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CHAPTER VIII

Extent of Organization

FIGURES of union membership as an index of the strength of organized labor suffer, it has already been suggested, from familiar limitations of accuracy. Standing alone they fall short of depicting the true position of trade unionism through their failure also to reflect changes in the size of the working population and in its composition. For this reason it has been found enlightening to compare the actual with the potential membership of labor organizations and thereby to derive as precise measures as possible of the extent to which the employees in all occupations together and in many of them separately have from time to time belonged to the unions of this country.

For such comparisons the most comprehensive sources of information on the size and character of the American working population are the decennial censuses of occupations taken by the Federal government. The data contained in these censuses are the most complete available of the number of persons attached to the various occupations to which they look for jobs and a living. The material is presented in such detail that it can without undue difficulty be recast into many new and informing classifications. But the census of occupations has for this purpose defects that impair its value and require that it be supplemented and amended by other bodies of information.

The census, first of all, is taken only once in ten years and

then during a limited period, usually less than a month. An account of developments within the long intervals between censuses can be supplied only through estimates involving indeterminate and often substantial margins of error. Second, the census records those attached to occupations but not necessarily at the time employed in them. Under conditions of prosperity and full employment, the difference between the number attached and employed may be slight, but under conditions of depression and unemployment the size of the employed population will obviously depart widely from that of the attached. Third, the raw data of the census are collected by thousands of field agents, or enumerators, through personal interviews. Since the definition and classification of occupations and industries raise problems that baffle even experts in this field, it is to be expected that census returns should present unusual difficulties of classification and interpretation. Consequently, efforts to classify the working population of the United States into social-economic groups, wherein the employed are distinguished from their employers, self-employed from employees, salaried employees from wage earners and the like, must involve a large element of conjecture.

A summary of the results of a reclassification of the census data is given in Table 26 (the details on which this summary is based appear in the Appendix, Table III). While these figures rest on the inspection and comparison of hundreds of occupations, they can in the nature of the case lay no claim to absolute accuracy. Among all the groups there is considerable and unavoidable overlapping owing to the impossibility of identifying and segregating many occupations and types of work. The group of 'employees' unquestionably includes a substantial number of business men, self-employed, and highly-paid managerial and

supervisory officials. The changes in the relative position of each group between 1910 and 1930 may be purely fortuitous consequences of changes in definition, in methods of enumeration, and in custom. At best the figures constitute a rough estimate of the size of social-economic groups in the American occupied population in the census years, 1910, 1920, and 1930. As they stand they appear to indicate that the number of 'manual' and 'white-collar' workers in the United States in 1930 was thirty-three million. Other and perhaps more refined distributions of the census data are possible, but it is doubtful that they would produce results differing greatly from those recorded in Table 26. A careful analysis of these same statistics of occupations for 1930, made by a member of the staff of the Census Bureau, confirms the impression that the estimate of thirty-three million does not overstate the size of the group of wage earners and salaried workers in the last census year. A summary of this analysis¹ based in part on classification by skill and in part on other criteria, appears in the accompanying tabulation.

	NUMBER IN 1930
Clerks and kindred workers	7,949,455
Skilled workers and foremen	6,282,687
Semi-skilled workers	7,977,572
Unskilled workers	14,008,869
Total workers	36,218,583
Professional persons	2,945,797
Proprietors, officials and managers	9,665,540
Grand total	48,829,920

¹Alba M. Edwards, A Social Economic Grouping of the Gainful Workers of the United States, *Journal of the American Statistical Association*, December 1933, p. 383.

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TABLE 26

WORKING POPULATION OF THE UNITED STATES, 1910, 1920, AND 1930¹

	1910	1920	1930
Professional workers, ² total	1,613,755	2,000,840	2,855,973
Proprietors, managers and officials, independent, salaried and commissioned workers, total	9,334,821	10,121,888	11,096,269
Proprietors	8,093,399	8,372,820	8,598,594
Managers and officials	380,696	609,853	748,597
Other proprietors, managers and officials	240,018	260,728	370,112
Independent, salaried and commissioned workers	620,708	878,487	1,378,966
Employees, ³ total	23,809,904	27,359,660	33,217,886
Agriculture and forestry	3,100,672	2,628,269	2,971,167
Mining and quarrying	939,935	1,055,898	953,427
Manufacturing and mechanical industries, including construction, total	10,229,364	12,162,179	13,540,817
Trades and occupations attached to more than one industry	4,756,144	5,433,714	6,083,981
Operatives and laborers attached to specified industries	5,473,220	6,728,465	7,456,836
Transportation and communication, total	2,254,204	2,705,906	3,368,162
Transportation	2,002,269	2,316,920	2,843,788
Communication	232,788	355,165	452,500
Other transportation and communication	19,147	33,821	71,874
Public service, ⁴ total	421,136	704,962	822,293
Clerical and commercial service, total	3,386,226	4,936,385	6,759,332
Other service industries:			
Recreation and amusement	9,114	11,024	32,903
Professional service	39,584	88,209	223,565
Domestic and personal service	3,429,669	3,066,828	4,546,220
Grand total	34,758,480	39,482,388	47,170,128

¹ Based on the 15th Census of the U. S., 1930, Population, Vol. V, *General Report on Occupations*. The grand total for 1930 differs from the grand total in Dr. Edwards' tabulation because it does not include unpaid family workers on farms. These amounted to 3,310,534 in 1910, 1,850,119 in 1920, and 1,659,792 in 1930.

² Includes an indeterminate number of professional workers employed by others.

³ Includes an indeterminate and probably large number of proprietors, managers, officials, independent, salaried and commissioned workers.

⁴ Includes only those occupations in public service which are not classified elsewhere.

Dr. Edwards estimates the total number of workers in 1930 at 36,218,583. In Table 26 the estimated total number of employees is 33,217,816. The lower estimate used in this study is obtained by excluding from the category of employees many supervisory and self-employed persons and unpaid family workers on farms who are included in Dr. Edwards' category of workers. Which of these two methods of classification and estimate is superior, it is impossible to determine.

How valid the use of any of the several possible estimates of the number of organizable employees is must remain a matter of opinion. It is clear that the criteria by which such estimates are obtained vary with the changing doctrine and practice of the organized labor movement. The traditional view, for instance, that agricultural laborers are not appropriate material for union organization is hardly tenable in light of the organizing activities of the I.W.W. in this field and the existence at this time of many local unions of agricultural workers, some affiliated with the American Federation of Labor and others independent of it. In recent years, likewise, a considerable number of union charters have been granted to clerks and sales-people in offices and stores. Persons engaged in service occupations, including several of the professional services, have also become subject to organization, and unions have been formed among them. Foremen and other supervisory employees, hitherto eligible to union membership in only a few organizations, have since 1933 been more generally solicited and are being admitted into an increasing number of unions. Of all the great categories of employment certain groups in personal and domestic service alone have remained relatively immune to pressure and unsusceptible to organization.

A broad comparison of the number of union members² with the estimated number of organizable employees in the census years 1910, 1920, and 1930 shows that the overwhelming majority of American employees was in these years unorganized. According to the data in Table 27, only 10 per cent were organized in 1910 and 1930, even after some 3,000,000 agricultural laborers had been deducted each year from the total. In 1920, the year of maximum union membership, the percentage of organization was twice that of 1910 or 1930, but 80 per cent of all non-agricultural employees remained unorganized. The increase of 1,000,000 union members from 1910 to 1930 just about kept pace with the increase in the number of employees, and as a result the relative amount of organization was the same in both years. Among the numerous groups that make up the total of more than 30,000,000 non-agricultural employees there are necessarily some whose inclusion is open to question. The most important is the group of domestic servants which aggregated 1,121,785 persons in 1910, 872,471 in 1920, and 1,433,741 in 1930. But even if, by making the most liberal deductions for domestic servants and other debatable categories, the number of non-agricultural employees in 1930 is reduced to 25,000,000, the organized in that year would still constitute only 12 per cent, and the unorganized 88 per cent, of the total.

That the foregoing summary comparisons represent an incomplete and, in a sense, misleading picture of the state of unionism in this country should be clear to anyone familiar with the character of American organized labor. The concentration

² Since most American national unions have local unions in Canada, it is necessary in order to make comparisons with the working population to deduct Canadian membership from the total. Canadian and American membership in 1930 is given in the Appendix, Table IV.

TABLE 27

PERCENTAGE OF TRADE UNION ORGANIZATION AMONG
EMPLOYEES IN THE UNITED STATES, 1910, 1920, AND 1930

	1910	1920	1930
Trade union membership ¹	2,052,402 ²	4,795,100 ²	3,073,200
Total number of employees	23,809,904	27,359,660	33,217,886
Percentage of employees organized	8.6	17.5	9.3
Total number of non-agri- cultural employees	20,709,232	24,731,391	30,246,719
Percentage of non-agricul- tural employees organ- ized	9.9	19.4	10.2

¹ Represents membership in the United States, obtained by deducting Canadian from total membership. Because of difficulties in classification these figures do not include membership in the actors, draftsmen, musicians, teachers, and postal supervisors unions. The combined membership of these organizations was 49,100 in 1910, 86,100 in 1920, and 116,300 in 1930.

² Leo Wolman, *The Growth of American Trade Unions, 1880-1923*, p. 85.

of union membership in limited groups of industries and occupations has been noted in preceding chapters and is confirmed by comparing the membership of groups of unions with the working population in major divisions of industry. The resulting measures of the extent of organization by industry are given in Table 28.

In each census year coal mining and transportation have, in this classification of industries, been the most highly organized. In all industries, except 'other mining' and street railways, the extent of organization was at its peak in 1920; in most industries organization had by 1930 dropped to practically the level of 1910. On both the steam railroad and street railway systems the degree of unionization in 1930 substantially exceeded that of 1910, but it must be remembered that in these industries the number em-

ployed had in this period of twenty years actually declined, while the total number of non-agricultural employees had increased more than nine and one-half million. In 1930 the populous manufacturing and mechanical industries, employing more than thirteen million persons, were nearly nine-tenths unorganized. Even in 1920 they had been little more than one-fifth organized. The service occupations, covering altogether about fourteen million employees in 1930, were even less unionized, the ratio of organization falling below 5 per cent in each census year. The low state of trade union organization among the twenty-seven million employees attached to the manufacturing and mechanical industries and to service occupations accounts for the low percentage of labor organization in the total wage earning and salaried population of the United States.

Figures for the important and highly unionized construction industry are not separately presented in Table 28 because neither the census data nor the statistics of membership lend themselves to satisfactory classification. The segregation and grouping of specific occupations in this industrial category are subject to so wide a margin of error that it was found necessary to regard the manufacturing, mechanical and construction industries as the constituents of a single major division of industry. In computing the percentage of organization for this group, the membership of the building trades unions has, accordingly, been added to the membership of unions composed of strictly manufacturing employees. Even then the resultant percentages are not free from error, for a fair number of unions, notably the Electrical Workers, Carpenters, and Teamsters, extend their jurisdiction over a wide range of industries, and there is no way, short of arbitrary decision, of distributing their membership among these separate

TABLE 28

PRINCIPAL DIVISIONS OF INDUSTRY, PERCENTAGE OF
TRADE UNION ORGANIZATION AMONG EMPLOYEES,
1910, 1920, AND 1930¹

DIVISION OF INDUSTRY	1910	1920	1930
Mining, quarrying, crude petroleum and gas production, total	27.8	39.6	22.4
Coal mining	36.8	50.9	33.0
Other mining	14.9	13.9	3.3
Quarrying	7.8	5.8	4.4
Crude petroleum and gas production	...	24.4	1.0
Manufacturing and mechanical industries, including construction, total	11.4	22.2	12.2
Transportation and communication			
Transportation, total	19.5	39.6	22.1
Motor and wagon transportation	4.5	11.7	6.2
Steam railroads	27.6	53.2	38.6
Street railways	23.6	50.0	57.6
Water transportation	33.2	80.9	30.4
Communication, total	9.0	19.9	7.7
Service industries, total	2.0	4.9	3.2
Clerical service	1.7	8.6	5.4
Commercial service	0.8	1.0	0.3
Professional service	3.1	4.6	3.6
Domestic and personal service, recreation and amusement	2.2	4.2	3.0

¹ For the data on which this summary is based see Appendix, Table V.

jurisdictions. The net effect of accepting the limitations of the census data and the shortcomings of the figures of membership is to exaggerate the percentage of unionization in manufacturing and mechanical industries and to minimize it in the rail transportation industry. So far as the construction industry itself is con-

cerned a rough estimate of the extent of organization in 1930 would lie between 30 and 40 per cent.

Except in coal mining, construction and transportation, trade unionism within each industrial division is limited to small segments of the organizable field. Thus in the manufacturing and mechanical division, which extends over a wide range of separate and distinct industries, organized labor is strong in printing, clothing, and shoe manufactures and in several trades not peculiar to any single industry, but is weak in the others. In the service occupations—a large category of employment—where the total extent of organization is low, there is considerable concentration of union membership within restricted groups. In clerical service, union membership exists almost exclusively among post office and railway clerks; there is hardly any organization among the vast number of clerical employees in commercial offices. Organization in the professional services is concentrated in several small unions of actors, draftsmen, and teachers and one large union of musicians, the membership of which is about 90 per cent of the total membership of all professional unions. And in domestic and personal service only the barbers and hotel and restaurant employees had substantial organization before 1930. In that year the beginnings of unionization, particularly in several large cities, appeared among building service employees, such as elevator operators and janitors.

Throughout all but a few industries union members are organized in craft unions whose jurisdictions cut across industrial demarcations. In the industries in which this form of organization prevails, the highly skilled craftsmen are as a rule well organized, the semi-skilled much less so, and the unskilled hardly at all. On the railroads, where unionism is preponderantly craft and there

was in 1930 a ratio of organization of approximately 40 per cent, the semi-skilled and unskilled are less thoroughly organized than the skilled. The same condition obtains in other industries as well. A rounded view of trade union strength in this country must, therefore, take into account the extent to which the employees in leading crafts have been organized. Some light on this aspect of the question is furnished by the data in Table 29.

It is plain from the series in this table that there is a close relation between the extent of organization and skill. The greatest degree of unionization appears to exist in a few crafts in the railroad and printing industries. Union members comprise a very large percentage of the locomotive engineers, locomotive firemen, and conductors on the railroads, and the specialized electrotypers and lithographers in printing. The smaller percentages of organization among the skilled operatives in the building industry reflect the influence of other forces, although there is here also a noticeable correlation between skill and union strength which in a measure explains the difference in the extent of organization between bricklayers and carpenters. In this group of occupations, as well as among machinists, molders, blacksmiths and the like, geographical dispersion acts to reduce the total percentage of unionization, for the simple reason that scattered and isolated workingmen are usually harder to organize than concentrated groups. Many of these occupations actually include craftsmen of all grades of skill and it is probably the more skilled and experienced within each occupational group who are the most highly organized. When it is observed, also, that such occupational groups as 'teamsters' and 'carpenters' include a considerable number of self-employed persons as well as the large class of part-time employees working in the small towns and rural areas of the

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TABLE 29

SELECTED OCCUPATIONS, PERCENTAGE OF TRADE UNION ORGANIZATION AMONG EMPLOYEES, 1910, 1920, and 1930

OCCUPATION	1910 ¹	1920 ¹	1930 ²
Actors and showmen	18.8	39.4	12.9
Bakers and bakery workers	16.1	21.2	10.8
Barbers	15.2	23.3	19.0
Blacksmiths, forgemen and hammermen	6.7	17.6	3.0
Brick and stone masons and tile layers	39.1	50.0	49.4
Carpenters and joiners	20.8	40.5	32.3
Compositors, linotypers and typesetters	34.9	46.4	39.6
Coopers	17.2	22.6	6.2
Electrical workers	6.4	29.9	22.8
Electrotypers and stereotypers	88.4	... ³	97.1
Lithographers	35.6	68.1	60.9
Locomotive engineers and firemen	79.1	98.1	96.4
Longshoremen and stevedores	33.0	81.8	44.6
Machinists, millwrights and toolmakers	11.7	33.9	8.9
Mail carriers	32.2	24.8	75.3
Metal polishers and buffers	32.8	40.0	16.8
Molders, founders and casters	33.8	43.4	19.1
Painters, decorators and paperhangers	17.6	29.1	18.7
Pattern and model makers	38.0	30.3	22.5
Plasterers and cement finishers	32.0	39.2	42.7
Plumbers and gas and steam fitters	20.7	33.5	17.5
Pressmen and plate printers	62.8	... ³	87.1
Railway conductors	87.0	72.0	69.1
Stationary engineers	4.6	12.4	12.5
Stationary firemen	9.6	19.9	6.4
Teachers (school)	... ⁴	1.1	0.5
Teamsters and chauffeurs	8.8	12.3	7.7
Upholsterers	12.3	18.6	20.2
Waiters and cooks	5.8	9.3	4.5

¹ For the source of the figures for 1910 and 1920, see Leo Wolman, *op. cit.*, pp. 156-61. The data for the earlier years have been supplemented and, in a few instances, revised.

² See Appendix, Table VI, for data upon which these percentages are based.

³ In this year the number of union members reported by the union exceeded the number of employees reported by the census.

⁴ No record of a teachers union in 1910 is available.

country, the percentage of union organization for this type of occupation can hardly be expected, even under the most favorable conditions, to rise to the levels reached by locomotive engineers, railway conductors, or stereotypers and electrotypers.

Recent changes in the position of organized labor are, of course, not recorded in the percentages of organization based on the data of the decennial censuses of occupations. Since 1930 fluctuations in union membership and the existence of an abnormal volume of unemployment have radically modified the chart of union organization. By comparing union membership with actual employment in several important divisions of industry, it is fortunately possible to derive indexes of union strength in intercensal years and thereby to allow for the growth of unemployment and to illustrate the striking decline and recovery of union membership since the onset of the depression. A summary of these comparisons since 1923 is given in Table 30.

The record for manufacturing industries shows the gradual decline in union organization in the prosperous years, 1923-29, and the sharp rise between 1929 and 1933. The improvement in the later period, however, was wholly due to the enormous contraction of manufacturing employment. From 1929 to 1933 the number of wage earners in manufactures dropped from 8,811,243 to 6,055,736, or nearly 3,000,000, while union membership in this group of industries increased some 20,000, from 958,500 to 979,800. Comparable data for 1934 are not available; but preliminary estimates would appear to indicate that membership increased more rapidly than employment and that the extent of organization in manufacturing industries had perhaps risen to as much as 20 per cent.

Among the major divisions of manufactures the most notable

TABLE 30

MANUFACTURING, COAL MINING, AND STEAM RAILROAD
TRANSPORTATION, PERCENTAGE OF TRADE UNION
ORGANIZATION AMONG EMPLOYED WAGE
EARNERS, 1923-1934 ¹

YEAR	MANUFACTURING ²	COAL MINING	STEAM RAILROAD TRANSPORTATION ³
1923	12.7	57.1	44.7
1924		58.9	45.6
1925	12.4	55.4	45.2
1926		47.6	43.2
1927	12.1	49.0	43.5
1928		45.3	45.2
1929	10.9	37.4	44.6
1930		31.8	49.0
1931	14.1	48.2	51.2
1932		64.9	56.3
1933	16.2	61.5	51.0
1934		90.6	49.7

¹ For the detailed data from which this summary table is drawn see the Appendix, Tables VII, VIII, IX.

² Includes shop crafts on railroads; see the Appendix, Table IX.

³ Railroad shop craft employees are excluded.

improvement in the position of organized labor took place in 'leather and its manufactures', and in 'clothing, except boots and shoes'. Union membership in both these groups had anticipated by one year the general advance in membership that is so striking a feature of 1934. In consequence, as is shown in Table 31, the percentage of union organization increased in the leather group from 14.3 in 1929 to 26.3 in 1933, and in clothing from 35.5 to 69.1. These two groups together increased their membership from 1929 to 1933 by 150,000. It is noteworthy that the percentage of unionism in the clothing group is probably at its peak for all time and that organized labor is stronger there than in any other manufacturing industry.

TABLE 31

MAJOR DIVISIONS OF MANUFACTURING, PERCENTAGE OF
TRADE UNION ORGANIZATION AMONG EMPLOYED WAGE
EARNERS, 1923-1933¹

DIVISION OF MANUFACTURING INDUSTRY	1923	1925	1927	1929	1931	1933
Chemicals and allied products	0.1	... ²				
Clay, glass and stone products	14.3	12.6	12.9	13.2	17.9	18.8
Clothing, except boots and shoes	54.6	55.8	47.1	35.5	44.2	69.1
Food and kindred products	7.0	7.4	7.3	6.3	7.1	6.3
Forest products	8.9	9.1	10.0	9.9	15.8	12.2
Iron and steel, machinery, trans- portation equipment and rail- road repair shops	10.8	10.2	10.1	9.4	12.8	13.9
Leather and its manufactures	15.7	16.7	15.1	14.3	13.6	26.3
Musical instruments	1.6	1.4	1.7	2.7	4.0	4.9
Nonferrous metals and their products	6.8	4.4	4.4	3.8	5.8	3.2
Paper and printing	26.7	26.8	27.1	25.2	29.6	30.8
Textile mill products	3.1	3.3	3.2	3.3	3.9	1.7
Tobacco manufactures	19.0	18.6	15.2	14.6	13.1	16.7
Miscellaneous	8.6	7.9	8.3	8.6	11.5	12.9

¹ See Appendix, Table VII, for the comparisons on which these percentages are based.

² Less than one-tenth of one per cent.

In coal mining, organization has pursued much the same course as in manufacturing, but the range of fluctuation has been much greater. From 1923 to 1930 unionization suffered a severe decline of almost one-half, but since 1930 the advance in organization has exceeded that in any other industrial group. If it were possible to separate union membership in the anthracite from that in the bituminous division of the coal industry and to compute the percentage of organization in each, the decline of unionism in the bituminous industry alone from 1923 to 1930 and its expansion thereafter would be seen to be even more striking. The

membership of the United Mine Workers is, in relation to the number at this time employed in the industry, the greatest in the history of the union.

More stable labor organization on the railroads is reflected in the narrow range of variation in the degree of unionization over this whole period. The decline in membership has in large measure been due to the contraction in railroad employment and not to loss of control by the unions; membership has declined at about the same rate as employment and the percentage of organization has been maintained through the years of the depression. In the absence of any substantial recovery in railroad employment during 1934, the membership of the railroad unions and, hence, the percentage of railroad workers organized have not changed.

These various estimates of the extent of labor organization fail to present a complete picture of the status of American industrial relations, since organizations of employees in this country are not limited to trade unions. Throughout American industry systems of collective bargaining under employee-representation plans are quite common and in many parts of industry cover more employees than the trade unions. It has already been noted that in the railroad industry forms of organization called company unions or employee-representation plans have shared with the standard railroad unions the function of representing employees in their relations with management. Under the present railway labor law many of these organizations have been converted into independent unions which compete with the standard railroad unions for the right to represent railroad employees in collective bargaining. Since most of these railroad unions are new and not firmly established their number and membership are not known.

The company unions are membership organizations. The employee-representation plans do not require members and merely furnish the structure for collective bargaining. The differences between them are described as follows by one of the leading students of these types of organization.³

“A company union presupposes organization, officers, memberships, insignia, everything that in a sense any regular trade union would have. It is simply a local union confined to membership in one plant or company, and more or less dominated or controlled by the company management. . . . A representation plan in its simplest form has no organization, no ritual, no machinery, no officers, no bylaws, no constitution—except four or five brief items as to how elections and hearings are to be conducted. . . .”

Company unions, consequently, are analogous to trade unions in that they require membership. Representation plans, on the other hand, furnish the employees of a plant, company, or industry with a framework for representation. They are the means through which all employees, whether members of unions or not, may elect representatives to deal for them with their employers. In view of these distinctions it is not possible to compare union membership with the membership of these other forms of organization. But it is possible to estimate with reasonable accuracy the number of employees working under arrangements between unions and employers and those under representation plans of all kinds. Estimates so made will not disclose relative membership and, hence, percentages of organization, but they will afford a fair gauge of the prevalence of different types of industrial relations.

³ C. R. Dooley, quoted in *Types of Employer-Employee Dealing*, *Monthly Labor Review*, December 1935 (U. S. Bureau of Labor Statistics), p. 1442.

A comprehensive survey of types of industrial relations was undertaken by the Bureau of Labor Statistics of the United States Department of Labor in April 1935.⁴ This inquiry distinguishes three types of dealings—with trade unions, with company unions, and with individual employees. The company union in the Bureau study is understood to mean “an organization formed among workers of a particular company or plant for the consideration of labor conditions” and presumably includes non-membership as well as membership organizations or arrangements. Replies received by the Bureau of Labor Statistics from employers in manufacturing, services, public utilities, mining, retail trade, and wholesale trade covered close to 2,000,000 employees. The findings are summarized in Table 32, which shows the percentage of employees in specified groups of industries working under each type of industrial relations.

If these results are used as a measure of union membership, they clearly overestimate it. This may be due to the shortcomings of the samples available to the Bureau of Labor Statistics. But it is in large measure an indication that many workers are employed subject to the terms of union agreements but are not members of unions. Taken at their face value, the data in Table 32 confirm the conclusions reached earlier in this chapter. The industries covered are hardly more than 25 per cent union; manufacturing is less than 20 per cent. In the services and in retail and wholesale trade, individual bargaining is the dominant type of relationship. Mining is the most heavily union.

The high percentage of union organization in public utilities—manufactured gas, electric light and power, and electric railroad

⁴ *Monthly Labor Review*, December 1935, pp. 1441-66.

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TABLE 32

DISTRIBUTION OF WORKERS BY INDUSTRY AND TYPE OF INDUSTRIAL RELATIONS, APRIL 1935¹

	PERCENTAGE OF WORKERS IN ESTABLISHMENTS DEALING With some or all workers through trade unions					
	Indi- vidually	Total	Esti- mated per- centage cov- ered by trade unions	Esti- mated per- centage not cov- ered by trade unions	Through company unions	Through union and trade union
All industries covered	42.5	30.2	26.1	4.1	19.9	7.4
All manufacturing industries	42.5	24.1	19.5	4.6	24.9	8.5
Durable goods	39.8	16.8	12.2	4.6	34.0	9.4
Iron and steel	29.1	13.6	10.6	3.0	49.3	8.0
Machinery	39.6	10.8	7.0	3.8	39.6	10.0
Transportation equipment	20.7	19.9	16.9	3.0	39.7	19.7
Nonferrous metals	58.2	14.8	11.8	3.0	23.0	4.0
Lumber and allied products	74.9	11.3	8.8	2.5	12.1	1.7
Stone, clay and glass products	22.7	63.5	42.4	21.1	5.9	7.9
Nondurable goods	45.5	30.8	26.1	4.7	16.0	7.7
Textiles	60.7	30.8	28.1	2.7	6.3	2.2
Fabrics (except hats)	68.1	22.7	19.6	3.1	6.7	2.5
Wearing apparel (except millinery)	37.5	55.9	54.6	1.3	5.4	1.2
Leather	36.9	45.4	35.8	9.6	17.7	...
Food	45.3	35.7	28.6	7.1	8.0	11.0
Cigars	74.0	26.0	25.0	1.0
Paper and printing	37.8	44.8	33.4	11.4	16.8	0.6
Chemicals	25.4	14.0	13.0	1.0	54.9	5.7
Rubber products (except boots and shoes)	12.5	8.8	7.2	1.6	13.1	65.6
Miscellaneous non- durable goods	28.7	71.3	71.3
Miscellaneous manufactures	22.3	9.6	7.7	1.9	59.0	9.1
Service	86.0	11.6	6.4	5.2	2.3	0.1
Public utilities	27.4	50.6	47.7	2.9	15.2	6.8
Mining	9.9	87.2	86.6	0.6	2.4	0.5
Retail trade	73.0	11.4	0.9	10.5	5.8	9.8
Wholesale trade	94.6	5.0	3.5	1.5	0.4	...

¹ Adapted from Table 2 (pp. 1450-1), *Monthly Labor Review*, December 1935; for explanatory notes and discussion, see the article in that issue, pp. 1441-66.

and motor bus industries—is due to the exclusion of the telegraph and telephone industry, almost entirely non-union, from the group and by the excessive weight given to the electric railroad and motor bus industries. Manufactured gas is 12.7 per cent and electric light and power 14 per cent union. In the telegraph and telephone industry 78 per cent of the employees were under company union arrangements, 16 per cent were under both trade union and company union systems of industrial relations, 5 per cent dealt individually with management.

Relationships prevailing in the railroad industry were surveyed in the following manner (p. 1464):

“A separate study of employer-employee relations on Class I railroads was carried out with the cooperation of the National Mediation Board. The Board made available for this purpose its files of agreements maintained in compliance with the provision in the Railway Labor Act of 1934 that each railroad engaged in interstate transportation must file with the Board copies of each agreement with every group of employees with whom it deals collectively. The file thus provided an almost complete picture of employer-employee relations on 149 Class I railroads as of July 1, 1935. The number of workers covered by the various agreements was estimated by the Bureau from the itemized monthly compensation reports made by all Class I railroads to the Interstate Commerce Commission. April 1935 employment figures were used to make the results comparable with other parts of the study.”

The results of the analysis of these railroad agreements are shown in Table 33.

Railroad employees are thus covered by three types of arrangement. They work under agreements with unions or with system associations, or they bargain as individuals with the railroad management and hence do not come under any collective contract. System associations are “non-trade-union organizations functioning on the railroads within the requirements set by the Railway

TABLE 33
 DISTRIBUTION OF EMPLOYEES ON CLASS I RAILROADS, BY CRAFT AND TYPE OF
 INDUSTRIAL RELATIONS, APRIL 1935¹

CRAFT OR CLASS	TOTAL NUMBER OF WORKERS ²	ESTIMATED NUMBER AND PERCENTAGE OF WORKERS COVERED BY AGREEMENTS WITH Trade union		ESTIMATED NUMBER AND PERCENTAGE OF WORKERS COVERED BY AGREEMENTS WITH System association		ESTIMATED NUMBER AND PERCENTAGE OF WORKERS NOT COVERED BY AGREEMENTS ²	
		Number	Percentage of total	Number	Percentage of total	Number	Percentage of total
All crafts or classes	909,249	646,169	71.1	218,885	24.1	44,195	4.8
Engine and train service	158,716	156,514	98.6	1,286	.8	916	.6
Engineers	39,917	39,083	97.9	620	1.6	214	.5
Firemen	45,773	45,097	98.5	344	.8	332	.7
Road conductors	22,468	22,231	98.9	84	.4	153	.7
Brakemen, flagmen, and baggagemen	50,558	50,103	99.1	238	.5	217	.4
Yard service employees	54,730	51,826	94.7	665	1.2	2,239	4.1
Clerical and station employees	180,817	125,796	69.6	49,811	27.5	5,210	2.9
Telegraphers	43,892	37,447	85.3	5,687	13.0	758	1.7
Signalmen	11,620	11,152	96.0	198	1.7	270	2.3
Train dispatchers	3,321	1,966	59.2	378	11.4	977	29.4
Maintenance of way	192,482	143,421	74.5	42,153	21.9	6,908	3.6
Shop crafts	244,999	115,015	47.0	114,240	46.6	15,744	6.4
Machinists	37,728	18,186	48.2	19,168	50.8	374	1.0
Boilermakers	10,321	5,591	54.2	4,568	44.2	162	1.6
Blacksmiths	4,637	2,196	47.3	2,363	51.0	78	1.7
Sheet metal workers	7,843	4,321	55.1	3,445	43.9	77	1.0
Electrical workers ³	10,887	4,735	43.5	5,988	55.0	164	1.5
Carmen	62,964	33,812	53.7	28,355	45.0	797	1.3
Firemen and oilers	47,420	17,058	36.0	17,030	35.9	13,332	28.1
Helpers ⁴	63,199	29,116	46.1	33,323	52.7	760	1.2
Dining car service	9,481	2,736	28.9	2,969	31.3	3,776	39.8
Miscellaneous ⁵	9,191	296	3.2	1,498	16.3	7,397	80.5

Labor Act" (p. 1465) and as such are similar to company unions and employee-representation plans in other industries. In terms of this classification the majority of railroad employees are covered by union agreements. Thus, of 909,249 employees, 646,169, or 71.1 per cent, were working under trade union agreements, 218,885, or 24.1 per cent, under agreements with system associations, and 44,195, or 4.8 per cent, dealt with their employers as individuals. Of the various classes of railroad employees, almost all the train service employees were under trade union agreements; employees in railroad shops were about equally distributed under agreements with trade unions and with system associations. These figures do not, of course, mean that 71.1 per cent of railroad employees were in April 1935 members of trade unions. For in this, as in other industries, the number covered by union agree-

Footnotes to Table 33:

¹ Adapted from table appearing in the *Monthly Labor Review*, December 1935, p. 1466.

² The reporting number under the new Interstate Commerce Commission classification were allocated among the various crafts or classes in accordance with the general pattern set by the trade union agreements. As a result of variations in the classifications covered in some agreements, the total for each craft or class may not tally exactly with the I.C.C. total. Railroad labor agreements, particularly those covering clerks, provide for many exceptions. In a few cases they cover only part of a group of workers who are included in a single figure in the employment report. It was not, therefore, possible to determine the exact coverage of each agreement. The figures are, however, considered to approximate the general situation. They probably overstate somewhat the extent of collective dealing as opposed to individual dealing.

³ Including linemen and groundmen. In 2 cases shop workers were covered by a system association, linemen and groundmen by a trade union; in 1 case the reverse situation existed. Excluding linemen and groundmen, the percentages of electrical workers covered by the different methods of dealing were: 46.7 per cent trade union, 51.9 per cent system association, and 1.4 per cent individual.

⁴ There are no separate agreements for helpers, but they follow the agreements of the crafts concerned. The number of helpers was distributed in proportion to the method of dealing with other shop crafts (except firemen and oilers) on the road. The figure is therefore only an approximation.

⁵ Includes miscellaneous trade workers (23), gang foremen and gang leaders (skilled labor) (53), molders (62), train attendants (101), and laundry workers (104).

ments may substantially exceed the number belonging to trade unions.

Another study⁵ of the distribution of types of industrial relations, covering only manufacturing and mining, was made by the National Industrial Conference Board as of November 1933. This second survey covered roughly 1,000,000 more employees than that undertaken by the Bureau of Labor Statistics in 1935 and reaches conclusions much less favorable to trade unions. For example, only 7.1 per cent of employees in manufacturing industries were found to be working under union arrangements. For coal mining the two estimates are not far apart (Table 34).

Owing to wide differences in the methods of conducting these studies the estimates should not be compared too closely, but careful examination of both makes it apparent that the most accurate estimates of the extent of union organization are those based on comparisons of union membership with the employed population.

From a similar study made by the Conference Board in May 1934 it is clear that the trade union and employee-representation types of industrial relations had both spread between the end of 1933 and the middle of 1934. The percentage of wage earners dealing individually with their employers declined from 46.1 to 40.0; the percentage dealing through employee-representation increased from 44.9 to 49.6; and the percentage dealing through trade unions rose from 9.0 to 10.4.⁶

Although plans of employee-representation have long existed in American industry, many more arrangements for effecting them were made after the passage of the National Industrial Recovery

⁵ *Individual and Collective Bargaining Under the N.I.R.A.* (1933).

⁶ *Individual and Collective Bargaining in May 1934* (1934), p. 10.

TABLE 34

DISTRIBUTION OF WAGE EARNERS UNDER CERTAIN FORMS OF INDUSTRIAL RELATIONS, NOVEMBER 1933 ¹

INDUSTRY	PERCENTAGE OF WAGE EARNERS UNDER RELATIONS OF		
	Individual bargaining	Employee-representation	Union
Manufacturing, total	47.4	45.5	7.1
Chemicals	61.8	37.3	0.9
Clothing	34.8	15.1	50.1
Food products	61.1	33.4	5.4
Leather and its products	62.7	30.6	6.7
Metal working	33.3	63.8	2.8
Paper and its products	55.4	39.0	5.6
Printing and publishing	52.4	25.9	21.7
Rubber products	17.8	79.6	2.6
Stone, clay and glass products	65.3	15.6	19.1
Textiles	67.2	14.6	18.2
Wood and its products	72.3	22.9	4.9
Miscellaneous manufacturing	73.1	21.1	5.7
Extraction and refining, total	30.1	41.0	28.8
Coal mining	3.2	7.0	89.8
Metal mining	26.6	64.0	9.4
Petroleum	43.3	55.5	1.2
Grand total	45.7	45.0	9.3

¹ National Industrial Conference Board, *Individual and Collective Bargaining under the N.I.R.A.*, p. 22.

Act. It has been estimated that of the employees dealing through plans of employee-representation in November 1933 only 31.4 per cent had been employed under similar arrangements before the N.I.R.A. Of the employees working under union agreements in 1933, only 44.4 per cent had so worked before the N.I.R.A.⁷

⁷ *Individual and Collective Bargaining under the N.I.R.A.*, p. 24.

Since the passage of the Recovery Act the number of employees covered by various arrangements for collective bargaining has increased notably. Union membership has also increased. Plans of representation, largely suggested by the employers, have competed with the unions for control of the instruments of collective bargaining and in some industries have grown faster than the unions. The area of individual bargaining has meanwhile steadily shrunk.