. At the present rate of exchange, and taking into account the differences in the cost of living, this is worth something like £3 10s. a week in Britain.

A paradoxical development reputed to have emerged from the union's successful pensions claim is that the steel employers are now lobbying for the Federal old age pensions to be increased to \$100 per month, in which case the employers' liabilities under the new agreement would be substantially reduced. They feel that this is the only fair way to meet pension needs as it equalises the added cost to all firms and all industries.

TRADE UNION EDUCATION

There is not in America an educational movement strictly comparable with either the Workers' Education Association or the National Council of Labour Colleges. For that reason, international unions have each had to develop their own educational facilities, some of which are very extensive. Both the C.I.O. and the A.F. of L. provide various educational facilities. The A.F. of L.'s Workers' Education Bureau, which is the nearest approach to the British W.E.A., organises hundreds of classes, lecture courses and study groups throughout the country, secures library co-operation, furnishes speakers and offers advice on films and radio broadcasts. Technical, economic, social and cultural subjects are taught and instruction is given in trade union history, organisation and administration.

The United Automobile Workers is among the foremost of the C.I.O. unions in the field of education, on which it spends 5 cents a member each month. Owing to its very rapid growth the main object of this union's educational programme has been to train local leadership (including shop stewards, members of editorial

committees and time and motion study personnel) to deal with everyday problems. Trade union administration and social and economic subjects are taught and tuition is given in journalism, parliamentary procedure, public speaking and time and motion study techniques. Not least of the U.A.W. Education Department's work is the publication of pamphlets, books, magazines and statements on all aspects of union objects and activities, including guidance and assistance to shop stewards and committeemen.

The International Ladies Garment Workers' Union also occupies a prominent place in American trade unionism for its educational activities. In 1949, it organised nearly 400 classes in more than 60 cities, on various union and cultural subjects. Scholarships to universities were provided, too. An important part of their Education Department's work is the conducting of an Officers' Qualifying Course, which since 1937 has been required of all union full-time officers who have not previously held office. We attended an evening session of the course at the international headquarters in New York and saw 50 prospective officers taking part in a lecture-discussion under the union's Director of Education. The lecture was part of a course consisting of 40-45 hours class work, based on the union's own "Handbook of Trade Union Methods." Following the lecture and discussion the students were set a test paper which was one of six for the course.*

Similar educational provisions to those of the U.A.W. and I.L.G.W.U. are made by many international unions but on a less generous scale. Among the industrial unions, apart from the I.L.G.W.U., little effort is made to teach union members the technical or operational aspects of their jobs. The I.L.G.W.U. exhibits films to new members showing the best way of performing work operations to enable them to maximise piece work earnings as soon as possible. Building trade unions are usually actively and often financially associated with apprenticeship training schemes which exist in many large towns and provide instruction of a very high standard. Part-time attendance at training centres is usually obligatory on all building trade apprentices.

FILMS

The use of audio-visual or film and sound strip methods is assuming increasing importance in

* See Appendix D for No. 3 in the examination series.

trade union educational work. Many larger unions have their own equipment and both the C.I.O. and A.F. of L. have film libraries from which films of 10 to 30 minutes duration can be borrowed, together with equipment if necessary, at a small cost. Included in the C.I.O. library is "Unity is Strength" by the British Amalgamated Engineering Union. While visiting the C.I.O. the Education Officer commented that there were apparently few films illustrating the structure of British trade unions and activities in the Labour Movement as a whole. More films of a similar character could, he thought, make a valuable contribution to American trade unionists' knowledge and understanding of their colleagues in Britain.

PUBLIC RELATIONS

The attention given to press and public relations, an attention which unions say they have been almost forced to give, is a distinctive feature of new American trade unionism. Insofar as it is possible to generalise, both employers and unions are very conscious of the need to secure public support when conducting negotiations. An informed and sympathetic public opinion is considered an important asset and every effort is made by both sides to present the "facts." This is particularly important to unions when conducting strike operations. We saw picket lines in New York and elsewhere patrolling various retail businesses with placards requesting the public not to buy the goods of a firm that had broken the agreement, or would not pay trade union wages or was resisting unionisation. Employers retaliated with the help of "blacklegs" and "scabs" and by means of window bills stating that the allegations were false.

Some unions also are attempting to inform the consuming public on the relationship of production costs to consumers' prices, thus bringing an indirect pressure to bear on excessive profits.

UNION LABELS

At A.F. of L. headquarters is a Label Trades Department to which is affiliated some 55 unions which use label cards, buttons and other means to designate the goods or services produced by their members. Each union establishes its own standards and the purpose is to promote union organisation and union standards of workmanship by appealing to the consumer. The idea of label-

ling is designed specially to canalise the purchasing power of union members who are also a large section of the consuming public towards buying union produced goods and services. When making purchases members of all unions will frequently request to see union labels.

The unions affiliated to the Label Trades Department of the A.F. of L. hold their own convention every year to discuss matters of mutual interest concerning union labels.

RADIO BROADCASTING

Unions have ventured into the field of broadcasting, too. The United Automobile Workers have stations in Detroit and Cleveland and another is planned for Chicago. At the same time the International Ladies Garment Workers' Union are establishing six stations in various parts of the country. It is anticipated that in due course unions and co-operative broadcasting stations will link up their programmes. Only a few U.A.W. members as yet own the frequency modulation receivers required to obtain broadcasts, but the union hopes soon to make bulk purchases of receivers to sell to their members.

The unions think that in five years their broadcasts will exert a powerful influence on member listeners and the general public. At present a considerable part of their broadcasting time is devoted to the elimination of racial prejudice and discrimination. The interest shown by American trade unions generally in radio broadcasting is also an indication of their increasing activity in politics.

TAFT-HARTLEY ACT

The ultimate repeal of the Taft-Hartley Act constitutes the basis of much American trade union writing and activity today and is largely responsible for their greatly increased interest in politics. Wherever we went during our stay in the United States union officials were bitter in their denunciation of the Act. The mutual opposition of the A.F. of L. and C.I.O. to Taft-Hartley has brought them somewhat closer together and their co-operation in the new International Confederation of Free Trade Unions may be useful in furthering domestic co-operation.

The Wagner Act of 1935 guaranteed "the right of workers to organise and to bargain collectively with their employers and set up procedures to enable them to exercise these rights." The Act prohibited unfair labour practices by employers,

provided for the selection of representatives for the purpose of collective bargaining, preserved the right to strike, and legalised "closed shops."*

Under this legislative umbrella, provided by the Roosevelt administration, American trade union membership quadrupled in a decade. Two years after Roosevelt's death the enactment of the Taft-Hartley legislation, which modified the Wagner Act "out of existence", indicates in some measure the growing strength and determination of anti-union forces.

The Taft-Hartley Act is chiefly directed against the "closed shop" which is now illegal—although a "union shop" may be negotiated with employers provided more than 50 per cent of the total number of employees in a plant vote in its favour. It follows from this that the hand of the employer is considerably strengthened in maintaining an "anti-closed shop" attitude. The building trades, waterfront and maritime unions are the traditional strongholds of the "closed shop" and the new law's application in these trades is now being fought in the courts. The adverse effect on union organising is indicated by the fact that the number of representation elections during the year following the Act was only 60 per cent of the previous year.

Limitations are also imposed on unions' right to strike. Union-company contracts are usually reviewed yearly and are legally binding; if the contract is broken the case can be settled in the courts. Although contracts are enforceable at law, disputes may not be taken before the courts until all the procedures laid down in the contracts for the settlement of disputes have been followed. Such procedure usually covers disputes arising out of the breaking of contracts; but employers interested in future amicable industrial relations do not use the courts to enforce contracts.

Should a union seek to meet employers to modify a contract, 60 days' notice must be given and if settlement has not been reached within 30 days the union must file notice of this fact with the Federal Mediation and Conciliation Service.

* Closed Shop: An agreement between an employer and a union which specifies that no persons shall be employed who are not members of the union and that all employees must continue to be members in good standing throughout their period of employment.

Union Shop: An agreement between an employer and union which requires all employees immediately after hiring or after a specified probationary period, to become and remain members of union.

In ordinary cases if the service fails to bring about a peaceful settlement in 30 days, the union is free to strike. But where a strike, or threatened strike, may be considered by Government officials to result in a national emergency then the proceedings can be drawn out another three months, or five months from the time of the union's notification to the employer to change the contract.

Moreover, jurisdictional (demarcation) and boycott strikes now come within the meaning of unfair labour practices. Unions, therefore, need to exercise great care to avoid court proceedings when considering strike action. The new law weakens the protection of workshop rights and can easily operate in favour of non-union employees; disputes, instead of being settled by the union or workpeople concerned, are adjudicated by the National Labor Relations Board after investigation and hearings. The A.F. of L.'s monthly "Research Report" gives ample evidence of the threat of the Taft-Hartley legislation to union organisation—and to finances, since unions can be liable for damages arising out of "secondary boycotts." In this respect, the Taft-Hartley Act can be likened to the Taff Vale Judgment in Britain in 1901.

The full potentialities of the legislation are seen in the 1949 Report to the C.I.O. Convention in which is quoted:

"In addition, the General Counsel warned that the worst is yet to come :

"This is so because employers—particularly some of the large and more powerful employers in basic industries — have deliberately refrained from exploiting to the full the Act's anti-union potentialities, partially because industry has enjoyed the most prosperous profit period ever enjoyed in peacetime. This fact is made clear throughout the recently concluded Senate hearings on the Administration bill.

"As a Republican Senator put it, 'As one reads that testimony, he finds management witnesses confessing, under cross-examination, that the most restrictive uses of the Taft-Hartley law will come when unemployment becomes widespread in America.'"

The Report also emphasised the extent of the problem before the American trade union movement:

"Yet the will of the American people has been blatantly thwarted by a reactionary coalition of Republicans and Southern Democrats which prevented the repeal of Taft-Hartley and the enactment of the Thomas-Lesinski Bill. So powerful is this coalition, that it almost succeeded in having the House adopt the Wood Bill, which is even more anti-labour than Taft-Hartley."

"Unions are relying increasingly upon the collection and analysis of accurate data for their daily decisions and the development of their long-term policy. This reflects the fundamental conviction of the New Unionism that industrial relations should be rationalised."

Sol Barkin, Director of the Research Department of the Textile Workers' Union of America in an article, "Labor Union Research Departments," goes on to say:

"The New Unionism stems from the upsurge in organisation in 1933 and is being crystallized in the large industrial unions formed since that date. The form, attitude, and aspirations of the New Unionism are seeping into most unions, and becoming the common property of the American trade union movement. It is an answer to the demand of the large mass of industrial workers in the basic industries for unions which respond to their practical and pressing needs.

"Built to reflect the needs of workers employed in nationally competitive industries, the New Unionism has, as we see it, five important traits.

"First of all, it is required to cope with giant impersonal corporations which control directly or, through, diverse financial channels, many plants distributed throughout the country; these corporations often enjoy monopolistic positions, and employ highly refined management techniques with extensive personnel and welfare programmes.

"Secondly, the strategy of the new unions is built upon an appeal to all workers, skilled, semi-skilled and unskilled, and therefore the industrial union is its characteristic form of organisation.

"Thirdly, the newly organised workers recognise that American industry is dynamic and mobile, that new industries and regions arise rapidly to replace older ones, and that, therefore, American union standards will be best protected by organising all unorganised workers in every industry and region.

"Fourthly, these workers want unions which would couple economic action with extensive national legislation to assure them economic security and protect their unions.

"Fifthly, the New Unionism believes that unions should assume industrial leadership to prevent competition at the expense of labor and domination of labor by monopolistic industries and in time should secure the right to participate in the direction and planning of industry.

“These new characteristics reflect an expansion of purpose and a new militancy which necessitates a specialised staff equipped to assist those handling these many challenges. In the skilled craft unions established for local industries, individual leaders were able to encompass the facts of the industry through their own personal contacts, and deal with the problems in terms of this experience. But the new organisations, too large for such simple procedures, require more precise and more profound, as well as prompt, information, analysis and understanding to cope with their problems. To secure these materials, trade unions have turned to specialised personnel who, because of their training and insight, knowledge of, and allegiance to, the labour movement, could aid in fulfilling these wider needs.”

Other trade unionists share these views, but a point made by Lazare Teper, Research Director for I.L.G.W.U., in a “Labor Information Bulletin,” is worth quoting:

“Though trade-union research departments are created in response to definite needs, it takes some time before they become fully integrated into the life of the organisation. This is apt to be especially true of a department set up in an old-established union. Awareness of the services which research workers can supply gradually spreads through the organisation as the department fills the demands placed upon it. The department is able to gage its own success by the growth in the flow of inquiries received or assignments turned over to it. Ultimately, if the department has done its work well, there is hardly a phase of union activity in which it is not at one time or another involved.”

The work of union research departments varies according to the nature of the industry in which union organise ; but in the main it consists of :

- 1 Supplying union officers with material and factual information for negotiations and arbitration hearings either in connection with new agreements or with disputes arising out of existing agreements.
- 2 Making periodical surveys and analyses of business trends in the various sections of industry in which a union organises.
- 3 Supplying organisers with information on the communities to which they are being sent, as well as economic and financial histories of concerns they are attempting to organise.
- 4 Providing regular services and information

to Locals dealing, among other matters, with new legislation, changes in administrative regulations and changes in cost of living by cities.

5 Assisting Locals in the settlement of day to day grievances and new industrial and technical development problems and organising instructional courses for Local officials, shop stewards and workshop representatives in time study, job evaluation and other aspects of “scientific management” and worker-foreman and union-management relations.

PRODUCTION ENGINEERING

In regard to this last aspect of the work of union research departments there is a growing tendency for work connected with industrial engineering and “scientific management” to be handled by specialist personnel—trained production engineers. Research departments on the whole are concerned with economic relations within the industry and consider individual plants primarily in their competitive or monopolistic setting. Wage, cost and profit analyses are directed towards determining what changes in labour standards should be made to increase the stability of industries in which unions are organising to promote the welfare and security of their members.

Trade union production engineers and engineering departments, on the other hand, are concerned mainly with problems inside the plants. Their duties are to ensure that production standards are not set at levels injurious to the health and well-being of union members, to check the work of company-employed engineers, to eliminate production hold-ups which affect members work and earnings and through these activities to stimulate indirectly improvements in management and production techniques. In this way, earning opportunities and systems of wage payments are made to provide fair returns for their members’ efforts. The work of the economists in the research department and that of the technicians is obviously complementary and close co-ordination is essential.

Widespread publicity has been given to American trade union research departments and particularly to the activities of union production engineers. Yet it is a fact that at present there are only three unions which, in a strict sense, have production or management engineering departments. They are the International Ladies Garment Workers’ Union, the Textile Workers’

Union of America, and the United Automobile Workers. The Steelworkers have an Inequities Department which might be classified as a technical department, but problems arising out of the steel industry's job-evaluation programme are usually dealt with by the union's regional officers. A number of other unions, particularly the Machinists, Amalgamated Clothing Workers and the Electrical Brotherhood, whilst not having centralised engineering departments, are carrying out production engineering activities in the field on behalf of their members. Another chapter of this report deals with our discussions with these unions' officials about attitudes to the introduction of new machinery and the use of "scientific management" techniques.

As will be seen in the extract from Barkin's article, the establishment of trade union research departments is of comparatively recent origin; one of the earliest was set up in his own union as recently as 1937. The specialist engineering departments of the I.L.G.W.U. and the U.A.W. were established in 1939 and 1940 respectively. The reason for this late start is attributed mainly to the fact that before the formation of industrial and mass trade unionism, the impact of "scientific management" was less felt and unions were not strong enough to attempt to deal with it. Before 1935 unions were organised mainly on a craft basis and organisers were rarely concerned with production problems as such. It is noticeable today that many American craft unions are not as yet following the lead of the industrial unions in dealing direct with questions on production in order to have a greater say in earning opportunities and work loads but they do, of course, operate in their own ways through union rules and bargaining to obtain control of the job.

Much of the opposition to "scientific management" is a legacy of "Taylorism" which in applying the principles of motion study threatened the basis of craft unionism. It must be conceded that the craft unions were to a large extent justified in their attitude because the greatest exponents of "scientific management" techniques used them to break unions. The steelworkers fought "scientific management" at every turn and as long ago as 1915 were successful in getting a law passed prohibiting the use of time study in their industry.

Nevertheless, nothing has been able to prevent the use of time and motion study techniques in industry generally. Opposition could delay their

introduction and unions might be unwilling to co-operate but modern systems of manufacture inevitably make it necessary that more accurate methods of measuring work be adopted. And the crux of the whole situation in the U.S.A. is that employers have been more powerful than the unions which have had no other choice in the first instance, but to accept time and motion study methods.

Another factor which speeded up the introduction of "scientific management" was the decision of the wartime tri-partite Labor Board to allow wage increases during the last war only if incentive or job-evaluation schemes were accepted. Subject to such circumstances and pressure, the new unions in the main dropped their opposition to the introduction of time studies and "scientific management" and are now concerned not only to see that the techniques are not misused but, in some instances, to use them to their members' advantage. This latter development is still very much in its infancy, as is the setting up of engineering departments by the unions, and much of it conflicts with official union policy. But the trend seems unmistakable. It will be seen in a following chapter that the I.L.G.W.U., owing largely to the nature of the industry in which it operates, has in fact, gone some considerable way to exploiting the advantages of "scientific management" for the benefit of its members.

LABOUR RESEARCH ADVISORY COMMITTEE

Although relations between American trade unions and Government departments are on an unquestionably high level—indicated to some extent by the number of E.C.A. personnel recruited from among trade union officials—there is no permanent advisory and consultative machinery such as the National Production Advisory Council on Industry and National Joint Advisory Council and other committees in Britain.

One exception is the Labor Research Advisory Committee, comprised of 20 trade union members (A.F. of L., 8; C.I.O., 8; and the Railway Labor Executive Association, 4) and the Commissioner and various officials of the Bureau of Labor Statistics, U.S. Department of Labor. As employers meet the Bureau separately they have no representatives on this committee. The committee is essentially an advisory body which meets quarterly and is designed to present the view of organised labour on Bureau of Labor Statistics

programmes and operations. It make its recommendations to the Commissioner of Labor Statistics.

A small standing committee functions as a continuing committee between meetings of the full committee and convenes on call. The committee has no official chairman; representatives of each of the three major labour groups preside for a part of each session. In addition to the standing committee, special technical sub-committees are appointed from time to time to make recommendations to the Bureau about technical questions facing the Bureau's operating divisions.

An important feature of the advisory committee is that the trade union members are nearly all research department staff officers. This is considered essential because it is the research staffs who analyse the information and statistics made available by the Bureau of Labor Statistics and other authorities and prepare material and statements for the use of union officials when conducting negotiations with employers. Attendance at the committee enables research directors, having in mind their unions' problems, to suggest the type of statistical information they would like and the way it might be presented.

American Trade Unionism: 2

FIVE LARGE UNIONS

International Ladies Garment Workers' Union

The International Ladies Garment Workers' Union is affiliated to the American Federation of Labor with over 400,000 members in America and Canada. It has jurisdiction over all workers engaged in an industry making women's garments and has contacts with more than 8,000 employers. Three-quarters of the industry's production, and hence a large proportion of the union's membership, is centred in New York City. Work tends to be seasonal and owing to the rapidly changing styles and patterns there is little development towards large-scale production. Competition is, therefore, a very live factor in the industry's economy and exercises an important influence on union policy. The union claims that in spite of competition it has, in conjunction with management, induced a large measure of stability into the industry.

A prominent part is played by the International Ladies Garment Workers' Union in the New York Dress Institute and in the National Coat and Suit Industry Recovery Board, which promotes fair trade practices and attempts to improve labour standards.

Before the war, competition in the industry raged largely at the expense of the operatives' wage packets and working conditions. With overheads and cost of materials reduced to a minimum, wages were, in the employer's opinion, the only factor which could be further exploited. A fairly common practice was for employers to obtain manufacturing contracts and then try to negotiate piece prices with the union on the basis of their estimated labour costs. Rate cutting and the breaking of agreements by the employers caused many disputes and bad management-worker relations.

The union, seeking to enforce the terms of agreements and safeguard the widest interests of its members, was compelled therefore to adopt measures appropriate to the occasion, especially

when many employers introduced time study and "scientific management" techniques.

MANAGEMENT ENGINEERING DEPARTMENT

Insofar as our experience permits us to judge, nothing is more specific in American trade union activity and thought than the attitude of the I.L.G.W.U. towards time and motion studies and work measurement in their industry. It may well be that the co-operation between worker and management is not as close and whole-hearted as union officials pretend, or that union members enthusiastically support and accept the work and policy of the union technicians. Few unions, however, have sought more fervently to point out the limitations of the "factual" basis of "scientific management" and yet use the tools of the industrial engineer to greater advantage in collective bargaining, wage and work load negotiations.

The I.L.G.W.U.'s Management Engineering Department was established in New York in 1941 under the direction of W. Gomberg a former organiser of one of the union's Locals. The staff is comprised of four people who are, in effect, with their technical training and experience, supplementing the skills and abilities of the union's organisers and administrators.

Great emphasis is placed on the importance of recruitment to the Management Engineering Department. Experience has taught the I.L.G.W.U. it is essential to secure the services of trade unionists and give them a course of industrial engineering rather than try to train engineers to be trade unionists. College-trained engineers without previous trade union experience have been unable to absorb and appreciate the trade union point of view on "scientific management."

The I.L.G.W.U.'s object in setting up the Engineering Department was to assist in improving manufacturing techniques and operating methods—factors with which workpeople's earnings are intimately bound. This the departmental representatives do by inspecting plants, usually at the

request of Locals, and following up with recommendations or suggestions.

To maintain pressure on management, Local leaders are encouraged to seek means of making better use of productive capacities in their plants in order to increase productivity and earning opportunities. To this end, and to assist shop members and committee men to distinguish good from bad time study practices in the determination of fair piece rates, time and motion study courses are arranged at I.L.G.W.U. Institutes and at its annual summer school at the University of Wisconsin.

The department also serves as a central information agency and is building up a library of standard data for labour operations in every branch of the industry. This was stated to be part of the long-term objective of the union. From the data it is hoped to establish standard formulae which will give an ideal time or a union standard time for every type of manual operation in the industry.

A time and motion study laboratory has been established complete with the necessary technical equipment, including a sewing machine, wink counters, stop watches, motion picture cameras and projectors.

An industrial engineering reference library is maintained and a stock of films is available for training members in the best methods of performing work operations.

METHOD OF WORKING

Day to day duties comprise the fulfilling of requests for immediate field service in specific situations where local union officials think the department can assist in overcoming stumbling blocks in negotiations and piece rate settlements.

Whenever the Engineering Department is consulted on a problem or new development in a factory, its usual practice is to get a representative of the firm and a member of the shop committee to work with the Department. After demonstrating the kind of improvement that can be expected, the Department's representative is then able to leave knowing that two individuals will be able to complete the working out of the details of the scheme and make subsequent adjustments which may become necessary in the light of its operation. Throughout the Department acts as a consultant, its recommendations and any consequential adjustments in piece-work prices are

matters for settlement by the ordinary processes of collective bargaining.

Improvements are generally obtained by charting the overall production system of the factory, breaking down and analysing individual operations, and then building up new and better methods.

Two instances of the type of activity in which the union engages are quoted from its monthly journal *Justice*:

Example 1:

"The Regional Office has offered the service of its Industrial Engineering Department to the _____ Garment Company in an effort to help the firm systematize its production methods, and to bring about a settlement of long overdue wage adjustments and legal holiday pay the company has neglected to pay.

"Some time ago, this firm claimed it was unable to pay the wage increases and holiday pay because of bad business conditions; then, when business improved, it changed its tune and maintained that production costs were too high.

"In a letter to the company, the union pointed out that it had repeatedly called attention to the firm's outdated methods, and had often made suggestions for increasing both production and the workers' earnings. However, the management failed to act on any of them, and the union feels the workers should not be penalized now for the company's negligence. "It has asked the firm to set a date for the industrial engineer to come in, and it has demanded that meanwhile, wages be upped and other improvements be made without delay."

Example 2:

"Increased postwar competition in the garment markets created a special problem in these shops. For close to 30 years the firm operated on a time-work system of production. As competition demands increased, the firm found itself forced to step up the pressure on its 300 employees.

"Even so, it began to fall behind and union officers suggested serious consideration of a plan to convert to piece work. Several months ago, this was done. Difficulties and problems following from a change in old habits have been many. There have been a number of modifications of the original piece work system. "Now, under this modified system, it is reported earnings have risen about 50 per cent over what they were before the change was made. The unit costs are such that the firm is better able to maintain its competitive position."

When an industrial consultant is introduced by an employer to survey his production methods, the union Department demands that its staff officer and representatives of both management and the shop committee or Local should accompany the consultant.

Although the union's department often carry out plant surveys, they do not compete with consultants since the department does not itself install production systems in the commercial sense.

TIME STUDY

Time study and "scientific management" methods are widely used and accepted in the industry but the union is not prepared to accept all the claims of the practitioners of these techniques. Time studies can play a useful part in bargaining and negotiations but, from the union's point of view, a management time study is not the "last word" or the "truth" on the situation. The dependence of time study on human judgment and opinion does not permit of their calculations being classified as "facts."

Even that part of time study in which human judgment plays the least part (the use of the stop watch) there is not the degree of accuracy which entitles it to be called a science. In an experiment carried out at the New York University School of Engineering, readings varied from a low of $3\frac{1}{2}$ per cent for readings of .10 minutes, to a high of 12 per cent for readings of .025 minutes. Obviously this is an important factor when wage claims are frequently based on percentage increases of less than 5 per cent.

Moreover, it is presumptuous, the union states, to pretend that there is any scientific method of computing allowances for fatigue—a factor which has not yet been accurately defined.

Nor can it be accepted that the process of leveling or rating is other than a technique and not a process based on a mathematical formula. Tests have shown that the concept of the normal standard or 100 per cent pace varies considerably among time study engineers.

The I.L.G.W.U., whilst being thus aware of the scientific limitations of time study, are nevertheless convinced that until a better or alternative method of measuring or estimating a reasonable day's work is found, time study will have to be used. As far as they are concerned, unions which denounce time study and refuse to participate in its application are acting irresponsibly unless they can offer a superior method. The limitations of time study do not call for its rejection, but rather that time study should be continually checked in order that the inaccuracies are not used as a means of undermining or neglecting union members' interests.

WAGE STABILISATION

Underlying the union's acceptance of modern production methods is an attitude which is not necessarily concerned with the long-term advan-

tages to society of technological development. There is also a belief that by reducing costs and prices, the market will continue to expand and employment will be maintained if not expanded, too. Employment in the women's garment industry, for instance, has risen from 100,000 in 1913 to the present figure of 500,000. Because of the constant state of flexibility and movement in the industry, it has been possible to persuade operatives that it is in their interest to keep unionised factories in an efficient and competitive position. Nothing is to be gained, the union contend, by ignoring the fact that the industry is and will continue to be highly competitive.

The union resists attempts by employers to utilise wages as a cushion for their competition risks to the neglect of plant efficiency. The union's policy is to equalise wage rates and piece-work prices up to those in the best paying plant in the industry and to ignore aggregate labour costs. In recent years interplant differentials have been reduced considerably and by forcing up wage rates, a premium has been put on plant efficiency and good production methods in order to reduce total labour costs.

CO-OPERATION WITH EMPLOYERS

The union therefore seeks to co-operate as fully as possible with employers, so that the best interests of all are served. An efficient plant is better equipped to resist cut-throat and unstable competitive infiltration into the industry and the union's membership is stabilised and individual members obtain greater security and higher earnings.

By participating in management and helping to stabilise the industry's economy, the operative is able to feel himself part of an industrial community—using the union as a vehicle of democratic participation in industrial life. Such active participation, says the union, is much superior to the labour-management councils which were set up during the war and existed largely on paper only. Too many management secrets turn out to be smoke screens used to hide their incompetence; but unless, it is felt, members are capable of understanding management techniques there is less chance of discovering their incompetence.

EARNING OPPORTUNITIES

The standard of efficiency of management in the industry varies considerably and affects operatives'

earning opportunities. Most operators are on piece work with a guaranteed base rate. The union's attitude when negotiating prices is largely determined by the average hourly earnings which can be expected from the piece work available. Hence the price per unit might depend largely on plant efficiency. An operation might nominally be worth 18 cents giving an hourly rate of about 90 cents, but owing to inefficient machinery and production methods, yield only 60 cents an hour. The union, under such circumstances, would probably press the employer to increase piece prices.

Owing to the pressure of competition the employer would most likely be unable to offer higher piece rates and would be obliged therefore to accept the union's recommendations that the plant be reorganised to enable aggregate hourly earnings to be increased. If the employer failed to comply, he could easily be pushed out of business and in the last resort the union would undoubtedly "strike him".

The trouble about many of the less efficient plants is that they are usually the older ones where trade union membership is of long standing. To cause such companies to go bankrupt would be to put union members out of work even if only temporarily. Factors such as this have to be taken into consideration by the Management Engineering Department when deciding what action to take.

WAGE NEGOTIATIONS

Wage and piece price negotiations are in the main conducted between individual Locals and employers, although a union joint board will sometimes negotiate with a local manufacturing association.

In New York, the joint board acting on behalf of four Locals has a price-fixing section which is responsible for piece-price rates covering 40,000 different styles of garments each year in respect of about 1,700 manufacturers. When it is desired to establish a piece rate on a new style a committee of the workpeople concerned meet the manufacturers or representatives of the jobbers' association and one or more of the joint board price adjudicators. A sample garment is then examined, labour costs computed and piece prices determined. In the event of a dispute either side may have recourse to appeal machinery and finally to arbitration by an impartial chairman. In many cases a new style is merely a new combination of

job elements which already have standard prices so that the settling of the final price is one of adding together the prices of the job elements.

A feature of the union's agreement with employers in New York is that the union has access to factory premises, and employers' accounts can be examined each month if necessary. If it is found that wholesale prices of garments are higher than those stated when the appropriate piece prices were fixed the union claims an increase. Thus if a wholesale price was stated to be \$6.75 and, in fact, turned out to be \$8.75 the union would claim a 10 per cent increase on the piece price.

Industry-wide bargaining clearly is not a feature of the women's garment-making trade. To some extent, it was stated, the differences in wage rates throughout the industry will reflect differences in productivity; but there were differences also arising from local industrial, social and economic circumstances. Considering the continental spread of the industry these latter differences could be very considerable.

If, however, the market should contract from other than seasonal causes, there is a tendency for the H.Q.'s piece-rate committee to try and operate a nation-wide or industry-wide wages schedule at a level which could be met by the whole industry.

A UNION SURVEY

An example of the type of job undertaken by the Management Engineering Department is well illustrated in the resolving of a problem in one garment-making factory.

The union had been called in by the employer to help solve a bottleneck in the pressing or ironing department. The union engineer surveyed the operations of the department and drew up a list of recommendations, the chief feature of which was that the operations performed by the pressers should be broken down and the skill of the pressers more fully utilised. The pressers on piece work would not receive so much for each garment but, handling more garments in a day, their aggregate earnings would be greater.

An interesting point in connection with the union's survey was its insistence that the time spent on certain pressing operations was too long—the quality of the work was too high in relation to the price of the garments. As earnings were related to manufacturers' prices it is obvious the union was protecting its members by seeing that

they were not asked to work harder or more skilfully than the agreed work-loads or standards. If the employer had insisted on maintaining the pressing quality the union could have claimed a higher piece price which could only have been met out of profits or by raising wholesale prices.

SUMMARY

The I.L.G.W.U. is ahead of most American unions in the field of production engineering and does not hesitate to use "scientific management" techniques in the furtherance of its members' interests.

The union refuses to accept that "scientific management" is scientific to the point of eliminating collective bargaining in industry. It recognises, however, that some method of measuring work is essential in the interests of efficient production and work payment systems, on which security of employment and wage stability both depend.

In accepting and using time study to determine piece prices the union has established work standards which, however, are not inflexible and are related to earning opportunities rather than specific work duties. A constant pressure is therefore exerted on employers to increase production efficiency and output per man-hour, by which means it is hoped to reduce unit labour costs of production and maintain competitive efficiency.

United Automobile, Aircraft and Agricultural Implement Workers of America

The United Automobile, Aircraft and Agricultural Implement Workers of America (U.A.W.) has more than one million members organised geographically, by occupation, industry and company. It was formerly affiliated to the A.F. of L., but since 1937 has been associated with the C.I.O.

The union's early days were characterised by intense struggles* with the large automobile manufacturers, Ford, Chrysler and General Motors, who control about two-thirds of American automobile production. The union's problems were accentuated also by internal strife and it was not until 1940 that any large measure of stability in membership was attained.

* While visiting the offices of the *Detroit Press* we saw photographic evidence of the bitterness of the 1937 strikes in the auto industry.

INDUSTRIAL POLICY AND ROLE

The U.A.W. has no clear-cut policy which covers every company in the industry. If anything, it tries to keep a degree of difference between companies to play one off against the other.

As a result of union activity, hourly wage rates—as distinct from piece work—are more common throughout the industry than in prewar days. The union's preference for time work is attributable to the abuses of the piece-work system and the difficulty of measuring work satisfactorily. Attempts are also being made to tie up hourly wage rates with increasing productivity. In a recent agreement with General Motors, for instance, provision has been made for a compound allowance of 3 cents increase per hour per year; this is based on research which shows that productivity in the automobile industry increases at an average rate of 3 per cent per year. Under union-company contracts wage questions are usually re-opened annually. The annual 3 per cent productivity wage increases are paid whether or not new wage rate increases are sought.

The U.A.W. does not attempt to restrict the introduction of new machines; nor are there any clauses in its rules, or in agreements, laying down the number of machines to be attended by one man. The main thing with which the union is concerned is the amount of work which its members are expected to perform. If a process becomes so simplified that one man can attend three machines instead of one the union raises no objection, provided the operative feels that the work is no harder than before. It is most unlikely, it was stated, that an employer would increase an individual's wage because he was operating more machines. That is why the union seeks overall productivity increases in hourly wage rates, and all cases of increased productivity from accepted technological advances are presented in annual negotiations as part of the union's brief when suggesting a general wage increase.

Time study plays an important role in the automobile industry, especially in collective bargaining and workshop negotiations. The union considers that to effectively protect the interests of its members it should know all about time study techniques and how they are applied. This does not mean that the union intends using time study for establishing production standards. On the contrary it is anxious not to become part of any process for determining standards or work loads.

It claims with some satisfaction, in fact, that in some cases employers have been persuaded to dispense with time study techniques.

In order to understand and cope with the various techniques of "scientific measurement" the U.A.W. has established a Time Study and Engineering Department at its headquarters in Detroit. The staff of three has attended production engineering colleges. The functions of the department, performed in close co-operation with the Research and Education Department, were stated to be:

- 1 To provide technical assistance at the request of Locals in cases of disputes concerning production standards, incentive rates and schemes and job evaluation.
- 2 To provide general information for Locals on matters involving time study practices and procedures and job evaluation.
- 3 To train local union officers, committee-men and other union representatives in time study procedures acceptable to the union.

TIME STUDY AND WORK MEASUREMENT

The union recognises that some form of measuring work is an inevitable feature of industrial development and in the absence of superior or alternative methods, time study has to be accepted. What it will not accept is that time study provides precise means of work measurement. It is this factor which determines its reluctance to associate itself with the "scientific" setting-up of production standards. If time study is not an accurate form of measurement then there is no way of deciding scientifically how much work a man should do per hour or day. The union is concerned only with what its members *can* do and not with what time study says they *should* do.

The passive attitude of the union to time study is not in its opinion without justification. In its experience and knowledge there are a number of assumptions and variable factors involved in time studying a job which can only be agreed by collective bargaining methods. The breaking down of a job into its elements, for instance, assumes that the job is the sum of its component parts. Experiments have shown, nevertheless, that the time taken to perform an element of work often depends upon the time taken to perform the previous and following elements.

Another factor on which the union is vigilant

concerns the recording in detail of all the conditions and circumstances in which a time-studied job is operated. When time studies are likely to be produced at later dates it is important to know how the job had been broken down into its elements, the nature of the material used, the location of the material and its flow to and away from the job and the conditions of machines, tools, fixtures and jigs.

After a job has been timed the union then watches for so-called corrections effected by management to obtain "average" times. Management frequently strike out those times which they feel are due to their own errors of timing, or which are, in their opinion, due to discrepancies by operatives.

If management is going to ignore unwanted times, however, the union declares there is little point in making time studies. The union also questions the extent to which it is possible to time accurately an element measuring .01 or .001 of a minute.

Among other practices employed by management to establish an "average" time is that of selecting one which is the most frequent time (the mode) or again the "middle" time (the median). In some cases management even selects a minimum time.

Insofar as the union is able to bring any pressure to bear on management it insists that an average time should be the arithmetical mean of all the times taken. Whenever possible too the union insists on the continuous timing of a job cycle rather than snap back timing of job elements. According to the union 50,000 time study tests have been carried out at the University of Illinois and, under ideal conditions, an error of 3 per cent was experienced when making snap back times.

One of the variable factors in time study in which human judgment plays a large part is the rating or levelling process by which average times are normalised. The trouble here, as far as the union is concerned, is that there is no way of knowing whether or not the time study engineer is normal or constant in judgment. Many time study engineers are trained in universities where the concept of a normal working pace is developed by means of card dealing methods, walking and films; but there is every reason to doubt the normality of these concepts.

The most questionable allowances in connection

with time study are those permitted for personal needs, toilet, drinking, etc., and fatigue. As a rule not more than 24 minutes in eight hours are allowed in the automobile industry for personal needs. The union considers that allowances should also be made for operatives for conversation whilst on the job—not in the sense of allowing a break for conversation, but rather in easing the pace of the job.

No one in the industry seemed to have any standard idea of fatigue allowances, which varied from 0 to 25 per cent of the total time of jobs. In Ford's, no allowances were granted for fatigue except in the foundry and steel mills.

Owing to the variability of these factors, the U.A.W. regards time study as no more than raw material for collective bargaining. Only through collective bargaining can compensation be made for the inaccuracies of time study. Moreover, if management and union express satisfaction with a job assignment there is no need in the union's opinion to re-time a job because one or more men choose to do their jobs in shorter time. In fact, the union have a few agreements, mainly with foundries, which permit an operative to leave the plant after completing his day's assignment of work.

Normally it is left to management to make time studies and propose their acceptance. Cases with which the U.A.W. disagree are taken up through the grievance procedure which is usually written into agreements in considerable detail. Union engineers from time to time, however, find it necessary to check standards themselves, which they do independently of the company's time study engineers. A not unusual checking procedure is to watch the operative do the job under study. If it is considered that he "applies himself to the job", is working normally without undue exertion, then the union ignores management calculations. As far as the union is concerned, time study is essentially a management tool to be used to determine their own standards. The U.A.W. uses time study techniques, it says, only in the "last analysis".

One of the main jobs of the Engineering Department is to help Locals maintain their usual bargaining rights when negotiating agreements with employers. For this purpose a "Guide to the Principles of Time Study for Union Negotiators" has been prepared. It is an excellent publication describing some of the fundamental principles of

time study, how a time study is made, and things to do and not to do. A list of proposed clauses* covering time study and production standards is included which Locals are advised to insert in their agreements.

RESEARCH DEPARTMENT

The Research Department works in close co-operation with the Engineering Department but deals with broader economic and industrial issues. The main functions of the department are:

- 1 To provide services to Locals. Over 1,000 analyses of companies' financial positions have been prepared in the past year.
- 2 To provide wage rate information and to acquaint Locals on rates paid on particular types of machines in other plants.
- 3 Furnishing information on contracts. The department runs a punched card system to handle various contract clauses which can be used as precedents when presenting claims.
- 4 Trying to keep officers and members informed on general economic subjects and topics, and providing information to the general public.

A FACTORY REORGANISED

An example of the work of the Engineering and Research Departments concerns a 60-year-old foundry in Alabama employing 150 workpeople. In 1946 when the union obtained an increase of 18½ cents an hour in most plants in the industry the foundry were pressed to meet the claim. Owing to the general inefficiency of the plant and inability to make profits the company said it could not pay the increase. After scrutinising the company's accounts the union suggested that if the company would agree to pay the 18½ cents at a future date the union would show them how to meet the pay increases.

On the strength of this the company negotiated a loan with a bank. The union then re-organised the foundry, increased furnace capacity and installed new moulding and core making equipment. In a short time the company was able to pay the wage claim. The union stated that this was a typical instance of their unwillingness to subsidise inefficiency.

LOCAL 600—U.A.W.

Before going through the Ford Rouge plant in Detroit we visited the office of the U.A.W.'s

* For proposed clauses, see Appendix E.

Local 600 which, with its 62,000 membership, claims to be the largest Local in the country. Local 600 has the representation rights of the Ford plants and is organised in 16 departmental units, or branches, such as railroads, glass, open hearths, and roller mill; some of which have memberships of about 11,000.

In Ford's there are 263 union representatives attached to the 16 plants, paid by the company, but working full-time handling union business, settling grievances and promoting better shop relationships. This must be a major contribution to efficient production in the plants.

A Review Board comprised on the union side of two members of the Local's office and two from the regional office meet every week to discuss and review current production matters. In the event of a disagreement about a new job, or a dispute concerning the existing contract which fails to be settled on the shop floor, the matter can be dealt with by this Board. Failing settlement the Local negotiates direct with the departmental management concerned. If this fails then the Local calls in the headquarters Engineering Department which checks the job in dispute and confers with the company. Provision has been made for arbitration when the union headquarters and the company cannot agree; but only three cases of arbitration have occurred since 1941.

The present hourly wage rate schedule was negotiated in 1941 but no established procedure was used in determining wage differentials. Ford's have made flat rate increases to wages since 1941 and differentials therefore have been compressed.

In an expanding market, Local officials stated, there would be no union restriction on the introduction of new machines and methods. In a falling market, new machinery might be accepted but in the case of new work methods, or job re-alignment, Local policy might have to be thought out again.

Local 600 organises a number of educational courses for its members. One of these is a six weeks' course in time study techniques, and members attend twice a week for two-hour classes.

FOREIGN COMPETITION

Another aspect of the U.A.W.'s attitude to industrial efficiency is shown in its opposition, as with other C.I.O. unions, to tariff barriers, believing there is a pressing need to work towards

a stable world economy. As far as the union is concerned, it feels the removal of tariffs would not affect American production to any extent. If foreign manufacturers could sell cars in the U.S. cheaper than, and at the expense of, American manufacturers, it would be taken to mean that American production methods by comparison were inefficient; and the union would do everything in its power to improve the efficiency of its industry to help maintain employment for its members.

SUMMARY

The U.A.W. is an example of an American union in a mass production industry which recognises that "scientific management" is to be expected from alert aggressive management faced with:

- 1 The necessity of competing for business in the domestic market;
- 2 Rising labour costs through union wage pressure.

The union does not subscribe to the "scientific" character of production engineering, but nevertheless has trained engineers working in an Engineering Department at national headquarters who train Local officials in time and motion study. This is to provide a defence against possible abuse by management.

The U.A.W. recognises the advantages in increased wages and rising standards of living to be gained by technological advance and efficient production, but insists that production standards be set by collective bargaining in which production engineering techniques merely sketch out guides within which bargaining sets the standards.

Textile Workers' Union of America

The Textile Workers' Union of America, which includes the American Federation of Hosiery Workers and the Federation of Dyers, Finishers, Printers and Bleachers of America, has a total membership of approximately 340,000. As with other leading American unions it provides extensive educational facilities and social security benefits for its members. Before the war the union financed several housing projects.

One of the union's major problems is caused by firms in the industry transferring their plant and equipment from the traditional north-east production areas to the cottonfield area of the

Southern States. Not only are firms establishing themselves near the source of their raw materials, and using electricity instead of steam obtained from north-east coal, but they are also moving into areas where advantage can be taken of the largely unorganised labour. The union is at present engaged on an intense organising campaign in the Southern States.

RESEARCH DEPARTMENT

The union was among the earliest of American unions to set up a research department. Research, it contends, is an essential tool of modern trade unionism and the effective operation of such a department requires personnel specially trained in economics, management, engineering, publicity and law to help administer union affairs. The type of data assembled by the Textile Workers' Research Department includes companys' financial, industrial, personnel and labour experiences; information on work load problems and labour costs; the economic characteristics and operations of the textile industry and reports on employer policies and practices and collective bargaining techniques. From this data the union can assess the ability of companies to meet wage increases, or detect industrial instability calling for union action. As there is no way of preventing employers choosing their own methods or weapons with which to oppose trade union organisation and bargaining, unions have to understand and counter those methods.

When negotiating with companies using "scientific management" techniques, Locals often find themselves out of their depths. Negotiations indeed often assume a new character as a result of technical jargon. Phrases sometimes sound familiar but employers and industrial engineers have given them new meaning. Management themselves are not always too clear on exact meanings and show considerable unwillingness to discuss with the union what is factual and what theoretical. Consequently many Locals are unable to approach and deal with these new methods in a practical manner. Confronted with time studies which management declare to be the "truth", Locals, with their limited experience, have had to seek the advice and assistance of the international union.

WORK OF DEPARTMENT

Textile Workers officials theory when establishing a research department was: "Never hire a

consultant. He knows nothing about trade unionism. He is a salesman first and engineer next." According to the union it takes a long time to "break in" an engineer to the service of a union because his training is basically against it. Other unions might call in consultants but in its experience it is far better to "blunder along in ignorance" than rely on consultants. This rather harsh judgment on consultants suggests that the Textile Workers' experience is bitter indeed.

The main function of the Research Department is to train and help union organisers. Under no circumstances does the departmental staff represent the union in its negotiations. This is the job of the elected officials who use the staff to keep them informed and to supply them with material for negotiating purposes.

The department does, however, help to formulate union policies, especially in regard to time study, merit rating, etc. In principle the union dislikes time studies but in practice, depending on its bargaining strength, they have often to be accepted. On occasions the Textile Workers has used time study to its own advantage. Employers have been informed that if they exercised their much vaunted prerogatives they could secure more savings through greater plant efficiency than might be obtained from wage reductions.

Considerable assistance on such matters as grievances, arbitration and contracts is given by the research department to the union's field staff when organising new plants. Organisers are trained to handle specific problems and a text book dealing with work duty charts, job specifications, classes of work duty frequencies, etc., is in course of preparation. The department is also building up a production engineering case history—every case with which they have dealt (there were more than 100) is carefully recorded.

When an organiser is so trained and efficient that he can stand on his own feet the Research Department feels it has done a good job. Organisers in effect are being trained to deal with problems on the spot without having to refer them to headquarters.

Another duty of the Research Department is to keep union leaders informed on technical changes in the textile industry. In this respect a complete analysis of the changes of the dyeing and finishing industry had been prepared. Since the end of the war the industry had undergone a revolution. Lifting and handling and various other operations

had been almost eliminated, and the operative, instead of labouring and performing heavy manual work, was employed reading instruments. Such a change demanded the employment of a different type of operative who, in the union's opinion, was worth 20-25 cents per hour more owing to the increase in responsibility and skill. Under job-evaluation, it was stated, the change would probably have led to a reduction in hourly wage rates.

Job-evaluation in fact, is intensely disliked by the Textile Workers and no effort is spared to "throw it out". Merit rating comes within the same category and there are only three out of 1,300 mills where the union has been unable to secure its rejection.

Physical conditions in the textile mills are of considerable importance to the union and a book on air-conditioning and ventilation, including a code of minimum standards has been prepared and circulated among employers.

Among the less onerous duties of departmental staff is that of attending conferences of employers and industrial engineers and saying "We don't believe you!"

TIME STUDY

Time study for setting up working standards was declared to be management's job. The union refuses, it was stated, to make time studies, although it is prepared to lay down the conditions in which they should be made. It is also prepared to examine management's proposals, and after looking at all the relevant information will make wage proposals. The union's technical officers were agreed that time studies form a better base for wage negotiations than empirical bargaining.

In point of fact, although there may be no scientific validity to a time study the union accepts that the recording of an operative's performance by such methods provides useful information for understanding a job assignment and the degree of effort of the worker. Moreover, there is no opposition from members to the union's technical officers going into a mill and making a record of an operative's performance on the job. What the union is really opposed to is the misuse or abuse of time study. It is concerned with reasonable output and will not accept that a particular operative's performance is necessarily typical or is a criterion with which to determine other operatives' earnings. Like the United Automobile Workers, the Textile Workers' Union is concerned with what its

members can do and not with what they should do as determined by a time study.

The skill of the time study engineer lies in his ability to judge the pace of a normal worker and, the union states, it cannot be certain either of that ability or the concept of a normal pace. Moreover, in building up a job cycle it is often assumed that there is perfect articulation of movements—that a cycle is comprised of the arithmetical sum of its element times. But an operative is a human being and not a machine or a mathematical formula and there is little point trying to compare them or assuming that an operative should work like a machine.

The impracticability of technical officers attending all jobs which are being time studied is an important factor. This is one reason why the union is at such pains to train Local officials in "scientific management" techniques. Efforts have also been made to persuade employers throughout the industry to standardise their methods of taking time studies and not to "cook" or manipulate them.

One of the most serious questions the Textile Workers' Union has to contend with is that of displacement arising out of time and motion study application and technological advance. It tries to cope with this problem by insisting that production changes be made only after consultation with and approval by the union. New production methods, considered unnecessary, have been opposed and the changeover speed of technical alterations has been controlled. In some cases displaced operatives have received "dismissal wages" (compensation).

INCENTIVES

Although not opposed to the introduction of incentive schemes the union is very critical of many particular types, especially those based on time studies. This criticism is inspired by the fact that the schemes do not always produce higher earnings and because employers frequently use them as a means to offset general wage increases.

The real object behind many incentive schemes, it was stated, is to relate wages direct to output and physical effort, and prevent operatives from sharing in the results of increased productivity arising from the introduction of new machines and methods. Incentive schemes also permit employers to shift their business risks to their workpeople. One of the union's problems is to

make sure that incentive schemes allow adequate opportunities for incentive earnings—that the volume of work on order and on the floor is sufficient to enable operatives to work full time.

Incentive standards developed on the basis of time studies demand the maintenance of standardised operating conditions and servicing at pre-determined levels of proficiency. Efficient management is also necessary together with the fullest co-ordination of materials, supervision and direct and indirect production operatives. Few plants, the union declared, attain such levels of proficiency and the burden of deficiencies falls on the operatives, leading to grievances and dissatisfaction.

The type of scheme favoured by the union is that based on a non-time study basis. In such cases greater reliance can be placed on negotiated work standards, by which means it is easier to claim increases in wages owing to increased productivity created by factors other than physical effort.

TECHNICAL CASE STUDY

When visiting a textile plant near New York we discussed with union officials a cone winding problem which had recently been resolved. The following is a summary of the case history prepared by the union.

The company concerned had installed worsted spinning frames which produced larger bobbins than the previous machines and had also requested a larger spindle assignment for the non-automatic cone winders. Following a strike by the cone winders the issue was settled when the operatives agreed to accept 50 spindles. Average piece-work earnings began to rise, however, and the company protested. Average earnings were thereupon frozen while the company took time studies of the cone winding operations. Subsequently attempts were made to establish new spindle assignments and workpeople operating 50 spindles were requested to operate 65 spindles. At the same time the company proposed a standard hour method of payment to replace the straight piece time work method. Another strike ensued.

In an attempt to settle the dispute, the union engineer went over the company's time studies. Although using the same element times he arrived at a much lower spindle load. The allowances for personal time, fatigue and miscellaneous work had been increased by 5 per cent to 20 per cent. The

company's method of calculation was to consider this 20 per cent as an hourly deduction, giving the standard number of spindles assigned as 50.8, expected standard production 22.6 kilograms per hour and standard machine efficiency as 78.3 per cent.

By applying the personal and fatigue allowances in this fashion the number of spindles assigned was not affected. The allowances in fact, only affected the expected amount of production, resulting in a low expected machine efficiency and a high incentive effort.

The union used the calculations to give operatives the rest time at the end of each job cycle.*

Despite the union's lower spindle assignment of 40.7 the expected standard production of 22.6 kilograms per hour was the same as that arrived at by the company. The difference between the two methods is that the union contemplated a higher machine efficiency, viz. 97.7 per cent as against 78.3 per cent. In the company's calculation, the operative was persuaded to take his rest time while the machine was stopped; whereas with the union he rested while the machine was running. The tacit assumption in the company's method is that the operative would not let the machine stand idle during the 12 minutes rest allowance each hour, but would keep the machine running and thereby increase the machine efficiency above the calculated level.

During discussions with the company, the union also questioned the proposed standard hour method of pay and the base rate established by the company. Unless the operatives were able to achieve the expected incentive production or more, they would make less money under the standard hour plan than they made on the old piece rates.

In its negotiations the union collected all data and information relevant to the cone winding job and after analysing its studies outlined the following five points:

- 1 There was an enormous variation in methods of performance both among the different workers and for the same worker from day to day and hour to hour. These variations in methods made it impossible to establish a reliable and valid definition of the amount of time required to do each part of the job. The variations also cast doubt on the accuracy of any time study determination

* See Appendix F for company's and union's calculations.

of the amount of workload, since one basic requirement for an accurate time study is that methods shall initially be standardised.

It is to be noted that in the U.K. "rating" is used to assess this position. The Textile Workers obviously do not accept the "rating" method as being sound.

2 There was considerable variation in the frequency of occurrence of the random element of tying end breaks both for the same yard count from day to day and among the different yarn counts. The company's proposed standard included a fixed figure for the number of end breaks per hour. The union's study showed a wide variation around this figure and it insisted that a more thorough check be made of the number of end breaks to determine if there was any regularity in the number of breaks and, if so, what should be a proper standard of breaks. Both sides, in effect, endeavoured to fix "standard" breaks instead of allowing, as in Britain, for variations of set up according to variable break frequencies differing from the standard by agreed tolerances.

3 The time allowed to cone winders for personal needs was very low. The union attributed this to the character of the job which required almost constant machine attention while it was running and it suggested that a more reasonable amount of rest time be given.*

4 Machine efficiency was low. The studies showed machine efficiencies in the range of 70 per cent to 75 per cent which the union suggested was evidence of a high workload. Normally, machine efficiencies should be in the neighbourhood of 90 per cent.

5 Machine speeds varied considerably and no precise control of machine speeds was maintained. In addition, the corrections for slippage and wind, which cannot be accurately determined, increased the difficulty of obtaining an accurate bobbin running time. The union indicated that bobbin running times would have to be carefully checked and because of variations a conservative figure used in calculations.

With such information it is not surprising that the Textile Workers should regard management time studies with the utmost suspicion.

The negotiations finally resulted in a return to

* This was, as stated earlier, increased from 15 per cent to 20 per cent.

piece work with a minimum guaranteed hourly wage rate. It is interesting to note that despite the lengthy and thorough time studies made by the union's technical officers the actual studies were not used by them when negotiating. Their idea is to keep their own time study information "at the back of their head" where it represents the minimum standards on which they are prepared to fall back when negotiating. The union contends also that its time study work lends technical prestige to its argument.

LOCALS' ATTITUDES

In our discussions with one particular Local it was stated that employers and their technicians "set timings too close". The Local, therefore, was not interested in increasing production because it was fully occupied safeguarding its members wage rates, working conditions and interests generally. It was felt that time study could be useful only if the company "played fair". At present it is used as a tool for obtaining greater production at the expense of the operatives, who thereupon tend to "ration production". It was agreed that an operative should do a normal day's work but the Local stated that it would take steps to prevent anyone "killing the job".

The Local complained also that there were too many time study staff employed; at its plant the number of engineers had risen from four to thirty-five although the plant had not increased in size.

Some members of our team sat in on a joint meeting between the Local time study committee and the company's time study engineers and it was clear that the operatives, from the loom and spindle, had a good grasp of the subject. They were also very quick at figures and could use slide rules.

It was apparent from visits to Locals and textile mills in other States that union organisers do not all share similar views. Their views are probably influenced by the union's organisational and bargaining strength in particular localities.

In a mill in Virginia when the supply package had been increased in size, the operatives had been given more spindles and frames to attend and several workpeople had been laid off. In this case the organiser accepted the redundancy as an inevitable development of technical change. His concern, he said, was to ensure that new conditions

were reasonable and acceptable and that work loads were correct.

SUMMARY

The Textile Workers' Union of America organises in a fairly competitive industry which is increasingly becoming large scale and very highly mechanised and showing a tendency to "run south" to take advantage of cheap, and as yet, unorganised labour.

In principle the union is opposed to "scientific management" and has been able in the main to resist the introduction of job evaluation and merit rating. Nevertheless it has been obliged to accept time study and its highly qualified technical staff keeps a watching brief on management practices. Despite its principles the union finds it convenient at times to make its own time studies and establish, in effect, certain, if flexible, work standards.

Generally the union does not oppose technological change but it expresses a strong desire to control, or be consulted on, the speed of development. As earnings and work loads are largely determined by the speed of machines, considerable attention is given to machine efficiency.

United Steelworkers of America

The United Steelworkers of America is affiliated to the C.I.O., and has a membership of 950,000, including 50,000 in Canada. The President, Mr. Phillip Murray, is also President of the C.I.O.

Organising originally in steel production plants, the union now includes in its membership workpeople employed in steel fabrication, steel window frames, various kinds of metal works, electric cables and some even in rubber and fabric coverings for electric cables. Membership is confined to production and maintenance personnel and does not include salaried workers, watchmen, guards, supervisors or foremen.

Regional machinery is comprised of 32 district committees, each of which has a director and field or staff representatives. The union's Locals are usually comprised of all the workpeople in a plant and vary in membership from 15 to 15,000. Sometimes a Local will cater for clerks employed in a number of plants within a particular area. Each Local is closely associated with its appropriate district committee.

JOB EVALUATION OR INEQUITIES PROGRAMME

There seems little doubt that the job-evaluation programme undertaken by the United Steel

workers of America and certain employers in the American steel industry must be one of the most extensive of its kind. Nothing we feel could give a clearer picture of the union's attitude to "scientific management" and of the work of the technical officers, than a description of the implementation of the job-evaluation programme or Inequities Programme as it is more commonly known.

The programme has in the main been carried out in conjunction with the Carnegie-Illinois Steel Corporation, which is the largest unit in the United States Steel Corporation with 35 per cent of the American primary steel ingot capacity. The Bureau of Labor Statistics, U.S. Department of Labor, stated in February, 1949, that "The male common labor rates and more recently the minimum plant rates paid by the United States Steel Corporation have long been recognised as key rates in the industry's wage structure".

Standards set by the United States Steel Corporation are not confined to wage rates. From schedules of steel prices it is apparent that most prices in the industry follow those determined by the corporation. Under these circumstances the union's policy has been to try and drive as hard a wage bargain as possible with the efficient and semi-monopolistic United States Steel Corporation knowing that it will be easier thereafter to get other companies to accept similar terms.

Some of the first grievances filed by the union following its recognition by U.S.S. in 1936 were concerned with inequities in intra-plant wage rates. An agreement signed in 1937 emphasised the need for a study of the wage problems in the steel industry; one organisation for instance, employing 160,000 men, had more than 25,000 wage rates operating in their plants.

Wages in the main were determined by departmental and plant supervisors without recourse to a central department. Consequently groups of men doing similar work in different parts of the mill were paid varying wage rates. There were also jobs with similar titles in various parts of a mill but with different duties attached to them and no standards by which the work could be classified; there were no fixed wage scales and no established means of determining the equity of any given rate. Considerable discrepancy also existed between different mills.

In an attempt to deal with this situation the 1937 agreement specified that where wage

inequities existed they could be taken up for local adjustment and settlement. It soon became apparent that inequities could not be successfully dealt with on a case to case basis. The adjustment of one wage rate merely emphasised the need to adjust related wage rates; and the situation if anything became worse.

In 1942, both management and union agreed to establish a joint commission to resolve the industry's wage problems. This, the commission was subsequently unable to do.

In 1944, the union requested a wage increase based on the rising cost of living and again pressed for the elimination of wage rate inequities on the basis of "equal pay for similar work throughout the industry." Management was not unwilling to seek means of eliminating the wage rate inequities; indeed they had already gone some way towards developing a complete set of procedures to be used to determine work standards and wage scales. The companies involved in the wage case stated, however, that the elimination of intraplant inequities should mean merely a redistribution of the existing pay roll and that lower paid workpeople should be given increases at the expense of the higher paid group. This was quite unacceptable to the union which felt that higher paid workpeople should at least retain their existing wage rates and that the cost of increasing the wages of lower paid operatives should be borne by the companies.

As no agreement could be reached the union's claim went to the National War Labor Board for arbitration. The Board ruled, in effect, that both sides of industry co-ordinate their efforts and work out a job-evaluation programme which would have as its aim the setting up of a fair wage structure. The Board also met the union's claim that no operative then working would suffer a wage rate reduction, but stipulated that as the high rated jobs (higher than would be classified on the new scale) were taken over by new operatives wage rates would be adjusted to bring them into conformity with the new scale.

The union recognised at this stage that its members' interests would be best safeguarded by actively participating in the work of the Inequities Programme. A wage rate inequities negotiating committee under an ex-craneman member of the union, was therefore established. Later the committee became an Inequities Department.

The committee worked jointly with representa-

tives of the managements' Co-operative Wages Study Group. An early understanding of the joint committee was that the programme would be implemented through collective bargaining. Each side was to be in complete agreement about the procedure to be adopted before going ahead with any part of the programme.

JOB DESCRIPTION

It became clear in the early stages of negotiations that the first step was to describe each different job in the mills. Wage rates for particular classes of jobs could not be fixed unless jobs were classified which was impossible unless they were adequately described. The union laid great insistence on accurate job description in order that new duties could not be indiscriminately imposed.

Union representatives had also to be alert on questions concerning the allocation of existing duties. Management seemed to think that the duties of a labourer for instance included "every job in the plant". Such duties as helping the millwright, the electrician, etc., were re-allocated to semi-skilled personnel, and the labourer's duties were reduced to about 45. This was very important because 60 per cent of the steel industry's labour force was on a basic labourer's wage or within 10 cents of it.

In accordance with the August, 1945, agreement, the companies prepared descriptions of production and maintenance jobs within the collective bargaining area. The descriptions (1,150 in all) covered the following particulars:

- 1 Job Title.
- 2 Department and Sub-division.
- 3 Primary functions of the job.
- 4 Source of supervision.
- 5 Tools and equipment used.
- 6 Materials used, processed and handled.
- 7 Duties and working procedures.

The method of describing a charging machine operator's job is shown in Appendix G. Having agreed on the working procedure the joint committee then arranged for local representatives of management and union, usually the grievance committeemen, to check the job descriptions with the workpeople on the job. Where local agreement could not be obtained, the job description in dispute could be referred back to the joint committee for settlement. 97 per cent of the original descriptions were stated to have been satisfactory.

JOB CLASSIFICATION

Preparing a manual for job classification was the next step in the programme. A procedure had already been developed by the companies and this was used to prepare the classification of the 1,150 benchmark jobs. After the procedures had been considered and to some extent revised by union representatives, (the 1,150 benchmark jobs were reduced to 131) it was jointly agreed that the method of job classification in the manual should be based upon an analysis of the relative worth of jobs in terms of basic factors of job content. The twelve factors considered were:

- 1 Pre-employment training.
- 2 Employment training and experience.
- 3 Mental Skill.
- 4 Manual Skill.
- 5 Responsibility for materials.
- 6 Responsibility for tools and equipment.
- 7 Responsibility for operation.
- 8 Responsibility for safety of others.
- 9 Mental Effort.
- 10 Physical Effort.
- 11 Surroundings.
- 12 Hazards.

In order to establish the job classification both management and union each set up their own job classification committees comprised of three in each plant. As in the case of job descriptions, the union committee received copies of the proposed classifications, checked with the men on the floor and conferred as necessary with the management committee.

Each of the twelve factors on the job classification sheets supplied to the committee* were subdivided into various groups of specific work requirement which were indicated with a numerical classification. Each numerical classification had a code letter, and appropriate to each group of job requirements or code was a number of benchmark jobs. An operative, therefore, employed on any benchmark job within a given code was expected to perform any, or all, of the specified job requirements. Specific instructions which were to be observed when checking the classifications were as follows:**

"In all job classification work, it should be borne in mind that it is the occupation that is under consideration and not the individuals who work on the occupation.

* See Appendix G.

** As per the Agreement August 10, 1945.

"Classification will be made on the basis of performance of a 'Fair Day's Work', defined as follows: 'A fair day's work is that amount of work that can be produced by a qualified employee when working at a normal pace and effectively utilizing his time where work is not restricted by process limitations.'

"Example: A normal pace is equivalent to a man walking, without load, on smooth, level ground, at a rate of three (3) miles per hour.

"The importance of adequate descriptions of the jobs cannot be overstressed. Job Descriptions serve to record why a job was classified as it was and also to judge alleged changes in job content resulting from technological changes or from accumulations of minor changes.

"Jobs are to be classified without regard to existing wage rate.

"Jobs will be placed in the appropriate level in each factor by considering the specific requirements of each job, the description of each level, and the illustrations set forth.

"Classification in each factor is made at or above a minimum requirement called 'Base'. The 'Base' level is not given an absolute value in classes since only the relative ranking of jobs is to be determined by the plan.

"In the subsequent reclassification of a job due to change in job content, consider only those factors affected by the change. Move them into the next class only if the change in job content is at least one whole job class."

It is doubtful if the union took much notice of these "instructions", its main concern being to satisfy its members rather than adhere to any theory of work measurement.

It was also concerned to resist any attempt by the companies to combine jobs which might have led to an under-valuing of job requirements. The feature of the arrangement was that if job requirements were properly designated then automatically they were assigned a numerical classification value relating to one of the twelve factors.

Having classified all job requirements it was then necessary to classify benchmark jobs; which meant, in effect, abstracting the appropriate job requirements from the manual and adding together their numerical classification values as shown in the copy of the "Job Classification Sheet*".

The total of the maximum points for each factor in the manual came to 45 of which slightly more than half were attributable to responsibility of some kind. The maximum number of points claimed by any benchmark job was only 30—this was in October, 1945. Since then the classification has been readjusted and some jobs are now able to claim 32 points.

Before finally agreeing on the job classification procedure, a test installation was carried out by the joint committee in the Garry Works of

* See Appendix G.

Carnegie-Illinois Corporation. This was successful and the committee went ahead and classified all jobs in the various plants.

STANDARD HOURLY WAGE RATES

In May, 1946, Carnegie-Illinois Corporation and the United Steelworkers agreed on that part of the Inequities Programme concerned with the establishment of plant standard hourly wage scales, the determination and elimination of intra-plant wage rate inequities and the conversion from existing to standard wage rates.

Management laid down that the scale for any given plant would "... commence with the base common labour rate in effect . . . as the standard hourly wage scale rate for Job Class I . . . (and would) progress upward from that point from job class to job class in logical increments of cents per hour". The scale, therefore, determines the wage rates of all non-incentive jobs and represents a minimum or guaranteed wage for operatives employed on incentive work.

According to the agreement the elimination of the intra-plant equities only would have cost the companies $3\frac{5}{8}$ cents per man hour. After further negotiation it was agreed to establish a wage scale which would eliminate both intra-plant and inter-mill and corporation inequities. In January, 1947, a single uniform type of standard hourly wage scale was introduced in all the companies plants. This cost the companies another $1\frac{1}{2}$ cents per man hour—making $5\frac{1}{8}$ cents per man hour in all.*

It will be noted that the job class differential is 3 cents per hour and that job class 30 is slightly more than twice the basic labourer's rate. Operatives with wages less than those to which they were entitled according to the scale had them increased up to the scale, but operatives in receipt of wage rates or earnings in excess of those determined by the scale were to be eliminated through the process of normal labour turnover. As and when an operative left a job the newcomer would be paid according to the scale.

Within three months it was clear that the wage rate scale had not met union members' expectations because the union negotiated an increase in the basic labourers wage—from $96\frac{1}{2}$ cents to \$1.09 and an increase in the job class differential to 4 cents per hour. In 1948 the union negotiated

* (The Job Classes 1-30 with the appropriate wage rates are shown in column A in Appendix H.)

another increase in both these factors—the minimum rate to \$1.185 and the differential to $4\frac{1}{2}$ cents. Moreover it was agreed to add another two job classes—31 and 32. All of which emphasises the fact that there is nothing final or static about a wage scale just because it is based on job-evaluation principles. Job-evaluation may be useful in introducing balance into a wage structure but there is nothing sacrosanct about the results—if trade union organisation is strong.

In conjunction with the job-evaluation programme covering production operatives in the basic steel section of United States Steel similar steps were taken to evaluate jobs and eliminate inequities among the craftsmen and skilled maintenance personnel.

An almost exactly similar procedure was carried out; their jobs were described and classified in the same way and their hourly wage rates were determined by the same scale. The only difference lies in an arrangement whereby a new starter is paid an hourly rate two job classes below an intermediate rate which is in turn two job classes below the standard rate for the job. A new starter is required to be employed 30 days before being promoted to the intermediate grade and another 30 days before reaching the fully skilled grade which entitles him to the standard rate.

Apprentice craftsmen or tradesmen are awarded job class numbers, according to the number of training periods (of 1,040 hours duration and equal to six months' normal working-time) they have served. The highest job class to which they can attain is ten in their eighth training period.

A detailed method of apportioning additional job class points for group leaders has also been arranged and provision made for up-pointing operatives employed on spell jobs—those in which they take over partial responsibilities temporarily.

UNION APPRAISAL OF JOB-EVALUATION

The April, 1947, agreement acknowledging the elimination of inequities in U.S.S. stated that "no grievance . . . alleging a rate of inequity shall be filed or processed". Grievances would in effect be dealt with by the negotiating machinery inside the industry.

Although the union does not believe that there is any "scientific method" of job evaluation, it is convinced that the Inequities Programme in the steel industry comes close to an easily understood and easily applied method of establishing and

adjusting standard hourly wage rates. Not only, it claims, does the system remove inequities and rationalise the wage structure, but it greatly simplifies the process of technical change. A major difficulty in the past arising out of the introduction of new machines and processes had been the question of wage rate adjustments. Changes in job content led to wage disputes but under the Inequities Programme such a change can easily be evaluated and translated into new wage rates. If new and larger furnaces, for example, were installed in a plant, the charging machine operators' responsibility for material, tools and equipment and, perhaps, for operations, would be greater and would "automatically" lead to an increase in his job class number, entitling him to a higher hourly wage rate.

Generally speaking, the union feels satisfied about the results achieved. Steel workers now have a fair wage structure, meaning that when the new standard hourly wage rate scale operates in full, every production and maintenance man in basic steel will receive a fair wage in relation to one another's responsibilities, skills, etc. While acknowledging some of the advantages of job-evaluation we are not persuaded that it is as simple and easily understood as union officials assume—or that the system is easily "policed".

"FAIR DAY'S WORK FOR FAIR DAY'S PAY"

The new hourly wage rate structure having been established, the companies are now pressing for an undertaking of what they contend is the main phase of the job evaluation programme. This is the establishing of principles for the determining of a fair days' work on the job, the adjusting of existing incentives and the setting up of new incentives. Extensive time study procedures have already been developed by the companies who hope that a joint committee with the union will soon be set up.

Neither management nor union consider that time study offers an absolutely precise measurement of work—they recognise the substantial amount of human judgment required. Nor do they consider it possible to set up synthetic time studies with any degree of accuracy. In any case no operative or union representative would accept a synthetic or "paper" time study. The union is always willing to try out incentives, which are invariably based on time studies, but reserves the right to test the fairness. The actual acceptance

of a time study depends largely on the attitude of the Local concerned.

The union had not at the time of our visit agreed to the setting up of an incentives inequities committee despite the companies' hopes. In fact, it had not decided what attitude or policy to adopt towards work measurement generally. It is well aware that acceptance of time study standards applied to incentives jobs could easily be extended to the hourly wage rate system. It said it was "bogged down" by the definition of "fair day's work for a fair day's pay" as propounded by the companies. This could only be taken to mean that the union is afraid that once they agree to any so-called standard of "fair day's work", or a performance standard related to hourly wage rates, a rigidity will be introduced into the wage and work performance structure which will considerably reduce their opportunities for collective bargaining. An acceptance of such standards under present circumstances is, the union considers, a threat to employment because the United States Steel Corporation is not concerned with a continually expanding output but is trying to stabilise production at a decreasing unit cost with a reduced labour force.

To date more than 200 new incentive schemes have been installed (since the 1947 agreement). Fundamentally, however, the union believes that its members should work with due regard for health, comfort and safety and that the benefits of increasing productivity should be shared by everyone in the company concerned. Although no exception has been taken to the introduction of incentive schemes the union is conscious that those men in lower classification groups could make considerably higher and disproportionate wages if employed on piece-work.

UNION HANDLING OF PLANT PROBLEMS

The union is aware also that owing generally to American managements alertness in introducing new machinery and improved methods there will be a constant need to evaluate or change jobs. Technical developments are, it feels, highly desirable provided its members' interests are considered.

When a grievance is submitted for settlement in a small plant (this applies to incentives, where time studies are used, as well as to non-incentive jobs) a grievance committee-man is assigned to the task. In carrying out his duties he takes time

off from his regular work and is compensated by the union members on whose behalf he negotiates.

In other instances men have been trained at special schools at company expense and are now employed solely on time and motion and job-evaluation studies. Although paid by the company, they act on behalf of the union.

Another practice receiving increasing attention is for a Local to employ a full-time technical officer paid by and responsible to the Local alone. Assistance is also rendered to Locals by the 32 union District Committees which have staff representatives specially trained in job-evaluation. Sometimes they make time and motion studies with management engineers but usually their job is limited to handling appeals on rate matters and advising local committeemen.

RESEARCH DEPARTMENT

As stated previously, the union's Inequities Committee has become an Inequities Department and as several members of the committee are capable production engineers they assist Locals on special technical problems from time to time.

The union's separate Research Department assists in wage matters by supplying economic information and statistics. When we were at the union headquarters in Pittsburgh, Pen., two Local officers were discussing with research officers a problem arising out of the recent pensions agreement. The Local's company, a small one, was unable to meet the immediate costs which would be incurred. A scrutiny of the company's books and accounts persuaded the union officers that that indeed was the case. The Local officials and the Research Department were therefore working out a scheme acceptable to all concerned until such time as the company could meet the full commitments of the pensions agreement.

SUMMARY

The United Steelworkers of America is an example of a union facing up to alert and progressive employers whose industry is in a rather more monopolistic position than most in the U.S.A. Moreover, owing either to the excess of production capacity or to restricted output, industrial expansion and the provision of new employment opportunities are limited.

The union has co-operated with management to a remarkable degree in the implementing of a job evaluation programme, which has completely

rationalised the wage structure of a very large section of the steel industry. Despite this the union does not subscribe to the "scientific basis" of job-evaluation, merit rating or time study and has demonstrated the need for collective bargaining in all forms of "scientific management" in order to safeguard union members' interests.

Having obtained reasonable wage levels and established suitable wage differentials, the union is being pressed to consider the determining of fixed work loads or standards to establish a "fair day's work for a fair day's pay".

International Association of Machinists

The International Association of Machinists caters for workers in the engineering industries. Following a jurisdictional dispute in 1945, the Machinists severed a 55-years' affiliation with the A.F. of L. although relations remain good and the union hopes to re-affiliate in due course. In the meantime it has no direct association with any central trade union organisation.

Basically, the Machinists is a craft union. Owing to the trade union legislation of Roosevelt's New Deal, however, which introduced plant representation elections, the union's membership includes workpeople who would not normally be catered for by a craft union. Membership has declined slightly from the wartime peak of 700,000. How the Machinists and other unions compete for members is well illustrated in the November 17, 1949, issue of *The Machinist*, which comments on an election at the Boeing Airplane Co., Seattle. Here the Machinists won at the expense of the Teamsters Union which protested to the National Labor Relations Board.

The organisation of the union is maintained through District and Local Lodges—the District Lodges being comprised of delegates from the Local Lodges. Both types are empowered to negotiate minimum wage rates and scales in their localities. At present, the union has 12,000 current agreements with 10,000 employers covering more than 2,000 industrial classifications.

The Machinists have a well-established research department in which they employ professional personnel. Emphasis was laid on the desirability of recruiting trade union members who have been through college and obtained degrees. This also applies in the Educational Department; and a lawyer has been engaged to deal with matters arising from the Taft-Hartley Act.

ATTITUDE TO "SCIENTIFIC MANAGEMENT"

The chief feature emerging from our talks and discussions with the Machinists' union, relating to industrial activity generally, was the discrepancy between official union policy and the day to day policy as carried out at shop floor level. Particular reference was made for instance to Sections 4, 5 and 6 in Article J of the union rule book.

"Sec. 4 Any member of the Local Lodge who refuses to do any kind of work belonging to the trade because it is rough or dirty shall be subject to fine or expulsion.

"Sec. 5 Members of Local Lodges shall discourage the working of overtime.

"Sec. 6 In shops where it is not now a practice no member of a Local Lodge is permitted to accept piecework, operate more than one machine, or accept employment under the premium, merit, task or contract system. Members found guilty of advocating or encouraging any of these systems in shops where they are not now in operation shall be liable to expulsion."

The union stated also that it is opposed to time study, this policy being the direct outcome of its experience with the early Taylor and Bedeaux systems of "scientific management." In initiation ceremonies new members swear to oppose the introduction of time study, incentive schemes and piece-work as outlined in the rule book. Incentive schemes, the union asserts, make cheats of supervisors and operatives alike and piece-work encourages inferior workmanship. Instead of individual operatives claiming the benefits of increased production as with piece-work, greater justice is served by embodying the benefits of increased productivity in general wage claims.

When the Machinists win a plant election one of their main objects is to introduce worker participation through joint consultative committees. This does not mean participating in setting up work standards which it is felt would eliminate collective bargaining.

In spite of this official opposition to time study and "scientific management" it was apparent from discussions with the union's technical officers that a different attitude is adopted on the job. If a Lodge, for instance, is persuaded by management to accept the installation of a job-evaluation scheme, headquarters may send an officer to dissuade the Lodge. Should the Lodge be adamant then a technical officer would help them draw up the contract and check job descriptions and classifications.

Nor is the rule on rough, dirty and uncongenial

work consistently pursued by union engineers. In their opinion, too many members tolerate bad working conditions and particular hazards provided compensating allowances are paid. This attitude did nothing to remove the bad conditions; in fact, vested interests were frequently created tending to keep production costs unnecessarily high. Union engineers are trying to instil into local leadership (and into employers) a more positive attitude towards this problem, in the belief that a refusal to accept bad working conditions presses management to remove the unpleasantness, discomfort and possible danger attached to a job. Production costs are thereby kept down and a company is enabled to maintain a better competitive position.

Normally, union technicians do not survey plants with the intention of re-arranging work flow and plant layout. Sometimes, however, surveys are carried out to prove to the employers concerned that improved efficiency can lead to lower production costs sufficient to meet wage claims.

TIME STUDY

The Machinists' entry into the production engineering field developed gradually but was accelerated during the war when the War Labor Board restricted wage increases. In looking round for alternative ways of increasing earnings other than by conventional methods the union "resorted to time study". By reducing aggregate labour costs through introducing efficient production methods, union technical officers were able to increase members' earnings throughout the industry by 40 per cent.

The copy of the supplementary agreement negotiated by the Machinists (as shown in Appendix J) is understood to be fairly typical and is an indication of the extent to which the union is committed to "scientific management." The terms are not necessarily those advocated by the union, and in negotiations the union does its best to "bargain away" clauses which it dislikes and failing that does its best to ignore them.

It is clear that the Machinists' union is not tied to any one theory of time study methods or concepts. Officially, it is opposed to time study and work standards; but in the supplementary agreement will be seen the acceptance of a normal or standard performance determination through the usual concepts of card dealing, typing and walking.

Work standards measured in units of work—60 per hour—seem to be a fairly rigid definition assuming there is no disagreement about the amount of work that can be performed in a minute. In this respect, the concept of the normal pace no doubt plays its part. Some tolerance is obviously conceded as the 18 per cent allowance for fatigue, personal needs and non-standard job items seems to be higher than in the automobile and other industries.

In further discussions it was stated that the concept of a “norm” is a factor which should be negotiated with reference to the particular plant concerned and should not be the result of an arbitrary decision by management. Even that concept was modified when the union added later that the “norm” was the average of the industrial output per man in a factory. It can only be supposed that the union’s technical officers use, or are obliged to use, whatever time study definition or formula their bargaining strength will permit.

If an employer changes or modifies a job the union takes the view that only that element of the job which has been altered should be restudied and timed—that there is no justification in completely restudying a job. When a change in a job standard does take place the usual practice is for the company to allow five per cent on the new standard for a five-day period to enable the operative to achieve the new production rhythm. The allowance is designed to overcome the natural resistance of employees to the introduction of new machinery and production methods.

JOB-EVALUATION

Job-evaluation schemes, many of them originating from the NEMEN Plan formulated about twenty years ago, are widely used by management in the engineering industries. Before the days of strong trade union organisation spies were frequently engaged by engineering employers to break up trade union organisation and activity to restrict bargaining strength. These tactics had been successfully resisted by the union but now employers are seeking to use “scientific management” techniques with, the union thinks, the same object.

The Machinists refute any suggestion that “scientific management” limits normal collective bargaining procedures. Job-evaluation in fact, has often been used to the union’s own advantage as it is not unappreciative of the rationalising

and balancing influence on wage structures and work loads. The union often tries to negotiate a job-evaluation scheme where none exist and to put it on an hourly basis to offset the continual management demand for piece-work.

The NEMEN Plan has, the union stated, a twelve factor job classification procedure—some-what similar to that used by the steel industry—for determining point values of jobs. But the union is concerned only with five factors of which the principal two are:

- 1 The judgment which a worker exercises.
- 2 The manual skill required.

The other three factors are:

- 3 The hazards involved.
- 4 The physical demand.
- 5 Working conditions.

If the bulk of the job classification points are accounted for by these five factors the technical officers are not unduly concerned about other factors.

As with the Steelworkers, the Machinists recognise the need in job-evaluation for accurate and detailed job descriptions before classifying jobs, although the ranking of jobs into eight grades is considerably less than considered necessary in the steel industry. The maintenance of a wage differential of 100 per cent between top and bottom levels, between the tool maker and the sweeper-up (typical of American plants) is higher than normal British standards.

Where job-evaluation and wage systems are established the union is conscious of the need to set up committees to keep a close watch on them. When setting up such committees, the union’s practice is to select three shop men from six nominations submitted by the men in the plant. When drawing up union-company contracts, efforts are made to get management to instruct shop committeemen in the technicalities of time and motion study and the operation of the job-evaluation system in use in the plant. Six weeks were thought to be long enough for this instruction, after which the committeemen attend a union course of instruction which emphasises the labour viewpoint. A point to be considered, the union contends, is the possibility of shop committeemen “learning too much and going over to the management side”. In one case a shop committeeman after six weeks’ instruction left his work and established himself as an industrial consultant!

A particular feature of the Machinists' Educational Department is the publication of handbooks for the use and instruction of shop committeemen. These handbooks, dealing with grievance procedure, relations in the plant, etc., are of a very high standard.

INCENTIVES

Considerable importance is attached to the pace of a job and no operative, it was stated, should be obliged to work an incentive system at the incentive pace. Operatives should be free to adopt a voluntary pace which would, of course, reflect itself in earnings. Where incentive schemes are in operation sub-standard performances can only be cited by the company. Incentive workers cannot be dismissed for such performances and the question must be handled as a grievance with the union which might agree to place the operative concerned in a more appropriate job. If on the other hand a worker spoils piece rates by consistently producing more than the time study suggested as feasible the Local would not hesitate to tell him not to "kill the job".

As a rule the Machinists try to establish hourly

wage rates as minimum or guaranteed wages for piece-workers. Incentives it is felt, should permit opportunities for operatives to earn 25 per cent above the minimum rate. Owing to some top grade workers, such as tool makers, receiving high hourly wage rates they are frequently left out of incentive schemes.

Incentive payment schemes were in operation in two plants we visited. In both cases they had been established with union consultation and participation and the details written into the union-company agreements.

SUMMARY

The attitude of the International Association of Machinists towards production engineering may be described as one marked by inconsistency due principally to a dichotomy between the official attitude and the policy adopted in day to day functioning in the field.

The union accepted "scientific management" where it encountered it, but by taking the initiative in some cases and by collective bargaining in others it seeks to maintain a useful measure of control.

American Trade Unionism: 3

VARIOUS OTHER UNIONS

THE following summaries of union production engineering activities and co-operation or participation in increasing productivity are brief because we did not have as much contact with the unions concerned as with those mentioned in earlier chapters. With other unions which have research departments or employ production engineers, we had either no contact or no opportunity for discussion.

Building Trades

In America the building and constructional industry, like its British counterpart, is organised on a craft basis. Mechanisation, new materials and new methods of construction, however, are continually entering into every phase of production. There are about thirty trade unions organising in the industry and in the large towns and cities trade union organisation reaching 90 per cent or even higher is not unusual.

The A.F. of L. has a Building and Constructional Trades Department which co-ordinates their interests in respect of government legislation and also examines trends in the industry. Wages, considerably higher than in the mass production industries,* and working hours and conditions are usually negotiated on a local or district basis. In some cases negotiations are conducted by a joint union board or trades council.

In spite of modern development, the industry, like other highly unstandardised skilled work, does not lend itself to the use of time study and other "scientific management" techniques.

The main drive for increasing productivity comes from the employers who, although having ample supplies of materials and fittings, plan and prepare their work well in advance to ensure smooth production without interruption. A common practice also is to set production targets.

Union participation in increasing productivity takes the form of maintaining and improving operatives' skill and refraining generally from imposing restraints on the use of new machines,

* See Appendix K for current "Schedule of established Wage Rates".

tools and building techniques. One clause of a Stabilisation Agreement between unions and employers in the building industry in Greater New York states: "They (the parties to the agreement) shall use their best efforts in the public's interest to increase production and reduce costs by maintaining maximum man hour output and to use all machinery, tools, appliances or methods which may be practical." Jurisdictional or demarcation disputes are not unknown, however, and paint spraying apparatus, for example, widely used throughout the building industry, is frequently subject to certain limitations.

Moreover, both employers and unions are opposed to any form of payment by results. To compensate for the seasonal and uncertain nature of employment, unions use their bargaining strength to secure high hourly wage rates and a short working week. Payment is normally made for public holidays, but there is no payment for an annual holiday period; nor is there any guaranteed working time or compensation for loss of work due to bad weather.

Prior to the 1920s the American building industry could rely on the inflow of highly skilled craftsmen migrating from other countries. Following the tightening up on immigration, the unions, employers and the Government have been active in establishing training schools and centres for building trade apprentices. As productivity is very dependent on the skill which tradesmen apply to their work, trade union initiative and co-operation in providing instructional facilities is a positive contribution.

In a number of large towns and cities very excellent building trade schools have been established. The International Brotherhood of Electrical Workers in New York City organise and manage an apprentices training school which is financed by grants from the employers and education authorities.

We visited the Cleveland Trades School which is governed by a committee comprised of representatives of building employers, building unions and the Board of Education and financed by

Federal and State subsidies. Considerable quantities of building materials and equipment are supplied free to the school by employers. In all cases, new training courses are initiated by joint apprenticeship committees of employers and unions. Training and instruction for teachers are provided by the Cleveland Education Authority.

Apprenticeships and entry to the school usually begin at 18 years. According to State legislation, a boy has to spend at least 144 hours each year at a training school during apprenticeship to qualify for a full apprenticeship standard. In most of the building trades apprentices have to attend school for eight hours a week for 38 weeks during each year of their apprenticeship. At the end of the course, apprentices sit for an examination and if they are not up to standard the apprenticeship may be prolonged.

Joint Apprenticeship Committees are active in most building trades in Cleveland and handle all apprenticeship questions, including wages and discipline. These committees also hold apprentices' indentures, which largely explains the 98 per cent unionisation of the Cleveland building industry. An apprentice can be transferred from one employer to another to facilitate training and instruction opportunities.

The high standard of education provided by the Cleveland Trades School may not be typical but it does demonstrate the way in which trade unions in the building industry can help to maximise industrial efficiency and individual output.

International Brotherhood of Electrical Workers

Our main contacts with the International Brotherhood of Electrical Workers were made when visiting their Local 3's Apprenticeship Training Course in New York and an electrical manufacturing company in Detroit. The union has a research department, the staff of which is experienced in time study and production engineering.

Union co-operation was well illustrated in the Detroit plant where productivity had risen by approximately 36 per cent in six years. There is no piece-work, but hourly time rates are supplemented by an "all-in" "Productivity Reward" scheme based on the weight of production per operative per hour. Due allowances are made for change in design resulting in the lightening of any particular job.

In 1949, the union's Local holding the plant

representation rights went on strike when the company declared itself unable to maintain wage levels owing to competition. The company made its accounts and costs available at the request of the union representatives who were persuaded that, in order to maintain the employment of their members, agreement to a new wage rate schedule was necessary. The agreement was signed and some changes were made in production methods; a few operatives became redundant (but were re-absorbed later) and the competitive efficiency of the company improved "beyond measure". Earnings, in fact, increased, following the introduction of the incentive scheme.

A Joint Production Committee met weekly to consider questions arising out of the production set-up. The committee was comprised of three representatives from each side—the union members being selected and appointed by union officials and not elected by union members in the plant. The object in doing this it was stated, was to get as good a plant "representation spread" as possible and "to limit the opportunities of the popular, but frequently misleading, orator". Union-management relations were obviously very good. The president of the Local was himself a paid employee of the company, and was engaged full-time in looking after the affairs of the union inside the plant where he had an office. He was, in effect, a full-time head shop steward; he had the full confidence of the members of the Local, was in daily touch with them and well acquainted with their problems. His authority seemed considerable and he could check or help to make time studies and generally act on behalf of union members on any grievances or problems arising in the course of the day's work. When difficulties arose beyond the Local's experience or ability to deal with, research officers of the international union provided help and guidance as necessary.

The preamble to the agreement between the unions and the company signed in 1948 declared: "The parties hereto believe in the following basic principles and objectives. The company and the union have the common objective of security of employment. They recognise that security of employment is dependent on the company's ability to compete successfully in the industry in which it is engaged. They recognise that the income of an employee is determined by the continuity and security of employment as well as by the hourly wage rate. To attain this objective

each party will exercise its share of responsibility in the co-operation necessary to accomplish maximum efficiency and productivity and minimise absenteeism and lay-offs."

The agreement, as far as we could judge, was being observed and we think it is a realistic appreciation by the union of the industrial conditions with which they have to contend.

Amalgamated Clothing Workers of America

It is unfortunate in many ways that we did not make greater contact with the Amalgamated Clothing Workers of America which has a membership of over 350,000 and has been well in the forefront of American union co-operation with management.

As long ago as 1928, the union started a clothing plant in Milwaukee to provide employment for members locked out by a company which had decided against the closed shop. The enterprise operated successfully for over three years and provided steady work for more than 200 of their members. Work in the plant was confined to the production of clothing for a particular firm on a contract basis, and the union was not obliged to market its products on normal commercial lines. When, early in 1932, the depression forced the firm to cancel further orders, the union was compelled to give up the project.*

Housing projects have also been successfully undertaken and in December, 1944, two of the four banks operated by unions were owned by the Amalgamated Clothing Workers. It was through these banks that the union was able to help employers to stay in business and maintain employment.

The work undertaken by the union's research department is very extensive and the staff includes production engineers who, as circumstances determine, and where employers are willing, go into manufacturing shops to reorganise the flow of work and break down work processes. They are prepared to establish production standards for their members. The union apparently is not unwilling even to recommend the substituting of machinery for manual labour. Where such changes result in redundancy, "dismissal wages" or compensation is demanded for the employees concerned. Union members so displaced are assisted to obtain work in other plants through the union's central hiring hall.

The bulk of the research department's work is concerned with broader economic issues and the

* *Monthly Labor Review*, November, 1938.

planning and operating of life and health insurance schemes for workpeople in the laundry, cotton garment, cleaning and dyeing and other branches of the industry.

Continuing research is maintained to collate average hourly earnings throughout the industries in various regions for such purposes as submitting memoranda to the Wage and Hour and Public Contracts Divisions in connection with minimum wage determination. Statements on proposed amendments to the Fair Labor Standards Act have also been prepared on behalf of the C.I.O. This has entailed considerable investigation into family budgets in different cities to determine minimum standards of living necessary for the health, efficiency and wellbeing of workpeople.

United Garment Workers of America

This union organises in an industry specialising mainly in the manufacture of protective clothing for workers and other forms of hard woven clothes. The industry, like that women's garment-making, is highly competitive and small scale. Most of the workers (some 90 per cent) are women and are mainly employed on a piece-work basis.

Time and motion studies are extensively used throughout the industry but the establishing of work load standards appears to be the prerogative of employers, the union contenting itself with the passive attitude of checking the reasonableness of standards rather than initiating them. As is true of all American unions, the United Garment Workers does not accept time study and job-evaluation as "scientific methods" of measuring work and is concerned to protect its collective bargaining and negotiating rights.

The union has a research and production engineering department with a qualified staff who figure largely in the settlement of piece-work operations. Piece-work committees are established in most shops and factories to deal with questions on the spot and, in most agreements, grievance procedure is well detailed. In the union's opinion, the examination of the members' productive output is the only way of ensuring their protection and economic advance.

United Mine Workers Union

No industry more clearly illustrates the difference in the rates of industrial productivity between Britain and America than does coalmining. The higher output of the American miner (something like four to five times as much coal per shift as his

British colleague) is attributable to the superior natural conditions in the American mines and the high rate of mechanisation and the partial rather than complete extraction of the seams as in British mines. Wage rates, welfare and pension rights enjoyed by the miners, are moreover, among the best in the country. They have been obtained by tremendous struggles between the union, headed by John L. Lewis, and the employers, sometimes to the discomfort of the public and the Federal Government.

The union does not claim to co-operate in the application of "scientific management" techniques in the industry's high rate of productivity, but the pressure exerted to improve their members wellbeing is undoubtedly one of the major reasons for the high rate of mechanisation. Another important pressure on coal production, and one that demands mechanisation and maximum efficiency, is the competition of oil, natural gas and hydro-electricity. The efforts of the Mine Workers to rationalise the industry indicate an appreciation of its economic vulnerability. It is better, the union contends, to achieve maximum competitive efficiency and offer good wages and conditions to a decreasing number of miners than to try to maintain security of employment for a given labour force irrespective of the economic circumstances of the industry.* The machines and power available to American miners, including the central highly mechanised surface coal cleaning plants, means that the labour force is reduced to an absolute minimum but individual hourly output is high; and whilst unit costs of production are relatively low, individual hourly earnings are high.

Peterson in *American Labor Unions* quotes an instance in which the United Mine Workers accepted an offer from a company to co-operate with management to maximise efficiency in order to compete with neighbouring non-union mines which paid lower wages. Co-operative relations progressed to such an extent that the union undertook sales promotion campaigns to bring more business to the company.

Industrial Union of Marine and Shipbuilding Workers of America

Like the building and constructional industries, the shipbuilding industry under normal conditions

* This attitude is not pursued relentlessly. In the Pittsburgh area a joint committee of state, management and union representatives meet from time-to-time to

is not one which lends itself to the employment of "scientific management" techniques. We had discussions with the union's research director and visited the Bethlehem Sparrows Point Shipyard in Baltimore, Maryland. It is apparent that union co-operation in increasing productivity is not in the same category as that in the mass production or small scale manufacturing industries.

As the name implies, the union caters for all shipbuilding workpeople whatever their grade. Negotiations are usually conducted on a union-company basis. Nevertheless, strenuous efforts have been made by the union to standardise basic rates throughout the industry and they have succeeded with welders' footage rates and minimum day payments.

In the Sparrows Point Shipyard there was no straight piece-work, although this is not typical of the industry as a whole. Wages were paid on an hourly time rate ranging from \$1.175 for a labourer to \$1.75 for craftsmen and tool and die makers. First class craftsmen received \$1.57 and second and third class craftsmen \$1.49 and \$1.41 respectively. In addition to these rates there were premium rates for "dirty work" just as in British yards and there was also a group bonus scheme which permitted operatives to earn up to 30 per cent on their time rates.

There was no formal joint consultative machinery in the yard and indeed, an article in the agreement between the union and the company states: "No employee shall be engaged in any union activity or union business during working hours in a manner which shall interfere with production." There is little recognition here of the constructive part a union can play in increasing production. A useful union contribution to efficiency was their participation in the Departmental Safety Committee which, in fact, handled many matters normally dealt with by J.P.C.s. Typical of the American desire to maximise the use of labour was a clause in the agreement which lays down that management can assign to a craftsman work not usually performed by him in order to eliminate "standby" time. It is doubtful if this use of labour, when it takes place, is necessarily the most efficient. Certainly there is no pressure exerted on management to maintain a high standard of programming or organising the flow of work.

discuss the equating of the production of coal to the demand. If demand is falling, agreement is reached on a reduction in working days.

American Unions and Productivity

SUMMARY AND COMMENTS

EFFICIENT management set the pace of productivity in American industry—not because of altruistic belief in social progress, but from necessity. But necessity and circumstances vary and, consequently, all managements are not equally efficient. For this reason, the American trade unions' major contribution to increasing productivity takes the form of spurring the less efficient companies to increase their efficiency.

Unions are no more altruistic than management and their efforts in this respect are geared to the protection and advancement of their members' interests. To a certain extent, trade union policy in industry is simple and decisive owing to the fact that unions need not specifically concern themselves about *new* ways of increasing productivity. On the whole they can rely on management to do that and they are free to bargain for greater shares in the benefits of increased productivity. By helping to improve average industrial efficiency unions are assured of correspondingly higher average wage rates and earnings.

COMPETITIVE SYSTEM

Wage claims are not the only pressure affecting company profits. Competition in the U.S.A. exists in fact as well as in theory, and it is the pressure of competition which compels management to be progressive. If an employer wants to stay in business he must keep his product competitive in price and quality or another manufacturer will quickly take over his market.

Americans accept the competitive economic system, the growth of which has been favoured by the existence of an abundant supply of raw materials, a large home market and other natural conditions. The effect of the Anti-Trust legislation is to stimulate competition. In the opinion of Americans it is the willingness and ability of firms to compete with each other which have ensured the high rate of their economic expansion and their high standard of living.

GOVERNMENT INTERVENTION

Nevertheless it is doubtful if competition would

be accepted without question in all circumstances as the answer to every social and industrial problem. The assistance given to agriculture, for instance, is recognition of the value of Government intervention. Unions, too, have relied on competition to keep consumers' prices down and so increase purchasing power, but they oppose attempts to promote competitive efficiency at the expense of wage rates.

As long as American capitalism continues to "deliver the goods" in the form of a rising standard of living—and American trade unions believe in results rather than theories—there is little possibility of the idea of a carefully defined programme of social and economic planning gaining many adherents. Nevertheless, a re-emergence of mass unemployment or a falling standard of living would, we think, stimulate a trade union demand for remedial measures by the Government, perhaps on the lines of the Tennessee Valley Scheme. We have some doubts however, about the ability of the trade union movement to exert effective pressure if its organisational strength were undermined by unemployment.

PRICES AND POLITICS

Already American unions are deeply concerned that the post-war inflation has diminished the purchasing power of money wage gains. This has stimulated an interest in consumer prices and consequently an awareness of the need for more direct political action. In thus widening their activities the possibility exists that they will assume responsibility not unlike that of the British trade union movement in the British economy. The more successful American unions become in influencing their Government to direct or guide the national economy to counteract inflationary tendencies and stabilise the purchasing power of wage earners, the more they would tend to remove the pressure on management to be aggressive and progressive. In such circumstances, unions might have to rely on forces other than competition, to maintain increasing productivity.

We believe that by employing production engineers, setting up management engineering departments, gaining valuable experience in time study and other "scientific management" techniques and training shop stewards and committee men to deal satisfactorily with production problems on the shop floor, a number of unions have already gone some considerable way towards acquiring the facilities for co-operating fully in many phases of managerial functions or, if necessary, bringing effective pressure to bear on management.

LABOUR-SAVING DEVICES

Meanwhile American trade unions are seeking to extend purchasing power to provide employment for operatives made redundant by technological advance. Not all unions, we found, have similar views on the speed at which the economy should expand. Moreover, the idea of security of employment at all costs is not unknown. Nevertheless, the attitude of union leaders to the introduction of new machinery and labour-saving methods indicates an appreciation of the social advantages of a dynamic industrial pattern.

The absence of any serious opposition to labour-saving machinery and the comparative lack of union restrictive practices is undoubtedly a major contribution, if only a passive one, to increasing productivity. This attitude is predominant mainly in the new unions in the manufacturing industries—unions which, since their formation, have not felt the impact of a serious recession. The maintenance of their attitude is dependent on an ever expanding economy. New machinery is generally accepted because unions assume that redundant operatives will be re-absorbed in another part of the plant or will soon get a job elsewhere as new production is created to meet new demands. The conviction that lower prices will create a demand for more goods and therefore provide more jobs explains the efforts of some unions to keep consumers informed of the relationship between production costs and retail prices.

We are not at all persuaded that a competitive economy works as smoothly as some Americans assume if for no other reason than that prices are largely determined by the forces of supply and the power of the purse and not necessarily by costs of production. The fact remains however, that in an expanding economy employment will be increased

as a result of not imposing restraints. Needless to say, if the economy contracts for a time the opposite is likely to be true and low employment levels will result. As is well known, American booms and slumps had higher peaks and lower depths than those in Britain.

REDUNDANCY

American machine operatives, like their colleagues in Britain, are concerned with the how, when and where of their job rather than with broad economic aspects and the possible social benefits of technological advance. Individual fear of redundancy arising out of the introduction of new machinery is, therefore, frequently offset by the generally established rule of seniority where the "last one in is the first one out." The operation of this rule suggests that the high rate of American productivity is not attributable to the fear of unemployment. If a worker's dismissal is not in accordance with the rule or not covered by the terms of the agreement a union will most certainly take up the matter as a case of discrimination or victimisation.

The seniority rule may also penalise young and able workpeople but it limits nepotism and favouritism and ensures employment for operatives who might have difficulty getting jobs elsewhere owing to their age. Moreover, "dismissal pay" or compensation, designed to break down resistance to innovations, is finding favour with many unions and companies. Where changes are proposed in work standards in the engineering industries, a common practice is to allow 5 per cent of total time for a week to compensate the operative for any temporary losses which might be sustained.

VIEWS ON PROFITS

American unions' attitude to company profits is typical of their acceptance of a capitalist economy. However high, profits, at least in competitive industry, are not regarded as immoral or a social evil; indeed they give proof of solvency and assured employment. Usually, high profits are considered a sign of efficiency and relatively high output per man hour, and the main concern of unions is to obtain a fair share of them. Unions drive the best bargain they can with the most efficient and profitable company in an industry and then bargain with other companies to obtain similar wage rates or piece prices. Profitable

companies are able to pay high wages and are often reluctant to provoke strike action which might jeopardise immediate market prospects. Less efficient firms, therefore, tend to be under dual pressure—from unions and customers. Bearing the same expenses for wages and raw materials as more efficient firms, they are obliged to accept lower profit margins. If efficient companies decide to reduce prices or pay higher wage rates, the inefficient find the situation embarrassing, provided the unions concerned are strong enough to enforce their claims. Thus, the differences between the efficiencies of the best and worst companies are comparatively small and average productive efficiency in the U.S.A. is high.

WAGE BARGAINING

Union-company wage agreements and an expanding economy are inseparable in the U.S.A. Unions recognise that some companies will always be ahead of others and will continually improve their efficiency to increase profits. They contend that if they bargained on an industry-wide basis they would have to accept the wage rates and working conditions obtainable in the worst, or at most, average companies. This would enable efficient companies to make unreasonably high profits, remove part of the pressure on them to continue to improve their efficiency and deprive operatives of a share in the gains accruing from the higher output per man hour. To try to force an industry-wide bargain at a level determined by the profitability of the best company is considered unrealistic and impracticable.

Under union-company bargaining, wage rates and piece prices vary between companies in similar industries. Theoretically, a union is always striving towards similar rates throughout its industry in that having secured good rates with the most profitable company it tries to lift wage rates in others to that level. Meanwhile, the efficient companies have again increased their output per man hour and profitability, and the unions then start the rounds again.

There are exceptions to union-company agreements. The United Mine Workers in particular, have an agreement covering the whole industry. In the steel industry the implementing of the Inequities or Job Evaluation Programme approximates to an industry-wide agreement. Both these industries have an excess of productive capacity and further expansion of employment is

unlikely or limited, which implies that union-company agreements and “divide and conquer” tactics are applicable only in an expanding economy. The International Ladies’ Garment Workers’ Union stated that the only time they thought in terms of industry-wide wage bargaining was when trade, other than from seasonal causes, was declining. They then sought to “dig their heels in somewhere” at a wage level which they knew the whole industry could meet.

SYSTEMS OF PAYMENT

The growing strength of American trade unions, especially in the highly mechanised industries, is indicated by their success in forcing a changeover from piece-work to high hourly time rates. Only 30 per cent of the operatives in manufacturing industries are at present on piece-work or incentive wage systems. The preference of unions for time rates is based on three factors. First, their dislike of the abuses which inevitably creep into the allocation of work; second, opportunities for securing high incentive earnings are limited because work pace is often determined by the speed of machinery or assembly lines; and third, earnings which depend on individual output enable employers to shift their business risks on to their employees.

This last point is of interest because it shows that American unions, in spite of relying on competition to keep consumer prices down to economic levels, are anxious to prevent competition operating at the expense of wage rates or earnings. It is tempting to assume, in view of the close union-management relations in many industrial plants that unions would readily co-operate in reducing wages if competition threatened to close down the company. This is not impossible, but highly improbable. Unions will co-operate to increase wage rates or earnings, but will fight strongly against company attempts to improve their competitive position by reducing wage rates. A company threatened by competition is proof that some other company has greater productive efficiency and, unions contend, it is up to the threatened company to reduce unit costs through improved production methods.

PIECE-WORK RATES

Some unions prefer straight piece rates. Where piece-work systems operate there are often substantial guaranteed base wage rates; and, as

opportunity permits, unions negotiate piece prices in terms of earning opportunities. Consequently, piece prices for similar jobs in different plants are likely to vary in inverse proportion to productive efficiency, on which earning opportunities depend. As this can only lead to higher unit costs for the less efficient companies there is constant pressure on them to improve. This pressure depends largely on the strength of trade union organisation in the various industries which are usually highly competitive and small-scale and involve high percentages of skilled work, the pace of which is not controlled by machines or assembly belts.

Most American unions are opposed to individual or group bonus arrangements and to profit-sharing incentive schemes. They regard them as tactics for avoiding increases in basic rates; "all round" wages increases are preferred to give all operatives in a plant equal benefit from increased productivity even if the increase is confined to one department or section of a plant. Theoretically, therefore, a union hands over to a company the benefits accruing from increased productivity between the time new methods come into operation and the time the union's claim is met. Unions are not unaware of this disadvantage, but feel that it is outweighed by the advantages of a unified plant wage structure which enables them also to hold the loyalties of their members.

WAGE DIFFERENTIALS

Characteristic of American wage structures are the range and number of wage differentials. The difference between top and bottom wage rates in many agreements is as much as 100 per cent. Average differentials are greater than in Britain, and there may be anything up to 60 different rates operating in one plant.* Many of these wage scales give the impression of having been calculated on a "scientific" job-evaluation or merit basis. This may be true of the steel industry and many plants in engineering industries but, by and large, the scales are built up over the course of time, often in conformity with rates operating in the area.

It is impossible not to feel that these company wage rate scales (not wage levels) are much more rigid than in Britain. Where one union negotiates the wage rates of all the operatives in a plant this

* In the many plants owned by the United States Steel Corporation employing 160,000 workpeople there were 25,000 different wage rates before the Inequities Programme was introduced.

is perhaps to be expected. It is much easier for one union to maintain wage differentials than for a number of unions all seeking to serve the best interests of their own members.

SCIENTIFIC MANAGEMENT

It should be clear from a previous section of this report that American trade unions are strongly opposed to any suggestion that time study and other aspects of "scientific management" are methods of measuring or evaluating work with mathematical certainty. The main reasons for this opposition are to provide protection for their members against the widespread abuse of "scientific management" techniques and to destroy the implication that time and motion study, merit rating and job evaluation, on account of their alleged "scientific basis," eliminate the need for collective bargaining.

TIME STUDIES

In our opinion, American unions have proved beyond doubt that it is impossible with the facilities at present available to calculate with unquestionable precision the average time it should take an average operative to perform a specific job. Even in the use of the stop watch—the most objective part of time study—unions have sufficient evidence to show that far from being accurate, the method has a margin of error of at least 5 per cent, especially in the case of small job element times. Nor is it possible, unions contend, to determine accurately whether an operative is working at 80 per cent, 100 per cent or 110 per cent of "normal pace" or to make "scientific allowances" for fatigue and rest.* Time studies provide nothing more than rough guides to collective bargaining. They can bring a sense of reality into negotiations but they do not provide the undeniable facts of a situation. Collective bargaining is maintained by law and is the rock on which American trade unionism has been built. It is not a base which will be lightly surrendered however "scientific" management becomes. The important point about the impossibility of obtaining unquestionable precision when using time study to measure work is that if accuracy cannot be guaranteed to within say 5 per cent and the per-

* There is reason to believe in fact that the average discrepancy of time study engineers when rating or levelling similar jobs is greater than average difference in the pace of the operatives being time studied.

centage of a wage claim to existing earnings is less than 5 per cent then there is no point in accepting time study results as a reason why the claim should not be met.

In thus disproving the scientific basis of time study, unions have largely eliminated opposition to its proper use, as it no longer constitutes a threat to collective bargaining and hence to trade union organisation. Any restraint on the introduction of new machinery or processes on that account has been minimised. In any case, it is doubtful if many unions were in a position to prevent time studies being made but there is a world of difference, as far as industrial relations are concerned, between judging time study on results and opposing it in principle. Whatever may have been the attitudes of unions to Taylorism and Bedeauxism, today they generally recognise the need for some method of measuring work—either to determine the quantity of work that can be reasonably performed in a given time or the price to be paid for performing certain fixed tasks. Clearly, these two questions are of fundamental importance to all trade unionists and they reflect the different approaches of American trade unionists to the development of “scientific management.”

ONE APPROACH TO INDUSTRIAL EFFICIENCY

Most unions play a passive rôle in which they put no obstacles in the way of a management's wish to make time studies. Time study in fact, is regarded as a tool of management. But unions reserve the right to question and check time studies, especially if there is any risk that operatives may be called upon to work at a pace which causes undue fatigue. This approach has been developed in the highly mechanised industries, in which there has been a considerable change-over from piece-work to time-work, so that earnings are not related directly to output. What is happening we think is that unions are not intervening when time studies are being made, except in cases where it appears that an attempt is being made to use the studies as a means of re-introducing the iniquities of the old piece-work systems that the unions fought to remove in the 'twenties and 'thirties.

Sooner or later (provided there is no worsening of the economic situation and in management-union relations) unions will, we think, have to

accept work standards in spite of their present determination not to do so. A “reasonable day's work” to all intents and purposes is a standard, although a very flexible one, and is no less abstract than the concept of a standard working pace being equal to a man walking at three miles per hour or a girl typing forty words a minute, which unions tend to denounce as unrealistic. Eventually, management and unions will adjust time study ratings and the “reasonable day's work” until they produce nearly similar results. Then, the passive attitude of the unions to time study is likely to disappear. Already some unions find it convenient to make their own studies—presumably to get some idea of what constitutes “a reasonable day's work.”

A particular feature about the concept of “a reasonable day's work” is that it precludes opposition to new production techniques. Changes in production methods are not used as an excuse for presenting wage claims. Operatives, although perhaps working differently will work no harder than previously. Wage claims therefore are based on “ability to pay” or increased productivity or higher costs of living and not on the complicated or strenuous nature of the work. When unions find that their members are working in conditions which cause undue physical strain or discomfort, they do not lodge a claim for extra pay in the form of allowances. Instead, they seek to secure the breaking down of the job into simpler functions.

ANOTHER APPROACH

Another approach (as developed, for instance, by the International Ladies' Garment Workers' Union) is really an advanced application of the first in that the union frequently co-operates with management in the setting up of work standards. The union is prepared to time study a job and then bargain with management on how much shall be paid for it. Thus output and earnings are directly related.

As yet this approach to the use of “scientific management” techniques is confined to industries where output is not controlled by the speed of machinery although it may be determined by the flow and availability of work and general efficiency in a factory. The similarity to the first approach becomes apparent when the flow of work is not considered adequate to permit normal earning opportunities. The union then attempts to raise piece prices, both to provide better weekly

earnings and to press management to increase efficiency.

It seems to us that in this approach the union is making a very positive contribution to industrial efficiency. Management can no longer set piece prices according to the value of a manufacturing contract. On the contrary, estimates are based on known piece prices plus materials and overheads. Competitive efficiency can only be achieved by improving production methods. And the I.L.G.W.U. will not hesitate to tell an employer how to improve those methods if adequate wages are not being paid or if employment is threatened by his being forced out of business.

DISSEMINATION OF "KNOW HOW"

As stated previously, unions seek to obtain high wage rates or good earning opportunities from profitable and efficient companies and then attempt to secure similar terms from other companies. If a company protests that it cannot meet a wage claim, unions will point out that better production methods would enable them to reduce costs sufficient to pay the claim. In this way unions disseminate production "know how." From information and experiences gained in previous negotiations, they can suggest methods and machinery used by the highly efficient companies to improve efficiency in a plant. The pressure exerted by unions in this fashion can be much more effective than the information gained by management from their technical associations and trade journals.

JOB-EVALUATION

Job-evaluation schemes are used fairly extensively throughout American industry and whilst the Textile Workers Union (C.I.O) is opposed to them other unions seem willing to accept them. The obvious feature about job-evaluation, where it is carried out on a "scientific basis," is the need for union vigilance. Not only are wage levels and differentials determined for all plant jobs but the various duties attached to each job are scheduled. Considerable rigidity therefore tends to be introduced. Collective bargaining may play a big part in drawing up the initial scheme but there is much less scope when it is in operation and when production methods continue to change and develop.

The claim made for job-evaluation is that it removes any possible opposition to the introduc-

tion of new processes and machines. A new job is evaluated in terms of such factors as skill, responsibility, training and experience, effort and working conditions. A wage rate is then paid in accordance with the total points merited. This will operate successfully no doubt provided no one is "down pointed." But if a process is considerably simplified its points value could be lowered. American operatives accept new labour-saving machinery without demanding an increase in wages but would protest if wages were reduced "just because a job was simplified." Simplification might, in effect, reduce earning opportunities although the reduction could, of course, be offset by all-round wage increases based on higher plant productivity.

Job evaluation however, offers a method of wage rationalisation within a plant that would be difficult to obtain by other means. The establishing of wage differentials gives a balance to wage structures which satisfies demands for recognition of skill and training. Moreover, as the schemes are based on time rates and the need to maintain differentials, there is a tendency for wage claims for increased productivity to be made on behalf of all operatives in a plant and not only for those working on production.

The administrative work involved in carrying out these various industrial functions is considerable and some unions use punched card systems to maintain records and build up case histories and work standards.

EDUCATIONAL SCHEMES

The extent to which instruction in time and motion study techniques is given to workshop representatives is to be admired and must be of incalculable value in handling and smoothing out production disputes and grievances "on the shop floor." Unions in the main provide their own teaching facilities and do not rely on outside authorities. They are very suspicious of instruction obtained from management sources and from most technical colleges and universities.

JOINT CONSULTATION

The establishment of production and management engineering departments and the engaging of economists and other specialists, the nature of their work and the extent to which trade unions are organised on a plant basis emphasise the strong industrial role played by American unions.

A fact we found surprising therefore was unions' lack of interest in formal joint consultative machinery, especially as many of them seem well qualified to make an effective contribution to plant efficiency through such machinery. The truth is that most unions do not expect or, we suspect, want to be consulted about the running of a plant. Management, in effect, can do what it likes within the terms of the agreement, but whatever it does is subject to consideration by the union which then decides on appropriate action. There is nothing restrictive in this attitude, even if it is not co-operative. The job of managing is left to management. Not all unions share these views and some feel that the efficiency of their industries could be improved through formal joint consultation. These views seem to exist where unions have highly developed technical services and experienced personnel and where there is inefficient non-progressive management.

The absence of joint consultative machinery does not mean that union-management relations are necessarily "distant." In fact, we got the impression that relations generally are better than in many British factories. Where a plant is organised and union representation upheld by law the employer seems to take the attitude of "Well, they're here—we might as well make the best of it!" Where organisation is weak and no negotiating rights are held unions get very little quarter.

SHOP STEWARDS

Industrial or plant trade unionism avoids the overlapping and duplicating of union authority and leads to greater operational efficiency in a

plant. Shop stewards in an American company are elected local officials and higher ranking officials are working or closely associated with that particular company and management. We were greatly impressed with the practice in many plants of companies engaging union officials or shop stewards on a full-time basis, looking after the affairs of the union with particular regard to day-to-day production matters inside the plant. Any suggestion that such officials in dealing with management lose the confidence of union members is cancelled out by the fact that the officials are elected annually and that their continued stewardship depends on retaining the trust and confidence of the members.

To a large extent matters often dealt with by joint consultative committees in Britain are in the U.S.A. written into union-company agreements. Dispute and grievance procedure, usually well detailed is also written into agreements. Questions concerning redundancy and promotion are being increasingly covered by the insertion of seniority clauses. Problems on the whole can be dealt with immediately and there is no need to report to anyone outside the plant unless a problem becomes so big that the international union representative has to be called in. The important thing is that plant policy is Local policy and problems concerning wage rates or piece prices can be settled without reference to national and other agreements. This tends to make the Local a compact working group alive to company techniques and sensitive to its economic stability and conscious of the need to maintain maximum efficiency in production.

Problems of British Trade Unions

SUMMARY AND RECOMMENDATIONS

BRITISH trade unions can learn from American trade union experience. Equally, we are convinced that American unions could learn something by studying our methods and attitudes, particularly in the field of politics and working class education.

One of the difficulties of utilising American experiences, however, is the considerable difference in the industrial and economic environments in which the two trade union movements operate. Many differences will have become apparent in the reading of this report.

DIFFERENT CIRCUMSTANCES

The United States of America has not experienced a post-war economic situation calling for a policy of wage restraint on the part of trade unions. Nor is there full employment, as we understand the phrase, in the United States. Moreover, owing to the size of the home market and the comparatively small percentage of American industrial capacity employed on export production, there is not the same urgency as in Britain to keep prices down—provided wages are not left behind. Britain has to keep prices down, not only to maintain a high standard of living but to compete effectively with other countries in order to secure imports of foodstuffs and raw materials on which full employment and the standard of living depend.

British trade unions, in voluntarily adopting a policy of wage restraint, accepted obligations and responsibilities far beyond anything contemplated in America. By securing wage increases, American unions compel management to improve industrial efficiency. British unions, as things are at present, expect increased wages, or lower consumer prices, to follow increased productivity. For too long, too great a section of British management has not been willing to face up to the need to become thoroughly efficient and progressive.

AMERICA'S ADVANTAGES

We do not ignore management's problems. The scattered and small-scale nature of Britain's

foreign markets often prevents integration with home production and does not permit the long production runs enjoyed by American industry which encourages greater specialisation and the breaking down of jobs into simple unskilled functions. Americans also enjoy, almost without limit, varied and high quality raw materials obtained without the difficulties created by foreign politics and trade agreements, quotas, tariffs and exchange rates.

An added advantage to American industry is that their operatives are provided with mechanical power amounting to two or three times that available to their British colleagues. This factor alone does much to explain the differences between American and British rates of productivity and is largely a reflection on past British management. It is a problem which can be overcome but the speed with which it can be tackled is limited by present shortages of power, capital equipment and manpower. Under conditions of full employment, increased capital goods production can be achieved only at the expense of the production of consumers' goods or by increasing output per man hour. There is, therefore, the utmost urgency to make the most effective use of existing manpower.

WAGES AND PRICES

Within conditions of full employment it is very doubtful if wage increases secured by British unions (presumably on an industry-wide basis) would necessarily lead to an increased rate of mechanisation and hence productive efficiency. A higher output per man hour might be achieved in some factories through redeployment. But if industry-wide wage increases were secured irrespective of whether individual managements carried out redeployment it would be difficult to avoid a rise in prices unless unions were prepared to force inefficient firms into bankruptcy.

The adoption of the wage-restraint policy indicated clearly enough that most British unions were well aware of the nature of the problems confronting industry.

SOCIAL OBLIGATIONS

The increasing willingness to accept incentive schemes can be taken as a sign of recognition of the fact that wage restraint did not mean a restriction of earnings or purchasing power. A wage policy in which earnings are related to output and factory efficiency is therefore the most obvious one for unions to pursue. This does not, of course, take into account the anomalies and inequalities of the existing national wage structure. The extent, however, to which any wages policy should be pursued by individual unions without regard to the benefits which can accrue to the whole community from reduced prices will be a test of the social consciences of unions. Some workers have fewer opportunities than others to increase productivity but that is no reason why they should not share the benefits of increased productivity through lower consumer prices.

NEW INDUSTRIAL ROLE

The need in industry for decisive trade union action in which unions must accept their responsibilities as well as claim their rights is perfectly clear. Where managements are progressive and seeking to use "scientific management" techniques in a reasonable manner to step up production, unions should be prepared to co-operate. If managements try to be aggressive the need for effective trade union action is accentuated—not to the point of resisting new development but to see that abuses are eliminated and that the inaccuracies of "scientific management" are not exploited at the expense of workpeople. Where managements are not sufficiently enterprising and progressive, are unwilling to step up efficiency or extend markets through lower prices, then unions must press them to do so.

INCENTIVE SCHEMES

Further, if trade unions, in accepting the dictates of the economic situation, are willing to associate themselves with incentive schemes and specific work loads it is in their own interests also to see that work loads are reasonable and that incentives operate. The incentive earning opportunities of union members should not be restricted by inefficient factory organisation and production methods. Unions must, therefore, provide themselves with the necessary tools and equipment in the form of suitable production engineering personnel to do this work.

EDUCATION IN MANAGEMENT

Union members must recognise that the use of "scientific management" techniques, however unscientific, is inevitable and necessary in industry today, and that determination to prevent abuses and where possible control "scientific management" is a necessary function of modern trade unionism. This calls for an extension of trade union educational facilities to teach workshop representatives and members the techniques of production, management engineering and joint consultation and not less important, the implications of an economy controlled to provide an increasing standard of living and to maintain full employment. Some unions are already organising educational facilities along these lines.

REDUNDANCY PROBLEM

In this new industrial role which unions are seeking to perform there is need also to develop a more positive and realistic approach to redundancy. A rising standard of living can only be achieved by increasing productivity obtained from labour-saving machinery and technical processes and working skill. Redundancy, therefore, is inevitable unless increased production enables immediate re-absorption; but redundancy is not unemployment where full employment exists. Considerable emphasis however, is placed on the need to encourage labour mobility and flexibility because it is becoming increasingly recognised that full employment means that there are more jobs than workers, rather than providing the redundant with jobs at the same trade and wage rates in the same locality. There are limits, in effect, to the distribution of industry based only on local social needs.

JOINT CONSULTATION

Even if industrial democracy is still not far removed from the slogan stage there is little doubt that formal joint consultation will play an important part in its development. Unfortunately liaison between unions and joint production committees and works councils in many industries leaves much to be desired. The difficulty often as not is that joint production committees want help and guidance on specific production problems in their places of work; and unions, as yet, have few means of servicing them. The movement towards industrial democracy will be accelerated when unions strengthen the links between themselves

and their members on the job by providing the technical assistance which members need to participate fully in promoting industrial efficiency and good relations with management.

RECOMMENDATIONS

The following are our recommendations:—

INDUSTRIAL EFFICIENCY

1 Unions should seek to co-operate in the application of “scientific management” which, even if not an exact science, can make a valuable contribution to increasing productivity in industry.

2 Larger unions and federations should establish production engineering departments and train production engineers for their national or district offices to protect and further the widest interests of their members.

3 The Trades Union Congress should have a competent technical staff to give help and guidance in the establishing of union production departments and to provide direct services to unions too small to engage their own staffs.

4 Consideration should be given to the employing of small full time staffs, including technicians or production engineers, in some of the T.U.C. Regional Advisory Committees to render services to unions in the regions and to give direct help to shop stewards and the trade union sides of joint production committees and works councils. Such staffs could also analyse and prepare information and material for trade union members on the Regional Boards for Industry and the Consumer Councils.

5 Where a number of unions organise in one industry the appropriate body to employ technical staff might be the trade union side of a joint industrial council.

6 Quarterly or half-yearly meetings of the technical staffs of the T.U.C., the unions and regional committees would facilitate an exchange of information. It might be considered desirable also to seek regular meetings with government statisticians and other authorities to discuss current statistics and to acquaint and advise them of trade union statistical needs.

EDUCATION AND TRAINING

7 In staffing trade union production departments it should not be enough to change the title of an organiser to that of production engineer. It

is essential that he acquires a first class training and should be equally as competent as the industrial consultants and technicians employed by management.

8 It should be the duty of technical staffs to train and instruct workshop representatives in the techniques of production and joint consultation—to deal effectively with day to day problems in the place of work and to make practical and realistic contributions to works councils and joint production committees.

9 Unions should extend their educational facilities, as some are already doing, to provide week-end and summer school courses in the economics of trade unionism in full employment and the implications of an increasing standard of living.

WORKSHOP ORGANISATION

10 Where a number of unions have members in one workplace, they should co-operate to achieve 100 per cent membership and establish a joint workshop committee of the unions, which would then form the trade union side of the works committee or joint production committee or would elect representatives to such committees.

TECHNICAL ADVANCE

11 In initiating or participating in the introduction of incentive schemes, unions should, where practicable, seek to increase production efficiency through a greater use of mechanical aids and the application of time and motion study in order to maximise earning opportunities.

12 As trade unionists want the standard of living to rise continually they cannot justify opposition to the installation of new or modernised machinery or the use of re-deployment techniques. There is every justification for demanding prior consultation in order to plan the necessary labour adjustments.

13 Unions should seek to establish procedure (similar to that already existing in some sections of British industry) through normal industrial negotiating machinery, for the payment of compensation for a limited period to workpeople made redundant by technological advance.

PROFITS AND PRICES

14 Unions should collect information on profit margins, costs of production, sales turnover and

other aspects of company finances with a view to taking action against unnecessarily high consumer prices.

15 Where management refuses to reduce high consumer prices which might limit sales and employment, unions should prepare authoritative cases for presentation to such bodies as the Central Price Regulation Committee and the Monopolies and Restrictive Practices Commission.

16 Unions should be prepared to give technical advice and assistance to firms whose profit margins are falling to the extent of threatening both wage levels and employment security.

17 Unions should seek to increase the efficiency of firms which are producing goods to be sold at controlled prices and which are below the average level of efficiency, in order to justify claims for price reductions.

EXCHANGE OF INFORMATION

18 In establishing production departments British unions should contrive to send teams of selected personnel to the U.S.A. to observe trade union attitudes and methods of working. In the event of such arrangements being made, teams

would do well to study relevant trade union literature beforehand to obtain a picture of the American industrial scene and to enable them to formulate questions and concentrate on their objectives.

19 Attempts should be made to obtain quantities of selected reprints of American trade union literature dealing with production engineering and trade union activities for distribution to British trade unionists. Consideration might also be given to the exchange of films dealing with trade union structure and activities.

20 Suitable technical articles written in this country should be reprinted and distributed to members by unions.

21 American trade union teams and individual officers should be invited to Britain to study British trade union administration and methods of operating, particularly in the fields of joint consultation, working class education and politics.

22 Eminent trade union production engineering and research officers might also be invited to Britain to give talks on their union's production engineering attitudes and activities and so reach a wider audience than could possibly visit the United States.

We are not unaware of the financial implications to unions of these recommendations but we are convinced that the ultimate benefits, material and otherwise, will more than balance the costs involved.

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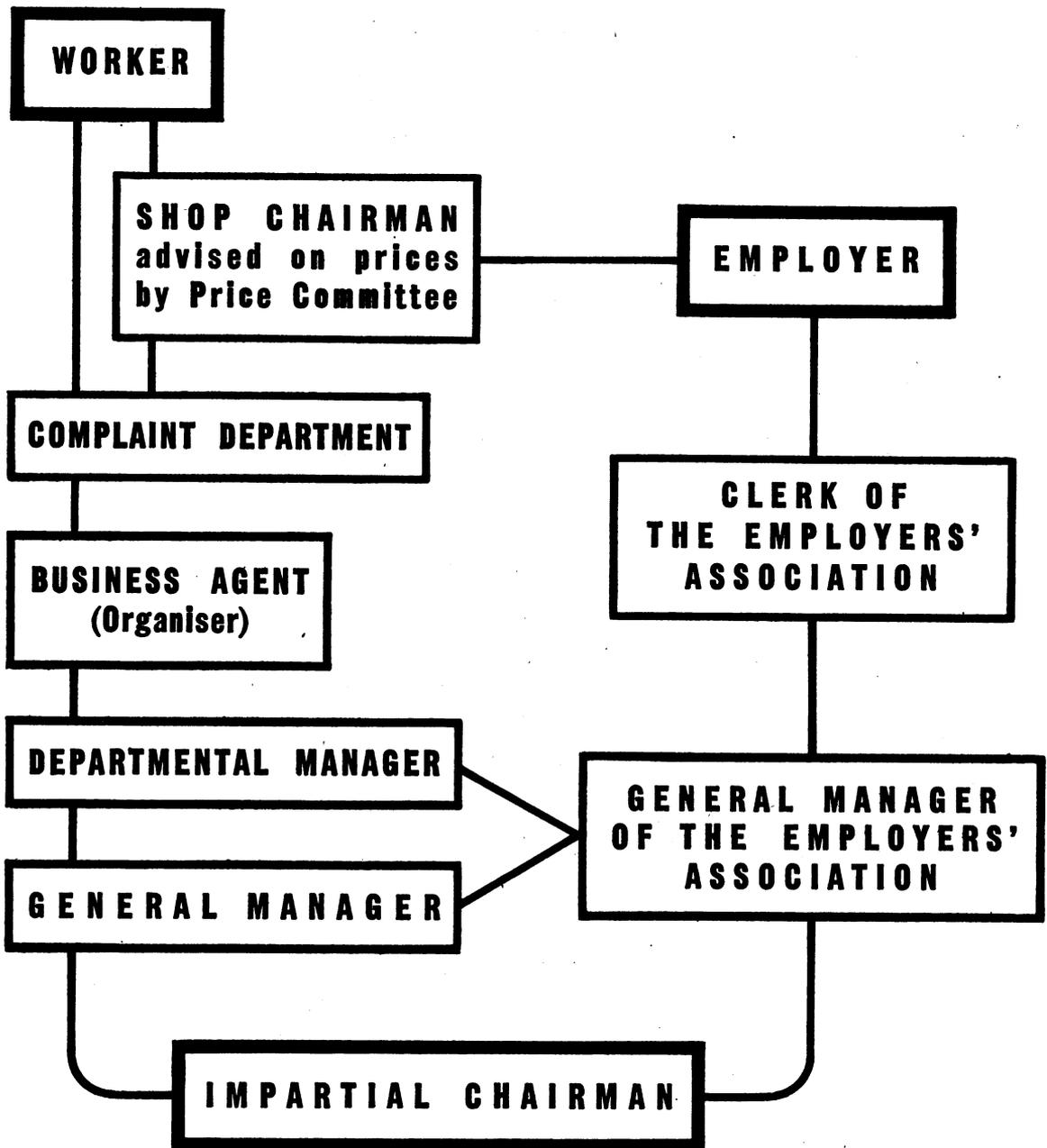


Diagram of Structure

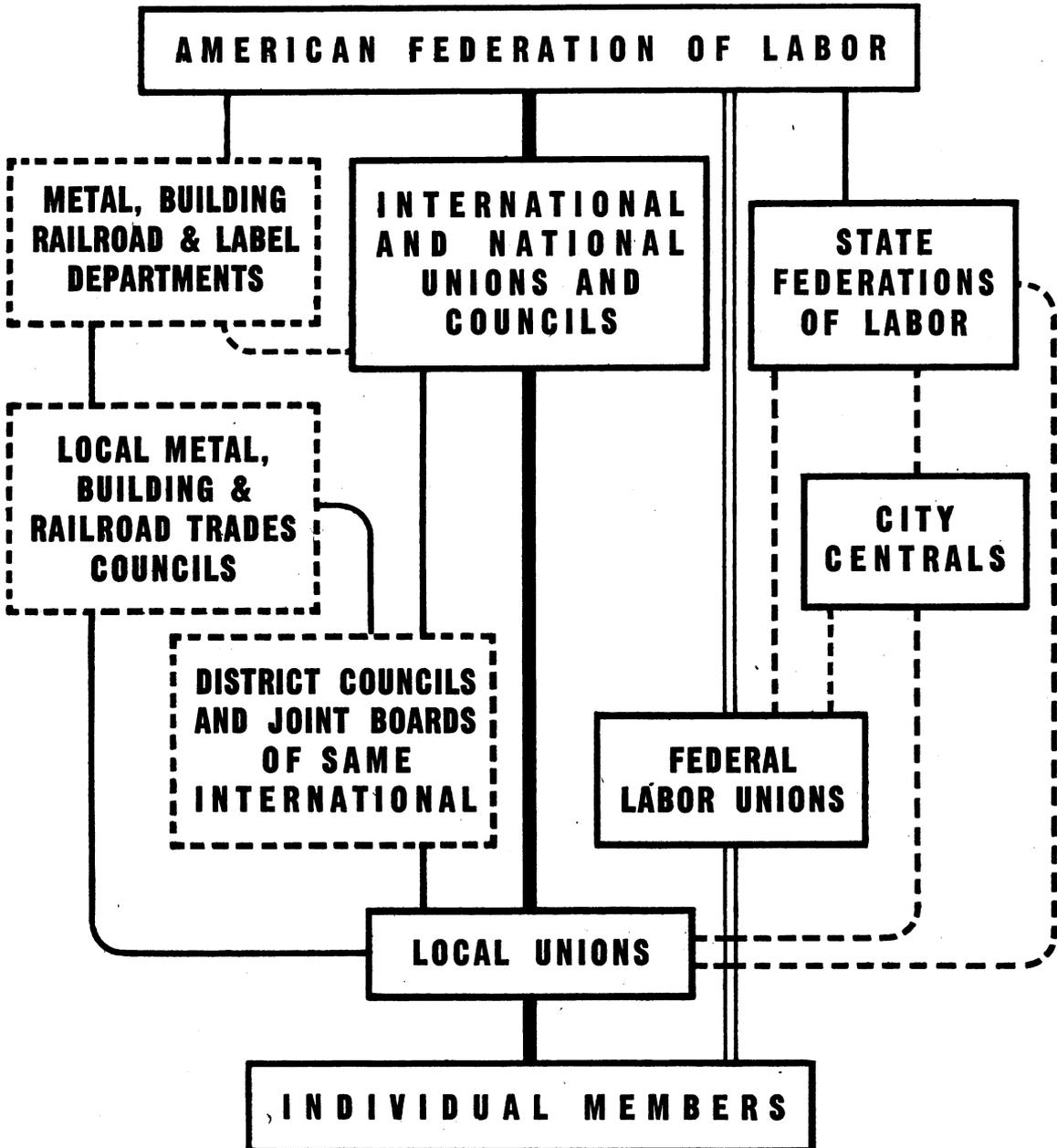
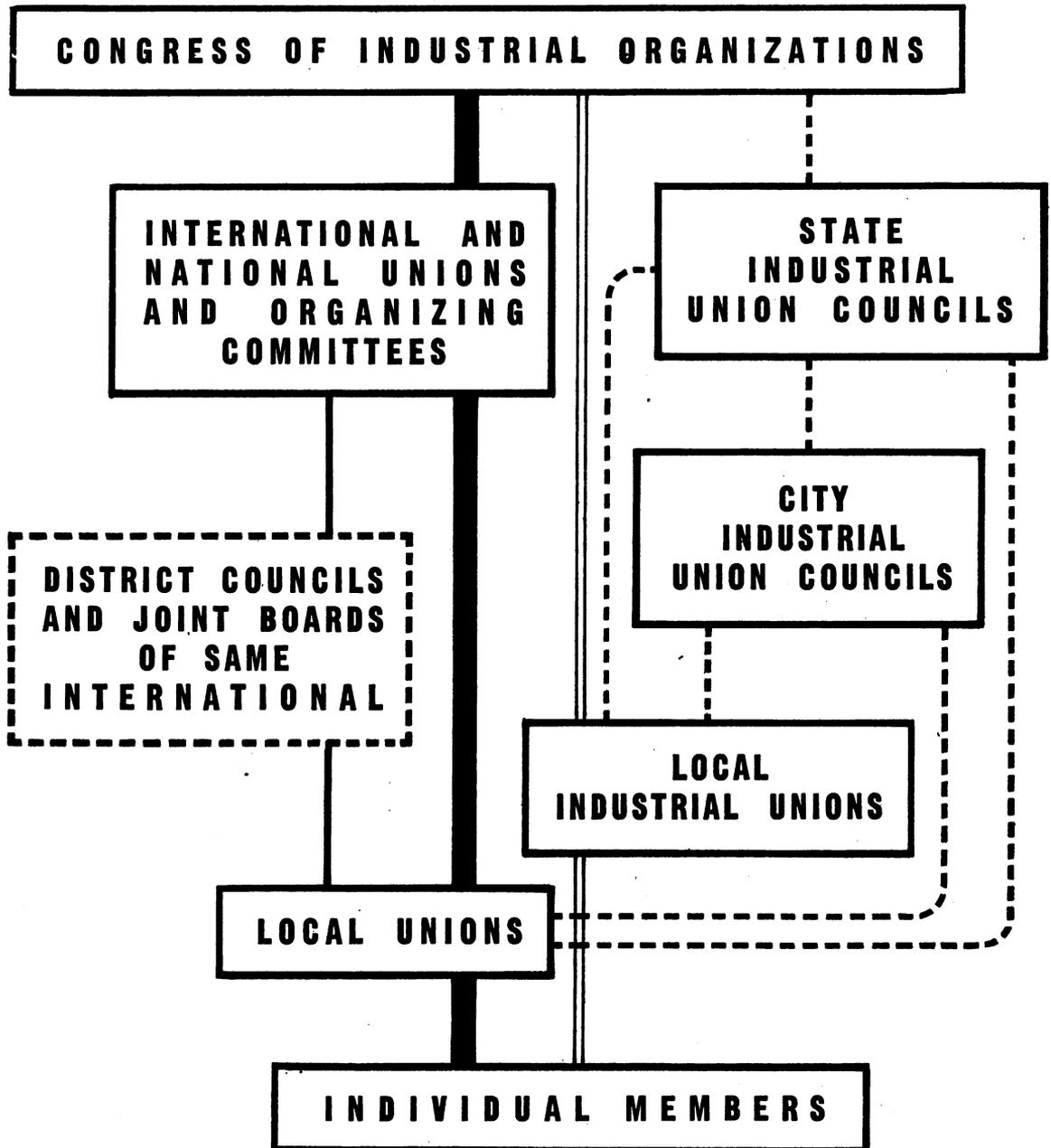


Diagram of Structure



I.L.G.W.U. Officers' Qualification Course, 1943-44 Test No. 3

TRADE UNION TECHNIQUES

Based on Section on Strike Publicity in

"HANDBOOK OF TRADE UNION METHODS"

- 1 a Pictures should not be used in strike publicity as they take up space which could otherwise be used for news:
True..... *False*.....
- b College students and society people should be kept off the picket line as they detract from the real issues of the strike.
True..... *False*.....
- 2 The following constitute "news" in a strike situation:
 Use of strikebreakers and thugs.
 (Check as many as are true) Speed-up of workers.
 The desirability of social revolution which would make strikes unnecessary.
 Comparison of wage levels in the local shops with those in unionised centres of the industry.
 A speech by a shop chairman, about "millions of workers are exploited by capitalists."
 Police brutality toward the strikers.
- 3 a During a strike the union should prepare daily press releases for the local newspapers.
True..... *False*.....
- b If a newspaper publishes false or misleading stories about the union's part in the strike, the union should do the following:
 (Check as many as are true) Beat up the paper's reporter the next time he comes to the office.
 Prevent the reporter from receiving any further information from the union.
 Explain the strike situation fully to the reporter and concentrate on furnishing fresh news to him.
 Ask the editor to fire the reporter.
- 4 If the union organiser writes a strike story to be sent to a list of papers, he should:
 Have it typewritten.
 (Check as many as are true) Identify the story with his name and address.
 Use narrow margins and write on both sides so the story will not take up too much room.
 Not put a "release date" on the story because editors know best when to publish material.
 Use large words to impress the editors.
 Always write the story in the first person (I told the employer).
 Put the most important facts at the beginning of the story because it may be shortened.
 Send the story only to the labour press as the capitalist press will not publish it anyway.
- 5 When writing an organising leaflet, it is a good idea to:
 Have it mimeographed rather than printed because the workers will be impressed by your money-saving.
 (Check as many as are true) Omit the time and place of the meeting because the boss may send in spies.
 Use larger type on a leaflet intended for street distribution than on one to be mailed to workers at their homes.
 Have the printing union label on a leaflet even though you are giving it to unorganised workers.

Name.....

Local.....

Date.....

Production Standards proposed by the United Automobile Workers

General

(A) The amount of work designated in pieces per hour which an employee is to be required to produce shall be known as the "production standard," and shall be determined by the company in a manner that is fair and equitable to the Union.

(B) Where time study is the means used to determine production standards, the standard shall be set so that a worker with sufficient skill to do the job can meet it by working at a normal pace, under the conditions and in the manner stated in the time study, with due allowances for personal time, fatigue, and contingencies.

Union Responsibility

(A) Where time study is the means used to determine production standards, a worker, when being time studied, shall perform his operation in accordance with the company's instructions and shall otherwise co-operate to give a performance which is honest and representative of the actual conditions of the job.

Time Study Techniques

(A) Before an operation is time studied, the company shall provide the Union with a complete audit of the operation showing all the elements into which the job has been broken down, sequence of elements, element breaking points, the method, motion pattern, location of tools, equipment, stock, and all other conditions and circumstances under which the operation is to be time studied.

(B) The Union shall have a full opportunity immediately prior to the time that the time study is taken to observe the operation and to determine if the conditions of the operation are as shown in the company's audit.

(C) The worker who is to be time studied shall be advised of this prior to the time study.

(D) All time studies shall be taken by the continuous watch reading method.

(E) No effort shall be made in time studies to break operations down into, or record, elements of less than .06 minutes.

(F) A minimum of thirty (30) minute time study or twenty (20) observations, whichever is greater, shall be made of any operation being time studied.

(G) If any observed time is not used in the calculations of a time study, a clear explanation of why it was not used shall be noted on the observation sheet.

(H) In determining the allowed time for elements of an operation only a simple average shall be used.

(I) Where two or more employees are performing identical operations, at least two workers will be time studied to determine the production standard.

(J) Observed time may or may not be levelled as the case may be but, in any case, the production standard shall reflect a normal work pace of a worker with sufficient skill to do the job, working under the conditions and by the methods prescribed on the time study sheet.

(K) All time studies shall contain an allowance for personal time of four (4) minutes per hour.

(L) All time studies shall contain an allowance for fatigue depending on the nature of the work and commensurate with the amount of fatigue in it but, in no case, shall such allowance be less than six (6) minutes per hour.

(M) All time studies shall contain an allowance for delays and contingencies which occur on a job. Under no circumstances shall a worker be required to make up production lost during delays or contingencies beyond that which he has been allowed for in the time study. The allowance for delays and contingencies shall be shown in minutes and, in no case, shall it be less than four (4) minutes per hour unless it is shown by time study of the delays themselves that it should be less. Delay time studies shall be made over an eight (8) hour period or longer.

(N) All work performed during a time study shall be immediately inspected in the normal way. If there is more than a normal amount of rejects, a new time study shall be taken.

(O) Upon conclusion of time study and before the company's time study man leaves the operation, he shall supply the worker who was time studied with the following facts in writing:

- 1 The exact total period of time over which the time study took place.
- 2 The number of pieces that were produced during the time study.
- 3 The levelling factor.
- 4 The allowances granted in minutes.

Changes in production standards

(A) A production standard, once established, shall not be increased except in the case where the company makes a substantial change in the material, tools, machine, method or design of an operation.

1 A change shall be considered to be substantial when it reduces the time per piece in the time study which existed prior to the change by more than ten (10) per cent.

2 Procedure for determining whether a change reduces the time per piece, as indicated above, shall be as follows:—

(a) A time study shall be made of only those elements of the operation which are directly affected by the change.

(b) After a time study, as indicated above in (a) has been made, a comparative data sheet shall be set up showing the elements of the operation which have been affected by the change; how the change affected them; and the time for each element that existed prior to the change and the proposed time after the change.

(c) The company and the Union shall then examine this data and determine if the differences in time for those elements of the operation which are affected by the change reduces the time per piece, which existed prior to the change, by more than ten (10) per cent.

(d) If the difference in (c) above is determined to reduce the time per piece, which existed prior to the change, by ten (10) per cent or less, then, under no circumstances, shall the time per piece be reduced. However, if at some future date, additional changes are made, all the elements which were previously changed but not used to change the standard because the time did not amount to ten (10) per cent may be used, but the ten (10) per cent shall still apply.

(e) If, on the other hand, the difference in (c) above is determined to reduce the time per piece which existed prior to the change by more than ten (10) per cent, then the time for those elements affected by the change, as determined by the time study indicated in (a) (2), shall be placed in effect and the old time study recomputed with the new figures.

(f) Under no circumstances, shall the time for any operation or portion thereof be reduced where it is not clearly and directly affected by a substantial change.

(B) A production standard once established shall be reduced if the method, conditions or circumstances, as provided in (A), have changed so as to increase the time per piece.

1 Procedure for determining whether a change, as indicated above, increased the time per piece shall be as follows:

(a) Only upon request of the Union shall a time study be made of those elements of the operation which are directly affected by the change;

(b) After a time study, as indicated above in (a), has been made, a comparative data sheet showing the elements of the operation which have been affected by the change; how they were affected; and the time both before and after the change shall be set up.

(c) The company and the Union shall then examine this data and determine if the change increases the time per piece.

(d) If it is determined that the change increases the time per piece, then the time for those elements of the operation affected by the change, as determined by the time study indicated in (1) (a) shall be placed into effect and the old time study recomputed with the new figures.

(e) Under no circumstances shall the time for any operation or portion thereof be a part of this procedure where it is not clearly and directly affected by the change.

Grievances

(A) The Union shall not be a party to an original time study or to a time study made in connection with an operation that has been changed but shall have the right to file grievances and bargain collectively concerning any production standard, and all matters pertaining to a particular time study, as well as time study procedures in general, including any of the items contained herein, formulas, the determining of levelling practices and policies, defining average conditions, etc.

(B) In cases where a grievance is filed by the Union on any matter, as indicated above, they shall have the right to a copy of all the data which the company has in relation to the particular grievance as well as the right to call in an outside time study man to assist them, and including the right to time study the disputed operation.

(C) The Union shall be entitled to have Union time study representatives, selected from among the members of the local union. Such time study representatives shall receive instructions in time study procedure and techniques. They shall be technical advisers to the various representatives of the Union responsible for collective bargaining on all disputes involving production standards.

APPENDIX F

Textile Company's method of calculating standard number of spindles per operator

1 Standard spindle stopped time determined from time study		1·18 min. per spindle per hour.
2 Stopped time plus running time:	$60 \text{ min. running time} + 1·18 =$	61·18 minutes
3 Working time per hour:	$(100\% - 20\% \text{ allowance}) \times 60 \text{ min.} =$	48 minutes
4 Standard spindle stopped time in 48 min. working time:	$\frac{48 \times 1·18}{60} =$	·944 min. per spindle per 48 min.
5 Standard number of spindles	$\frac{48}{·944} =$	50·8 spindles
6 Number of spindles assigned with incentive:	$50·8 \times 1·25 =$	63·5 spindles
7 Expected standard production:	$\frac{50·8 \times (48 - ·944) \times 360}{38,000} =$	22·6 kilograms per hour
8 Standard machine efficiency:	$\frac{(38,000 \times 22·6)}{50·8 \times 60 \times 360} =$	78·3%

Textile Workers' Union's method of calculating standard number of spindles per operator

1 Standard spindle stopped time as determined from time study		·273 minutes per bobbin*
* This figure is exactly equivalent to the number shown in the company calculation except that it has been put into a different form.		
2 Running time per bobbin	$13·61 + ·273 =$	13·883 minutes
3 Total cycle time:	$13·61 + ·273 =$	13·883 minutes
4 Standard number of spindles with no rest allowance	$\frac{13·883}{·273} =$	50·9 spindles
5 Standard number of spindles	$(100\% - 20\% \text{ allowance}) \times 50·9 =$	40·7 spindles
6 Number of spindles assigned with incentive:	$40·7 \times 1·25 =$	51 spindles
7 Expected standard production:	$\frac{40·7 \times (60 - 1·18) \times 360 \text{ meters per min. (speed)}}{38,000 \text{ meters per kilogram (yarn count)}} =$	22·6 kilograms per hour
8 Standard machine efficiency:	$\frac{38,000 \times 22·6}{40·7 \times 60 \times 360} =$	97·7%

Stages in Job Evaluation Programme carried out by United Steelworkers of America and United States Steel Corporation

SPECIMEN

JOB DESCRIPTION

Department: Steel Production
 Sub-Division: No. 1 Open Hearth
 Plant:
 Date:

Standard Code: 0832 AG 0480 C.W.S.B.
 Standard Title: Charging Machine Operator
 Plant Title: Charging Machine Operator
 Plant Code: 3110-021

Primary Function:

To operate an open hearth charging machine in charging materials into furnaces.

Tools and Equipment:

7-1/2 Ton Charging Machine; lubricating and hand tools, etc.

Materials:

Limestone, steel scrap, ores, miscellaneous solids, etc.

Source of Supervision:

Maintenance Foreman for training and scheduling. Receives direct orders from First Helper for work with machine.

Direction Exercised:

None.

Working Procedure:

Operates control levers, controlling speed and travel of machine.
 Operator charges the various kinds of scrap into furnace.
 Sets hot metal spouts in furnace doors and removes when necessary.
 Removes banks from furnace doors after each heat is tapped, using charging box as a scraper.
 Transfers iron ore boxes from buggies to stand at end of furnaces, and removes empty ones when necessary.
 Aligns boxes on buggies when necessary.
 Replaces buggies on tracks when necessary.
 Switches buggies on charging floor tracks.
 To service, lubricate, and make minor adjustments to charging machine.
 Charging machine operator must be constantly on the alert watching floor operations and workmen, and takes safety precautions to prevent injuring men.
 Lubricate machine.
 Cleans machine using broom.

The above statement reflects the general details considered necessary to describe the principal functions of the job identified, and shall not be construed as a detailed description of all of the work requirements that may be inherent in the job.

Appendix G continued next page

SPECIMEN

JOB CLASSIFICATION

Plant Title: Charging Machine Operator

Standard Title: Charging Machine Operator

Factor	Reason for Classification	Code	Classification
1	<i>Pre-Employment Training:</i> This job requires the mentality to learn to operate powered mobile equipment where judgment is required.	B	·3
2	<i>Employment Training and Experience:</i> This job requires experience on this and related work of 13 to 18 months of continuous progress to become proficient.	D	1·2
3	<i>Mental Skill:</i> Exercise considerable judgment in operating a large piece of equipment in a semi-routine manner.	D	2·2
4	<i>Manual Skill:</i> Manipulate controls of a complex machine at a rapid pace, involving a high degree of co-ordination.	C	1·0
5	<i>Responsibility for Material:</i> Close attention for part of turn to prevent spilling of material handled, charging wrong material, making additions after melt. Probable damage would be loss of part of heat if banks or door jams are pulled out.	Estimated Cost 1/3 Heat @ \$7/ton - up to \$350·00	C 1·8
6	<i>Responsibility for Tools and Equipment:</i> Close attention and care required to prevent damage to machine and furnace.	Med. D	1·5
7	<i>Responsibility for Operations:</i> Operate an important part of a major producing unit.	E	3·0
8	<i>Responsibility for Safety of Others:</i> Uses considerable care to avoid injuring men on floor with charging machine. Visibility partially impaired by machine.	D	1·2
9	<i>Mental Effort:</i> Close mental or visual application required for making minor repairs and adjustments; lubricating; clean up, moving cars along track and machine, up and down shop. Operate machine—requiring dexterity and fast reaction.	D	1·5
10	<i>Physical Effort:</i> Moderate physical exertion required to make minor repairs; lubricate; clean up; operate several electrical controllers, dinkey type, at a rapid pace—standing.	C	·8
11	<i>Surroundings:</i> Hot in summer due to proximity to furnace. Extreme heat for short intervals.	C	·8
12	<i>Hazard:</i> Explosion of wet material charged into furnace. Danger of collision. Flames during ore addition.	C	·8

Reviewed and approved by:
<i>Chairman, Union Job Classification Committee:</i>
<i>Chairman, Management Job Classification Committee:</i>
<i>Union Copy</i> <i>Management Copy</i>

<i>Job Class 16</i>	<i>Total</i>	<i>16·1</i>
<i>Described By:</i>		<i>Date:</i>
<i>Classified By:</i>		
<i>Approved By:</i>		

[Appendix G continued next page

SPECIMEN

MENTAL SKILL: Factor No. 3

Consider the Mental Ability, Job Knowledge, Judgment and Ingenuity required to visualize, reason through, and plan the details of a job without recourse to supervision.

<i>Code</i>	<i>Job Requires Ability To:</i>	<i>Benchmark Jobs</i>	<i>Numerical Classification</i>
A	Perform simple, repetitive routine tasks. Do simple sorting. Make changes in routine only when closely directed.	Laborer. Stocker O.H. Wharfman—C.P. Scrapman—Bil. Shr.	Base
B	Make minor changes in routine or sequence on repetitive jobs involving selection, positioning, and recognition of obvious defects or adjustments where tolerances are liberal.	Charger Bar Mill. Wire Bundler Pipe Stenciler	1·0
C	Perform semi-routine job involving some variety of detail and requiring judgment. Sort material according to size, weight or appearance.	Chipper—Cond. Bottom Maker S.P. Stitcher Operator Assorter—Tin Plate Tractor Operator—Ram. Craneman—H.S.	1·6
D	Reason through problems involving set-up and operation of moderately complex equipment. Use considerable judgment in operating equipment. Exercise considerable judgment in selecting and using materials, tools and equipment in construction, erection or maintenance work.	Slitter Operator Finisher—H.S. Charging Mach. Oper. O.H. Ore Bridge Operator Carpenter "A" Bricklayer "A" Millwright—B.M.	2·2
E	Plan and direct the operation of a large complex production unit. Reason through and plan operating problems. Plan work detail from complex blueprints.	Tandem Mill Roller 1st Helper—O.H. Machinist "A" Boilermaker "A"	2·8
F	Analyze and plan complex non-repetitive tasks to be performed by skilled workmen.	Layout Man "A" (Development Work)	3·5

Appendix G continued next page

SPECIMEN

RESPONSIBILITY FOR MATERIALS: Factor No. 5

Consider the obligation imposed either by authority or the inherent nature of the job to prevent loss through damage to materials.

The responsibility exists only to the extent that it is controllable by the workman, that is, the damage is a direct result of an act of, or negligence of, the workman on the job.

Material is that which is actually worked on. It may not always be product, as the equipment worked on by maintenance workers is considered materials for those jobs. This factor covers in addition to product, processing materials such as fuels, acids, tempering oils, etc. On attendant jobs only the material handled or supplied such as oil, air, gas, water, etc., is to be considered as material for the job.

Both care required and the probable monetary loss are to be considered. The cost of error must be qualified by the probability of detection. Determine the factor level by the degree of care required for the particular element of the job causing the estimated damage. Credit the cost of error for the length of time that it would normally continue before detection, with a maximum of one turn of production.

In determining the loss, consider cost of repair or replacement and the salvage value. Use values of materials in round numbers, considered normal for the industry, rather than actual plant costs.

Code	Requirement of Job to:	Benchmark Jobs	Cost (in dollars) Up to and including	Numerical Classification
A	Perform task where damage is not likely. Work with material difficult to damage.	Manganese Wheeler. Mill Janitor Laborer	Under 50	Base
B	Use ordinary care to prevent damage. Handle material manually on or off units. Mechanically handle or transport material not easily damaged. Perform repetitive tasks with liberal tolerances and specifications.	Feeder—Open Anneal Craneman (Cond.) Pusher Oper.—C.P. Ingot Buggy Oper. Millwright Helper Oiler—B.M. Baller (Pipe) Stopper Maker—O.H.	50 100 250 500 1,000 over 1,000	.3 .4 .8 1.2 1.8 2.3
C	Use close attention for part of turn. Set up and operate a producing unit where cycle is long and specifications are partially obtained by mechanical control. Perform repetitive work where close attention is required only during checking of product for tolerances. Mechanically handle and transport material subject to damage from handling devices.	Mill Shearman—Bar Mill Guide Setter—Bil. Wire Drawer—Mach. Coupling Tap. Oper. Tractor Oper.—Ram. Craneman—H.S.	50 100 250 500 1,000 1,500 over 1,500	.5 .7 1.2 1.8 2.5 3.1 3.7
D	Use close attention for majority of turn. Set up and operate units having a variety of detail requiring frequent checking and adjusting to determine size, shape, finish or physical properties of product. Inspect and classify finished product. Perform tradesman's work requiring frequent checking and close tolerances.	1st Helper—O.H. Boilermaker "A" Assorter—Tin Plate Carpenter "A" Roll Turner	Under 50 100 250 500 1,000 1,500 2,000 3,000 over 3,000	.8 1.1 1.6 2.4 3.5 4.5 5.3 7.0 8.5
E	Use very close attention Have responsibility for product on complex units requiring constant checking. Perform tradesman's work involving a high degree of precision or variety of detail.	Tandem Mill Roller Blower (Bess.) Machinist "A" Roller—Blooms Layout Man "A"— Devel	50 100 250 500 1,000 1,500 2,000 3,000 over 3,000	1.2 1.6 2.3 3.2 4.5 5.6 6.7 8.5 10.0

[Appendix G continued next page

SPECIMEN

RESPONSIBILITY FOR OPERATIONS: Factor No. 7

Consider the obligation imposed on the workman for utilizing capacity of equipment or process by maintenance of pace and machine speeds. This includes planning, instructing and directing the work of others.

Consider the size of crew and teamwork required, the importance and size of equipment and the degree of control exercised by the workman on the job.

Excess capacity and storage facilities between process operations are definite indicators for the lowering of the classification in this factor.

<i>Code</i>	<i>Job Requirements</i>	<i>Benchmark Jobs</i>	<i>Numerical Classification</i>
A	Little or no responsibility beyond use of own time. Work as member of a gang on simple work closely directed. Work on simple highly standardized jobs with little equipment or no other operations closely dependent.	Mill Janitor Laborer Wire Bundler Chipper—Cond.	Base
B	Work as a member of the crew on a production unit, performing a simple routine work requiring some co-ordination with other members of the crew or with process to maintain production.	Charger—Pack Mill Feeder—Open Anneal Scrapman—Bil. Mill	·5
C	Responsible for operating a small or individual processing unit where continuity of production is required. Perform tradesman's or shop maintenance work such as operations of complex machine tools. Handle material to and from processing units using mobile powered equipment such as cranes, and tractors. Perform auxiliary or service operations when closely associated with production units or processes.	Sand Mill Oper. Roll Turner—Shapes Bottom Maker—S.P. Wharfman—C.P. Welder "A" Craneman—Machine Shop Tractor Oper.—Tier	1·0
D	Operate a medium sized producing unit not closely tied in with other operations; has several helpers. Responsible for performing assigned maintenance work on large producing units. Responsible for continuity of operations on a number of small producing units.	Millwright—B.M. Motor Inspector—B.M. Die Setter—Thrd. Mach. Wire Drawer—Mach.	2·0
E	Operate an important part of a major producing unit. Operate a medium sized producing unit when closely associated with other operations. Responsible for continuity of operation for a number of medium sized units.	Craneman—Soak. Pit Pusher Oper.—C.P. Bloom Shearman Speed Oper.—H.S.	3·0
F	Has high responsibility for complex work planning to meet production schedules. Has high responsibility for continuity of operations on a large producing unit.	1st Helper—O.H.	4·0
G	Sets pace and assumes joint responsibility with supervision for production of a large unit.	Welder—Butt Weld.	5·0
H	Has responsibility for maximum production from a major producing unit.	Roller—Blooms	6·5

[Appendix G continued next page

SPECIMEN

HAZARDS: Factor No. 12

Consider the probability and severity of injuries to which the workman is exposed, assuming that the workman is exercising reasonable care in observing safety regulations.

<i>Code</i>	<i>Likelihood and Nature of Injury</i>	<i>Benchmark Jobs¹</i>	<i>Numerical Classification</i>
A	<p>Accident hazard low and usual injuries consist of minor cuts, bruises, burns.</p> <p>Operate machines, machine tools, material handling equipment, or control movement of material when only occasionally exposed to moving machinery.</p> <p>Perform repetitive manual tasks, such as feeding or piling product or material.</p>	<p>Hot Bed Oper.—Bil. Mill.</p> <p>Speed Oper.—H.S.</p> <p>Craneman—H.S.</p> <p>Blower—Bess.</p> <p>Mill Janitor</p> <p>Couplin Tap Oper.</p>	Base
B	<p>Accident hazard moderate and probable injuries consist of severe cuts, bruises or fractures such as encountered when performing routine crane hooking, operating tractors and trucks; regularly adjusting moving machinery or product.</p> <p>Exposed to falls such as may occur when walking or climbing over bins, stock buggies and low scaffolds.</p> <p>Occasionally exposed to hot objects that may cause moderate burns.</p> <p>Exposed to flying objects such as chips and scale.</p> <p>Handle or work near caustic, inflammable or volatile liquids or gases. (Closed vessels or pipes).</p>	<p>Tractor Operator—Ram.</p> <p>Tandem Mill Roller</p> <p>Nail Machine Oper.</p> <p>Stocker—O.H.</p> <p>Bricklayer "A"</p> <p>Scarfer—Cond.</p> <p>Bottom Maker—S.P.</p> <p>Chipper—Cond.</p> <p>Saturator Oper.—B.P.</p> <p>Dryerman—B.P.</p> <p>Laborer</p> <p>Pickler Loader—Batch</p>	4
C	<p>Exposed to burns from molten metal splashes.</p> <p>Regularly manipulate hot product with tongs or hooks.</p> <p>Handle or control caustic inflammable or volatile liquids. (Open vessels or handling containers.)</p> <p>Exposed to falls such as might occur when working on high scaffolds, structures and roofs.</p> <p>Occasionally exposed to high voltage electricity.</p> <p>Exposed to severe injury from crane hooking where difficult rigging or lifting devices are involved.</p> <p>Perform heavy maintenance work involving climbing and rigging to repair, set up, or tear down equipment and mills.</p> <p>Climb on moving rolling stock.</p>	<p>Charging Mch. Oper.—O.H.</p> <p>Strander—Bar Mill</p> <p>Hi Mill Plugger—Pipe Seamless</p> <p>Agitator Oper.—B.P.</p> <p>Pipefitter "A"</p> <p>Motor Inspector—B.M.</p> <p>Stock Unloader—B.F.</p> <p>Millwright—B.M.</p>	8
D	<p>Exposed to severe burns from handling, transporting or controlling the flow of molten metal.</p>	<p>Keeper—Blast Fce.</p> <p>2nd Helper—O.H.</p>	1-2
E	<p>Frequent exposure to a hazard where failure to exercise extreme care and judgment might cause an accident which would result in total disability or a fatality.</p>	<p>High Tension Lineman</p>	2-0

APPENDIX H

Table showing job class wage rate schedules as negotiated
by the United Steelworkers of America

<i>Job Class</i>	<i>A</i> <i>May</i> 1946	<i>B</i> <i>April</i> 1947	<i>C</i> <i>July</i> 1948
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
0— I ..	.965 ..	1.09 ..	1.185
2 ..	1.00 ..	1.13 ..	1.230
3 ..	1.035 ..	1.17 ..	1.275
4 ..	1.07 ..	1.21 ..	1.320
5 ..	1.105 ..	1.25 ..	1.365
6 ..	1.14 ..	1.29 ..	1.410
7 ..	1.175 ..	1.33 ..	1.455
8 ..	1.21 ..	1.37 ..	1.500
9 ..	1.245 ..	1.41 ..	1.545
10 ..	1.28 ..	1.45 ..	1.590
11 ..	1.315 ..	1.49 ..	1.635
12 ..	1.35 ..	1.53 ..	1.680
13 ..	1.385 ..	1.57 ..	1.725
14 ..	1.42 ..	1.61 ..	1.770
15 ..	1.455 ..	1.65 ..	1.815
16 ..	1.49 ..	1.69 ..	1.860
17 ..	1.525 ..	1.73 ..	1.905
18 ..	1.56 ..	1.77 ..	1.950
19 ..	1.596 ..	1.81 ..	1.995
20 ..	1.63 ..	1.85 ..	2.040
21 ..	1.665 ..	1.89 ..	2.085
22 ..	1.70 ..	1.93 ..	2.130
23 ..	1.735 ..	1.97 ..	2.175
24 ..	1.77 ..	2.01 ..	2.220
25 ..	1.805 ..	2.05 ..	2.265
26 ..	1.84 ..	2.09 ..	2.310
27 ..	1.875 ..	2.13 ..	2.355
28 ..	1.91 ..	2.17 ..	2.400
29 ..	1.945 ..	2.21 ..	2.445
30 ..	1.98 ..	2.25 ..	2.490
31	2.535
32	2.580

Copy of a Supplementary Agreement negotiated by the International Association of Machinists

The following rules and procedures shall be adopted by the parties hereto and made a part of the present agreement. These rules and procedure shall also serve as criteria in establishing New Jobs, New Standards and in resolving issues that may arise that are not specifically covered by the foregoing:

RULES AND PROCEDURE TO GOVERN: JOB RANKING, EMPLOYEE CLASSIFICATION, BASIC HOURLY WAGES AND THE INCENTIVE PLAN

The Company agrees to properly title and describe each job currently being performed in the plant. The titles of the jobs shall serve only to indicate the specific locations and the identity of such jobs.

The language describing each job shall only set forth the highlights of the work being performed indicating the degree of judgment exercised.

The Company shall submit to the Union the titles and described jobs for its check and correction by negotiation.

The Company agrees to rank all jobs into a series of eight (8) grade levels on the basis of the relationship of the jobs to each other. Such ranking shall be on the basis of the correct job descriptions, but due weight and consideration shall be given to: hazards that are present, physical effort inherent to the job and disagreeable working conditions that are present.

The Company shall submit to the Union the proper ranking of each job for its check and correction by negotiation.

The Company agrees to classify each present employee and new employee into a specific job and grade level within 30 days from the date hereof, or 30 days from the date of hiring. The classification of the employee shall be contingent upon the work that he normally performs, or is required to perform.

The Company shall submit to the Union the proper classification of each employee for its check and correction by negotiation.

The parties hereto agree when the preceding provisions have been complied with, the Company shall determine a proper wage curve that is consistent with appropriate money values for each grade level. Such curve shall be consistent with the aim to eliminate inequalities from the standpoint of inadequate basic hourly wage payments for each grade level and shall be negotiated by the parties hereto.

The Union shall designate a committee of four (4) who shall act in the preceding matters. Such representatives shall receive their hourly rate of pay if hourly workers or their average hourly earnings, if incentive workers, for all time spent handling matters in the above.

In the event of disagreement involving the provisions as set forth herein, unresolved questions involving the correctness of Job Titles, Job Descriptions, Ranking Jobs, Employee Classifications and appropriate money values for each grade shall be handled as grievances in conformity with the grievance procedure in the present agreement.

WAGE INCENTIVE PLAN: OBJECTIVE

It shall be the aim of the parties hereto to provide earnings that exceed those paid for on an hourly basis, thus creating an incentive that should encourage unlimited production. Production workers shall receive all direct savings above a normal performance as designated, and using a defined point of earnings computation as hereinafter set forth.

Incentive opportunity and anticipation shall be based on equitable time standards arrived at by applying the applicable foregoing principles. Standards thus determined shall enable the average efficient incentive worker to earn at least twenty-five per cent (25%) above the applicable day rate or hourly rate as hereinafter provided.

INCENTIVE BASE, INCENTIVE EARNINGS, INCENTIVE STANDARDS

For all productive time equal to or less than the time allowed in which to do a job the worker shall receive earnings for total earned time computed from his hourly rate. Should the allowed time be exceeded, not less than the hourly rate shall be paid for such time.

When an employee is temporarily assigned to higher rated jobs, his incentive earnings shall be computed from a point which shall in no event be below the hourly rate for such work.

When an employee is temporarily assigned to lower rated jobs, his incentive earnings shall be determined from the point of computation that is used on work that he normally performs or is required to perform.

The employee's hourly or day work rates shall be guaranteed. Incentive premium shall be paid at full value for "units" of work time earned. The amount of work performed during the day shall be checked at the end of each day.

Where there is no question as to the correctness of a time standard, employees will be only expected to attain a normal performance or sixty (60) "Units" of work per hour.

The arbitrary limitation of work performances at or below this point that may effect the production schedule and limit the earnings potential of employees on succeeding operations may be cited by either party and resolved only in conformity with the grievance procedure in the present agreement.

Accelerated incentive performances and continued incentive performances in excess of normal or sixty (60) "Units" per hour shall be on a voluntary basis only.

Employees will be expected to only give a performance that is within reasonable limits of their abilities and physical capacities.

It is understood that when grievances arise, pertaining to subnormal work performances, full consideration shall be given to the ability and physical capacity of the employees involved.

PAYMENT FOR HOURLY AND UNRATED WORK

Incentive employees shall be paid not less than their straight time average incentive earnings while performing unrated work, hourly work or work of an experimental or development nature provided however there is work available for them to perform on an incentive basis;

otherwise they shall receive the rates of pay as set forth in the present agreement in addition to whatever other compensation is provided.

CLASSIFICATION OF EMPLOYEES

Incentive employees shall be classified in a job level or grade in the same manner as the parties have heretofore agreed to classify hourly (day work) employees.

When an incentive employee is temporarily assigned to higher hourly rated jobs, the base rate of the higher rated jobs shall be the computing point in determining his incentive earnings.

SCRAP OR FAULTY WORK

The Company shall notify employees, in writing, within five (5) working days of the occurrence of faulty or scrap work that an adjustment will be made from the nearest weekly pay period subsequent to the occurrence of such faulty or scrap work. Only the premium credited for the faulty work or scrap shall be adjusted against the premium earnings, if any, if premium for the faulty or scrap work has been credited. Charge for faulty or scrap work must be specifically proved to be carelessness on the part of the operator involved.

DETERMINATION OF STANDARDS

Standards shall be established from detailed time studies or standard data developed therefrom and shall include allowances for fatigue, personal requirements and minor variations.

(a) *Method of timing.* All time studies shall be made by qualified time study men. Operations shall be broken down into component elements and sufficient readings taken for each element to insure accurate results.

(b) *Levelling.* Time values recorded shall be levelled by the time study men to convert them to standard or sixty (60) "Units" per hour which shall be representative of par or a one hundred per cent (100%) level.

(c) *Allowances.* A minimum allowance of eighteen per cent (18%) shall be added to all handling elements to compensate for fatigue incurred in the performance of a job and for personal requirements necessary during the course of a day. Such allowance shall consist of personal needs, five per cent (5%), delays, interferences, faulty materials, and equipment, three per cent (3%) minimum, and fatigue, eleven per cent (11%) minimum.

Additional percentage allowances for fatigue over and above such eleven per cent (11%), shall be made in increments of three per cent (3%), and for delays, interferences, faulty materials and equipment shall be in increments of two per cent (2%). Such additional allowances shall be made on a relative basis, with due consideration given to undesirable conditions that may retard or prevent an incentive employee from attaining incentive pace acceleration or which do not permit continuity of work performance without affecting his physical or mental well-being.

An allowance of twenty-five per cent (25%), covering machine time, personal needs, delays and interferences, shall be added to machine time where the operator gives only attention time. In cases of hand feed during machine time or the performance of some internal element, the machine time shall be treated as a handling element and the handling allowance shall be applied.

Where tolerances and specifications are close and exact, a suitable quality incentive allowance of not less than five per cent (5%) shall be made on a relative basis and increases shall be in increments of three per cent (3%).

Suitable and proper allowances shall also be made to

compensate for loss in production time where the contract provides for paid rest time, wash up periods, lunch periods, and for such minor delays that are inherent to the specific jobs

(d) *Standard Data.* Standard data may be developed to permit synthetic standard setting. However, in the event that grievances arise, all standards shall be subject to check by standard time study methods.

(e) *Computation of Standards.* Equitable standards shall be derived from time values for operation elements of each particular job. Standards shall be expressed in terms of "Units" (standard minutes).

PERFORMANCE DETERMINATION

(a) *Normal.* Normal efficient performance shall be that measure of judgment by observation of a pace of an operator that is neither slow nor fast, but rhythmical, consistent, and continuous and maintainable over an eight-hour period of time under a predetermined set of conditions without experiencing fatigue.

(b) *The concept of normal or standard performance shall be in conformity with the generally accepted "day work pace."* Specific examples of standard performances are offered by the following:

1 Hand motions as they are involved in dealing a deck of fifty-two (52) standard size playing cards into four separate piles in the time of 0:150 minutes.

2 Finger movements as they are involved in typing forty (40) words per minute.

3 Body movements as they are involved in unrestricted walking at a rate of three (3) miles per hour.

(c) *Sub-Standard.* An efficient and slow performance below sixty (60) "Units" per hour of normal to a greater or lesser degree, measured by lack of co-ordination, degree of inconsistency, and time not utilised in a productive manner.

(d) *Incentive Pace.* Accelerated, efficient performance in excess of standard (sixty (60) "Units" per hour) maintainable over an eight-hour day without producing undue fatigue up to eighty (80) "Units" per hour.

Acceleration of performance in excess of eighty (80) to ninety (90) "Units" per hour shall be considered as a pace producing fatigue that approaches maximum capacity for the average incentive worker.

Incentive performances beyond ninety (90) "Units" per hour are excessive and may affect the physical well-being of the average normal efficient incentive workers, yet may be within the capacity of the worker unusually adapted to the operation, either through skill acquired through long experience or unusual physical capacity.

GUARANTEE

All permanent standards once established including speeds and feeds once determined are guaranteed not to be altered, increased, or reduced except for changes in operation methods, materials, design, tooling or equipment or unless a clerical error has been made in computation. Any such revisions that may result from any of the above reasons shall be confined to the elements of the operation which were changed and shall be made only to the extent to which the elements are changed.

Whenever a change in a standard becomes necessary, an allowance of five per cent (5%) of the total time shall be made for a period of five (5) working days to compensate the operator for any earnings losses he might sustain as a result of his interrupted productive rhythm.

However, it shall be the aim and desire to maintain a consistent relationship of element times on operations that are related or similar, and the parties hereto may, by agreement, make adjustments in time standards

whenever necessary in order to establish and maintain a proper relationship.

Where a standard is reduced by reason of a change in an operation, created by an employee, that results in a savings to the Company, the Company shall make an award equal to the net direct labour savings in "Units," i.e., the difference between present and reduced standards evaluated at the operator's base rate, times the activity of the operation under consideration during the previous six months. If there has been no activity during the previous six months plant operation, then the award will be delayed and computed at the end of the next succeeding six months of plant operations. From this will be deducted any labour and material costs incurred by the Company in making practical to obtain net direct labour savings to be paid to the employee.

Should more than one employee be involved, the distribution of the award is the prerogative of the Union.

TEMPORARY STANDARDS

Temporary standards may be established either from a brief time study or from standard data for unusual conditions where circumstances make impractical the setting of a permanent standard. A temporary standard shall generally be set for a definite time period or particular job lot and shall terminate at the completion of such time period or job lot. No temporary standard shall be cited to support a claim that a permanent standard is correct or incorrect.

Temporary standards may be used for a period not longer than fifteen (15) working days except by agreement of the parties hereto.

INSTRUCTIONS

Operators shall be given instructions and sequences to follow before performing the task. Such information shall include machine identification, material identification, speeds, feeds and any special equipment required and standard for the operation. The operator shall perform the operation as so instructed.

GROUPS

Group incentive may be applied on closely related operations where each member of the group is dependent on others of the same group or when a community of interest exists. Group standards will be established in essentially the same manner as individual standards.

INDIRECT WORKERS

A plan to include indirect workers on jobs not considered practical for the establishment of direct standards shall be developed later to allow additional earnings on an incentive basis.

Until such time that proper standards are established, the company agrees to increase the present hourly rates two per cent (2%) every three months until the percentage increase totals sixteen per cent (16%), the subsequent establishment of incentive opportunity shall displace this percentage payment on work only on which standards have been determined.

GENERAL MACHINE DEPARTMENT INCENTIVE

A plan to establish group incentive on a basis other than that described herein may be hereafter developed by agreement.

DOWN TIME

Employees shall receive their hourly rate, plus 25% for all down time. Down time is defined as time lost

by incentive operators and is idle waiting time due to machine breakdown, waiting for assignment, tools, material or some similar cause not within the control of the employee. Down time shall be kept at a minimum insofar as possible.

An incentive worker, including stewards and committeemen as authorised in the present agreement, who is assigned to a non-incentive job other than on his own specific machine or work station shall receive his average hourly earnings for such time worked provided that there is incentive work available within the production schedule to which he would normally be assigned. Average hourly earnings shall be deemed to be the average hourly earned rate of the most recent day worked in which incentive work was performed.

INCENTIVE REPRESENTATIVES

The Union shall designate incentive representatives as follows: Two regular representatives who shall work in the Job and Time Standards Department for a period sufficient for them to become familiar with the methods and practices of the incentive plan, not to exceed eight (8) weeks. Following this, they shall return to their regularly assigned work places except for such times as their duties as representatives shall require their presence elsewhere.

During their period of work in the Job and Time Standards Department, those representatives shall receive their "Average Hourly Earnings" as defined in Article, "Down Time," if they are incentive workers, or their applicable hourly rate of pay if they are hourly workers.

In order to limit the turnover of such representatives and in order to give the Company the reasonable assurance of at least a one (1) year period of Union representation in such capacity, the Company need not assume the obligation of training more than two (2) such representatives at any one time, nor more than three (3) during the term of this Agreement.

Not more than two (2) Union incentive representatives as such shall be active on company premises at any one time exclusive of the original training period.

All Company time study records shall be kept on file in the Job and Time Standards Department office for the inspection of Union representatives on complaints or grievances during working hours.

The duties and responsibilities of these representatives are detailed under the section on "Grievances."

GRIEVANCES

Before protesting the fairness of a standard, it is expected that an operator will give such standard a fair trial.

When an employee feels that the allowed time for his operation is insufficient, he shall immediately notify his foreman and committeeman.

If no satisfactory settlement is effected, the foreman shall immediately notify the Job and Time Standards Department, who will promptly review the complaint and make a disposition of the case.

If the disposition is unsatisfactory, the Union Committeeman shall, through the foreman, call in a designated Union Incentive Representative to review the complaint.

The Union Incentive Representative shall then meet with the Job and Time Standard Department to effect a settlement. The settlement shall be effected by:

(a) Review of operation specification sheet to be certain that all elements of work are included.

(b) Review the application of standard data, if such has been used, to the specification sheet to be certain that the standards have been correctly applied.

(c) Should no settlement be effected after steps (a) and (b), then both parties in the presence of each other shall time the operation in question to determine the correct time value as defined herein. Whenever a timing becomes necessary as a result of an alleged inadequate time value, the aggrieved employee shall be studied whenever possible. There shall be an

exchange of the performance ratings of the employee being observed *before* the time study representatives of the parties leave the job in question.

If no agreement is reached by the above procedure, then the grievance shall follow the regular grievance procedure as set in the Agreement with Step Two (2).

If the grievance procedure provided for fails to produce a settlement of the complaint, it will become a matter for arbitration under the procedure provided for in the present agreement.

STABILISATION AGREEMENT

APPENDIX K

Schedule of Wage Rates established by Building Trades in New York

For Period from January 1, 1948, to June 30, 1950 (Except as Noted)

Trade	Work Day in hours	Hourly Rate in dollars	Special Conditions
Asbestos Workers	7	2.75	
Asbestos Workers' Helpers	7	1.90	
Boilermakers	8	2.75	
Boilermakers Helpers	8	2.40	
Carpenters	7	2.75	With provision that eighth hour be worked at straight time when approved by Trade Committee, due to scarcity of men.
Cement and Concrete Workers	7	1.95	Effective March 15, 1948.
Cement Masons	7	2.75	
Derrickmen and Riggers (stone)	7	2.50	
Elevator Constructors	8	2.75	
Elevator Constructors' Helpers	8	2.035	
Engineers, Hoisting	7-8	3.00	With provision that eighth hour be worked with 8-hour trades at straight time.
Engineers, Cranes and Working with Structural Iron Worker	7-8	3.25	
Glaziers	7	2.75	With provision that eighth hour be worked at straight time when approved by Trade Committee, due to scarcity of men.
Marble Cutters and Setters	8	2.75	
Marble Polishers	8	2.55	
Marble Riggers and Derrickmen	8	2.475	
Marble Helpers	8	2.35	
Metallic Lathers	7	2.75	
Mosaic and Terrazzo Workers	7-8	2.60	With provision that eighth hour be worked at straight time at the option of the individual contractor, and further, that the rate of \$2.60 and \$2.05 will be adjusted to the same rate as the tile setters and tile setters' helpers after July 1, 1948.
Mosaic and Terrazzo Workers' Helpers	7-8	2.05	
Ornamental Iron Workers	7	2.75	With provision that eighth hour be worked at straight time when approved by Trade Committee, due to scarcity of men.
Ornamental Iron Workers' Helpers	7	2.25	
Plumbers, No. 1 (Brooklyn)	8	2.81½	With provision for a reduction of hours in the working day as provided in the individual trade agreement.
Riggers and Machinery Movers... ..	8	2.75	Effective March 1, 1948.
Sheet Metal Workers	7	2.75	
Slate and Tile Roofers	8	2.75	
Slate and Tile Roofers' Helpers	8	2.00	
Steamfitters	7	2.75	
Steamfitters' Helpers	7	1.90	
Stone Cutters	7	2.75	
Stone Setters	7	3.00	
Structural Steel Workers	8	3.00	

The above rates are those negotiated by the New York Building Trades Council (A. F. of L.). Agreements have also been negotiated separately by some unions and therefore are not included in the above Schedule. Bricklayers, Plasterers and Painters have a 7-hour day, Bricklayers and Plasterers being paid \$3.20 per hour and painters \$2.45.

Trade Unions AND **Productivity**

**THE REPORT AND
RECOMMENDATIONS**

of a team of

British Trade Union Officials
who investigated the role of unions
in increasing productivity in the
United States of America

TWO SHILLINGS AND SIXPENCE