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U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, SECRETARY
WOMEN'S BUREAU
MARY ANDERSON, Director

BULLETIN OF THE WOMEN'S BUREAU, NO. 19

IOWA WOMEN IN
INDUSTRY



WASHINGTON
GOVERNMENT PRINTING OFFICE
1922

[PUBLIC—No. 259—66TH CONGRESS.]

[H. R. 13229.]

An Act To establish in the Department of Labor a bureau to be known as the Women's Bureau.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established in the Department of Labor a bureau to be known as the Women's Bureau.

SEC. 2. That the said bureau shall be in charge of a director, a woman, to be appointed by the President, by and with the advice and consent of the Senate, who shall receive an annual compensation of \$5,000. It shall be the duty of said bureau to formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment. The said bureau shall have authority to investigate and report to the said department upon all matters pertaining to the welfare of women in industry. The director of said bureau may from time to time publish the results of these investigations in such a manner and to such extent as the Secretary of Labor may prescribe.

SEC. 3. That there shall be in said bureau an assistant director, to be appointed by the Secretary of Labor, who shall receive an annual compensation of \$3,500 and shall perform such duties as shall be prescribed by the director and approved by the Secretary of Labor.

SEC. 4. That there is hereby authorized to be employed by said bureau a chief clerk and such special agents, assistants, clerks, and other employees at such rates of compensation and in such numbers as Congress may from time to time provide by appropriations.

SEC. 5. That the Secretary of Labor is hereby directed to furnish sufficient quarters, office furniture and equipment, for the work of this bureau.

SEC. 6. That this act shall take effect and be in force from and after its passage.

Approved, June 5, 1920.

U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, SECRETARY
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MAINT. ROOMS, 2000

BULLETIN OF THE WOMEN'S BUREAU, NO. 12

IOWA WOMEN IN INDUSTRY



U. S. DEPARTMENT OF LABOR
WOMEN'S BUREAU

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF LABOR,
WOMEN'S BUREAU,
Washington, July 11, 1921.

SIR: I have the honor to submit the accompanying report of the investigation in the State of Iowa of hours and working conditions of women in industry in that State. Part II of the report contains the results of a special inquiry as to industrial opportunities and training for women workers.

This investigation was conducted at the invitation of the State commissioner of labor with the approval of the governor and the indorsement of the organization of the League of Women Voters and the Federation of Women's Clubs of the State. Valuable assistance and cooperation were given by the bureau of labor statistics through its commissioner, Mr. A. L. Urick, and its woman factory inspector, Mrs. Ellen Rourke.

This survey was made during October, November, and December, 1920. The investigation was directed by Miss Agnes L. Peterson, assisted by Miss May Lane, Miss Florence Clark, Miss Lenore Leins, and Miss Elisabeth Benham. The statistical tables and the report were prepared in the office of the Women's Bureau.

Respectfully submitted.

MARY ANDERSON, *Director.*

HON. JAMES J. DAVIS,
Secretary of Labor.

LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF AGRICULTURE

WOMAN'S BUREAU

WASHINGTON, D. C.

The following report on the results of the investigation of the conditions of labor of women and young children in the State of Ohio, conducted by the Bureau of Labor Statistics, is transmitted to you for publication in the report of the Bureau of Labor Statistics for the year ending June 30, 1911.

The investigation was conducted at the instance of the Bureau of Labor Statistics, and the results of the investigation of the conditions of labor of women and young children in the State of Ohio, conducted by the Bureau of Labor Statistics, is transmitted to you for publication in the report of the Bureau of Labor Statistics for the year ending June 30, 1911.

The investigation was conducted at the instance of the Bureau of Labor Statistics, and the results of the investigation of the conditions of labor of women and young children in the State of Ohio, conducted by the Bureau of Labor Statistics, is transmitted to you for publication in the report of the Bureau of Labor Statistics for the year ending June 30, 1911.

Very respectfully,
Miss Mary E. Johnson

Chief Clerk

U. S. DEPARTMENT OF AGRICULTURE

IOWA WOMEN IN INDUSTRY.

FOREWORD.

Reason for survey.

Upon the invitation of the State commissioner of labor, with the approval of the governor and the indorsement of the League of Women Voters and the Federation of Women's Clubs of the State of Iowa, the Women's Bureau of the United States Department of Labor made this investigation of working conditions and hours of employment of women in industry in Iowa during October, November, and December, 1920.

Surveys of wage-earning women in special industries had been made by the Iowa State Bureau of Labor in 1914 and 1915, notwithstanding the small force of that bureau and the fact that it employed but one woman. These reports on women employed in laundries, mercantile establishments, telephone exchanges, hotels, and restaurants—showing undesirable hours, wages, and working conditions—had aroused the interest and the concern of the women of the State.

During three successive sessions of the legislature 8-hour bills had been introduced, only to be defeated or so amended that they were withdrawn. A new bill introduced at the session of 1919 was so altered by amendments exempting certain industries from rulings in regard to hours that it became necessary for the sponsors of the original bill to defeat the amended one, which meant worse than nothing—the legalizing of existing conditions with no regard for industrial standards.

Following this defeat the groups that had championed the 8-hour bill through three sessions determined to secure fuller and more recent statements on the facts of the situation, that they might present arguments based on actual conditions. Therefore the assistance of the Woman's Bureau of the U. S. Department of Labor was requested. The result was that this investigation was undertaken, with the cooperation of Commissioner A. H. Urick and Mrs. Ellen Rourke, inspector of the Iowa bureau of labor statistics.

Iowa an agricultural-industrial State.

The Women's Bureau was particularly interested in conditions in Iowa because of the geographic situation of that State and its reflection of conditions and tendencies prevailing in agricultural States throughout the Middle West.

The United States is swinging from agriculture to manufacture, figures in the Census of 1920 showing that the trend of population

from the country to the city had steadily increased during the past decade. The Census of 1920 reports 51.4 per cent of the population as urban while that of 1910 reports 45.8 per cent.¹

Iowa is moving with this national change of balance. The State census of 1915 showed that a considerable part of the State population had already changed from rural to town activities,² and even though State and national authorities on census taking differ in their interpretation of the word "town"—the national census regarding as a "town" only an incorporated place of 2,500 population or more—the national figures confirm the drift from country to city.³ The following figures show the change in the character of the population of Iowa during the 10 years from 1910 to 1920:

Census year.	Urban.	Rural.	Per cent urban.
1910.....	680,054	1,544,717	30.6
1920.....	875,495	1,528,526	36.4

Iowa is becoming a manufacturing State, as are other agricultural States, largely because scientific processes have made it possible for more and more of the perishable products of agriculture to be preserved or shipped for later consumption. The food crop has become part of the raw material of the factory. For this reason Iowa will increase her factory products, even as she increases her farm produce.

Extremes and averages.

Iowa is in the center of a large agricultural area. Therefore, its conditions and inclinations have a wider significance than simply within its own boundaries.

But its extremes, like its averages, are striking. It is extreme in literacy, having the smallest percentage of illiterates in the Union; extreme in per capita wealth, leading all the States; extreme in the smallness of its per capita debt, following only Kansas and Oregon.⁴

It is extreme, though not alone, in its ignoring of the advance in labor legislation as it affects women; it is black on the maps⁵ which show the relative standing of the different States regarding the regulation of women's hours (day or week), night work, and minimum wage. Iowa is one of the six States which do not limit the number of hours, by day or week, that a woman may work; it is one of the 35 States permitting night work without restriction; it is one of the 34 States having no minimum wage legislation.

¹ U. S. Bureau of the Census, 14th Census. Urban and Rural Population of the United States: 1920. Released Jan. 13, 1921.

² Iowa Bureau of Labor Statistics Biennial Report, 1916-1918. p. 21.

³ U. S. Bureau of the Census, 14th Census: 1920. Bulletin. Population: Iowa. 1921. p. 2.

⁴ Iowa Bureau of Labor Statistics Directory of Manufacturing Establishments. 1919. (Bulletin 1) pp. 19-20.

⁵ Following p. 17.

Women in industry in Iowa.

During the last six years Iowa industry has increased by a considerable per cent, gauged by the number of wage earners, men and women.

Average number of wage earners in Iowa.⁶

1913.....	46,695
1919.....	75,249

These figures are certainly sufficient testimony to give Iowa pause when she calls herself a purely agricultural State—in six years her industrial population increased 61.4 per cent.

Men wage earners have increased in actual thousands, but their percentage of the total number decreased slightly in the six years. Though very slight, the decrease is significant.

Percentage of men workers.⁶

1913.....	84.5
1919.....	83.9

As the percentage of children at work in Iowa is almost insignificant—the report of 1920⁷ showed but 0.6 per cent of wage earners to be children—women have therefore gained the slight percentage that men lost. They have increased by a few thousands each biennial period, naturally making their greatest gain during the war.

Percentage of women workers.⁶

1913.....	15.5
1919.....	16.1

Women have been holding their own, but not doing much more than holding their own, in industry in Iowa. Their percentage has been strangely steady. They have formed 15 per cent of the labor force for six years, and even after the urge of the war and the withdrawal of men, this proportion has been changed but 0.6 per cent. However, in order to maintain this proportion they have had to increase their numbers greatly—in 1913 they numbered 7,323; in 1919, 12,091.

In this survey stress has been laid on hours and working conditions. Even though standards are set by continued usage, yet due allowance must be made for the fact that Iowa is still pioneering in industry. However, the ignorance and lack of experience which must sometimes accompany pioneering will not excuse a permanently established low standard of any sort. As long as one single toilet must serve 100 women and the public, as long as the common cup, the common towel, and kindred menaces to public health are tolerated, pride in general working conditions is misplaced.

⁶ Iowa Bureau of Labor Statistics 16th Biennial Report, 1912-13, p. 22; 1918-1920 (unpublished).

⁷ See footnote 1, p. 8.

It was felt that Iowa would like to know the worst in order to demand the best. And if one-half of the women work an 8-hour day, that in itself is an argument to rescue, if need be by legislation, the other half who work up to 12 hours and over each day. If one-half the women work in excellent surroundings with conveniences and comforts, their conditions may constitute a model for the formulation of an industrial code applicable to all industries.

Many of the conditions described in this report might be improved if the State bureau of labor statistics and the woman inspector were given more power. With the powers of its bureau of labor enlarged and the personnel of the bureau increased, the Iowa public would find the additional cost of such a change more than compensated for.

The fact that Iowa has little or no labor legislation may be regarded as an opportunity—because of its being the State of both the highest literacy and the highest per capita wealth—to write on its books the most advanced and most carefully considered labor laws. To quote from the report of 1918:⁹ “The laws relating to factory inspection are antiquated and should be entirely rewritten to make them more definite.” Iowa can afford to change and add to these laws and thus to place herself with the most progressive of the States in insuring good industrial conditions.

Scope of survey.

The investigation included 223 firms in 21 cities—Atlantic, Boone, Burlington, Cedar Rapids, Clinton, Council Bluffs, Davenport, Des Moines, Dubuque, Fort Dodge, Fort Madison, Grinnell, Keokuk, Mason City, Muscatine, Oskaloosa, Ottumwa, Red Oak, Sioux City, Washington, and Waterloo.

Method of collecting data.

The data quoted in this report were gathered by agents of the Women's Bureau who personally inspected each establishment. They recorded the numbers of employees as given by the manager or other official and obtained additional information through home visits to workers. A description of working conditions was written by the agents following their inspection of each establishment.

The firms visited were chosen by the agents of the Women's Bureau from the records of the bureau of labor statistics at Des Moines, with the assistance of the commissioner and of the woman inspector.

Through the courtesy of the commissioner the Women's Bureau has had access to the unpublished statistical material gathered by the Iowa bureau of labor statistics for its report covering the period from July, 1918, to June, 1920. This material was gathered under the provisions of the law¹⁰ which provides that the commissioner of

⁹ Iowa Bureau of Labor Statistics Biennial Report, 1917-18, p. 11.

¹⁰ Iowa, Session Laws, 1884, chapter 132, section 5; amended, Session Laws, 1902, chapter 97, section 1.

labor "shall collect, assort, systematize, and present in biennial reports to the governor statistical details relating to all departments of labor in the State, especially in its relations to the commercial, social, educational, and sanitary conditions of the laboring classes, the means of escape from and the protection of life and health in factories, the employment of children, the number of hours of labor exacted from them and from women, and to the permanent prosperity of the mechanical, manufacturing, and productive industries of the State."

The choice of the plants to be investigated by the Women's Bureau was carefully made. The essential was that important industries employing large numbers of women should be studied. Both large and small plants, with good and bad working conditions, were included in order that high as well as low standards already prevailing in the State might be quoted.

As the study was intended to ascertain the hours and working conditions of women, certain industries employing a large proportion of men were not investigated. There were nine industries in Iowa which were omitted because they employed no women—artificial limbs, cement blocks, crushed rock, mirrors and glass, oils and grease, ship and boat building, silos, and vulcanizing.

Other industries not included in the survey, though employing small numbers of women, were slaughtering and meat packing, poultry and produce packing, canning and preserving, lumber and timber, signs, and advertising novelties.

The season of the investigation eliminated canning, while the limited time available made it necessary to exclude butter, cheese, and condensed milk plants.

The result of the Women's Bureau investigation showed that in the 223 establishments there were 10,411 women and 11,718 men for whom data were reported in manufacturing plants, stores, restaurants, hotels, and laundries. Thus the survey included a tabulation of the hours and working conditions of about 22,000 employees (22,413), all of whom were full-time workers and almost half of whom were women. Table 1 gives the distribution by industry of the employees in the establishments investigated.

The distribution of the women by industry was as follows: 2,560 in stores, 1,415 in clothing manufacturing, 1,188 in food manufacturing, 937 in candy manufacturing, 822 in laundries, 617 in cigar manufacturing, 558 in printing and publishing establishments, 410 in restaurants, 443 in button manufacturing, 181 in box and basket manufacturing, and 1,280 in miscellaneous manufacturing. These figures relate to women actually employed at or about the time of the visit to the plant and do not show the maximum numbers of a more busy period. In this industrial classification the establishments

listed as manufacturing clothing include those making gloves, hosiery, overalls, shirts, pants, jackets, hats, ties, skirts, ladies' clothing, and overalls. Miscellaneous food manufacturing includes plants manufacturing bread, biscuits, pickles, vinegar, macaroni, sugar, and cereals. Miscellaneous manufacturing includes the manufacture of wood, metal, clay, and rubber products, boots and shoes, brooms, medicines and proprietary articles, phonographs, fountain pens, paper stock, and woolen textiles.

TABLE 1.—Number of employees, by sex and industry.

Industry.	Number of establishments.	Total number of employees.	Men.		Women.		Boys.	Girls.
			Number.	Per cent.	Number.	Per cent.		
Box and basket manufacturing.....	8	328	127	41.2	181	58.8	2	18
Button manufacturing.....	10	725	260	37.0	443	63.0	1	21
Cigar manufacturing.....	11	860	226	26.8	617	73.2	3	14
Clothing manufacturing.....	25	1,987	470	24.9	1,415	75.1	20	82
Candy manufacturing.....	18	1,520	573	37.9	937	62.1	2	8
Miscellaneous food manufacturing.....	20	4,122	2,926	71.1	1,188	28.9	1	7
Miscellaneous manufacturing.....	37	6,325	5,018	79.7	1,280	20.3	18	9
General mercantile.....	19	3,109	809	26.0	2,259	72.7	20	21
5-and-10-cent stores.....	9	391	71	19.1	301	80.9	1	18
Laundries.....	29	1,198	367	30.9	822	69.1	3	6
Printing and publishing.....	7	1,147	580	51.0	558	49.0	6	3
Hotels and restaurants.....	30	701	291	41.5	410	58.5	.....	.....
Total.....	223	22,413	11,718	52.3	10,411	46.5	77	207

¹ One firm, employing 209 males and 532 females, did not report numbers under 16 years of age.

According to Table 1 women predominated in the industries surveyed, except in printing, where they almost equaled the men in numbers, in miscellaneous food manufacturing, where women were outnumbered about 2½ to 1, and in miscellaneous manufacturing, where they were outnumbered about 4 to 1.

The following figures show the scope of this study measured by the number of women and girls employed in the different establishments investigated, compared with the number reported by the State bureau of labor statistics as the average for the State in comparable industries in 1919.

Industry.	Number of women employed.	
	Women's Bureau survey.	State bureau of labor statistics. ¹
Boxes and baskets.....	199	201
Buttons.....	464	861
Cigars.....	631	741
Clothing.....	1,497	2,168
Candy.....	945	1,032
Miscellaneous food manufacturing.....	1,195	1,342
Miscellaneous manufacturing.....	1,289	1,859
Printing and publishing.....	551	1,250
Total.....	6,781	9,454

¹ Iowa Bureau of Labor Statistics—Statistics of Manufactures, 1919 (unpublished).

In the box and basket industries the Women's Bureau survey included approximately as many women in the 8 establishments studied as the complete State statistics show were employed on the average in 16 establishments.

In the button industry the Women's Bureau survey included 464 women in 10 establishments, while the State statistics reported 861 women in 32 establishments. However, the firms in this industry covered by the Women's Bureau survey include all of those employing women at the time of the investigation; those omitted were cutting plants employing only men. Certain plants had shut down, for the industry had been seriously affected by post-armistice conditions in trade, which accounts for the decrease in the numbers reported.

Printing and publishing establishments show the smallest proportion included in this investigation of the total number of women employed throughout the State. The establishments investigated employed but 561, while 1,250 were reported by the State bureau of labor statistics. The investigation, however, could not include many small printing plants scattered throughout Iowa where only one or two women were employed.

In all, practically three-fourths (71.7 per cent) of the women reported in these industries by the State bureau of labor statistics were included in this investigation.

Women in new industries.

In general there has been little fluctuation from year to year in numbers of women in the industries. In some instances women have entered new industries or increased their hold on old ones where such hold was slight. They are now in core making and in automobile tire and furniture manufacturing. But the 12 industries which rank highest in the number of women employed were, according to the State bureau of labor statistics, approximately the same in 1919 as they were in 1917.¹¹ The order, however, has changed.

TABLE 2.—*Ranking industries in number of women employed, 1917 and 1919.*

Industry.	1917		1919	
	Rank.	Number of women employed.	Rank.	Number of women employed.
Clothing.....	1	1,222	3	961
Buttons.....	2	1,157	4	861
Confectionery.....	3	1,027	2	1,032
Printing and publishing.....	4	974	1	1,250
Tobacco.....	5	786	5	741
Food preparation.....	6	599	8	632
Bread and bakery.....	7	528	7	640
Canning.....	8	459	9	519
Clothing, women's.....	9	428	10	402
Slaughtering and meat packing.....	10	381	6	689
Gloves.....	11	268	11	316
Patent medicines.....	12	278	12	282

¹¹ Iowa Bureau of Labor Statistics Biennial Report, 1916-1918, p. 35; 1918-1920 (unpublished).

These figures show that printing and publishing has moved from fourth to first place in the number of women employed; confectionery has moved from third to second place. Button making, which in certain processes has occupations suited to women, has fallen off noticeably, and clothing, both men's and women's, has moved down the scale, both industries affected by conditions in the trade. Tobacco continues to hold fifth place. Only two others kept in 1919 their 1917 rank—gloves the eleventh and patent medicines the twelfth—while slaughtering and meat packing, which was tenth only two years ago, has moved to sixth place in the employment of women.

The foregoing figures show that women in the industries in Iowa form a by no means inconsiderable group and that this investigation has been sufficient in scope and accurate enough in method to give a trustworthy picture of the conditions under which they are employed. To remedy those conditions which are unsatisfactory is the task for the people of Iowa. From facts given in the following pages it is apparent that many employers have already instituted most progressive and up-to-date standards. That they have done so without compulsion indicates that these standards are practical and worth trying. It is their action in blazing the trail to healthful and efficient conditions of employment which should facilitate the success of those who are striving to establish for all workers those standards which have been found practicable and wise.

SUMMARY.

PART I. HOURS AND WORKING CONDITIONS.

Scope.

1. Number of establishments visited	223
2. Total number of employees	22, 413
3. Total number of women	10, 411
4. Number of women in—	
Manufacturing establishments (including printing and publishing)...	6, 619
Stores	2, 560
Laundries	822
Restaurants	410

Weekly hours.¹²

	Women.
5. Less than 48 hours was worked by	1, 710
6. 48 to 50 hours was worked by	3, 597
7. 50 to 52 hours was worked by	2, 360
8. 52 to 54 hours was worked by	941
9. 54 to 60 hours was worked by	1, 180
10. 60 hours or more was worked by	281

Daily hours.

	Women.
11. Less than 8 hours was worked by 22 establishments	189
12. 8 to 9 hours was worked by 110 establishments	5, 297
13. 9 to 10 hours was worked by 92 establishments	3, 395
14. 10 to 11 hours was worked by 31 establishments	987
15. 12 hours or more was worked by 3 establishments	37

NOTE.—Establishments working their various departments different hours appear in this classification in more than one group.

Saturday half holiday.

16. On Saturday 53 establishments were open less than 5 hours, or did not work at all.
 56 worked 5 but not 6 hours.
 81 worked 6 hours or over (excluding hotels and restaurants and those not reported).

Lunch period.

17. A lunch period of one-half hour was the practice in 67 establishments (excluding hotels and restaurants).
 In one plant the period was 25 minutes; 21 gave more than one-half hour but less than one hour; 104 gave one hour or more.

Piecework.

18. Piecework was done by 3,205 women (25.9 per cent of all the women working).
 The percentage of women on piecework was highest in cigar manufacturing, 89.3 per cent; lowest in restaurants, 0.1 per cent.

Working conditions.

19. In 63 establishments cleaning was done by the workers only. In 157 establishments it was done by janitor or matron, and in 11 of these cases with the help of the workers. Three cases were not reported. 164 establishments were reported to be clean and 53 to be neglected.
20. Sufficient general light was reported in 203 establishments.

¹² All industries except restaurants.

21. 120 establishments provided seats for all workers; of the remaining 103, eight provided no seats and the others an inadequate number.
22. No toilet facilities were found in 3 establishments; men and women used the same toilet in 12 establishments; the women used public toilets in 9 establishments; 203 establishments had separate toilets for women, but in these 221 compartments out of 748 were inadequately screened.
23. Lunch rooms were not provided in 111 establishments; cafeterias or dining rooms serving hot food were provided in 17; other lunch facilities in 65 (excluding hotels and restaurants).
24. Rest rooms were not provided in 149 establishments; they were provided in 22. There were rest facilities in 52 others, one-half of them combining rest and lunch rooms.
25. 39 establishments had no cloakroom provision.
26. 87 establishments did not provide first aid. In 9 establishments there were hospital rooms and a very few employed nurses.
27. Uniforms were worn in a considerable number of establishments but in only 12 were uniforms provided and laundered by the firm. Aprons were worn in 31. In 23 women wore caps and in one hair nets. Of these 23 factories 5 manufactured candy and 4 other food products.
28. Of 78 establishments which provided bubblers for drinking water, in only 28 were the bubblers of a sanitary type. In 92 establishments the workers used common cups. In 57, individual cups were supplied either by the workers or by the firm. The workers in 118 establishments used faucet water, in one well water. 39 establishments had tanks or coolers for iced water. Two used open pails.
29. In the dressing rooms in 125 establishments only cold water was found. Liquid soap was provided in 30, cake soap in 151, and no soap in 34 establishments. Common towels were found in 145. In 51 establishments having individual towels, 32 had paper and 19 had cloth towels. No towels were provided in 25 establishments.

PART II. INDUSTRIAL OPPORTUNITIES AND TRAINING.

Occupations of women.

Over 5,300 women were engaged in manufacturing industrial products or their box or bag containers.

Over 2,100 were packing the products.

Over 2,100 were engaged in selling the products.

Over 1,100 were keeping the records of production, movement, and sale of products in offices and stock and shipping departments.

A small number of women but a notable proportion of opportunities (23 per cent) were in supervisory positions.

The maintenance and repair of the plants and the lunch and rest room welfare work demand the housekeeping services of women.

In one field of service alone were women absent; none were firemen, electricians, or engineers who operate the heat, light and power service in plants.

Instruction of women.

In 55 per cent of the firms instruction to new workers was reported as given by foremen or forewomen.

In 20 per cent of the firms no definite system of instruction of any sort was reported.

In only 5 per cent of the firms was arrangement made for instruction of beginners by special teachers.

In 8 per cent of the firms it was reported that exceptional workers served as instructors.

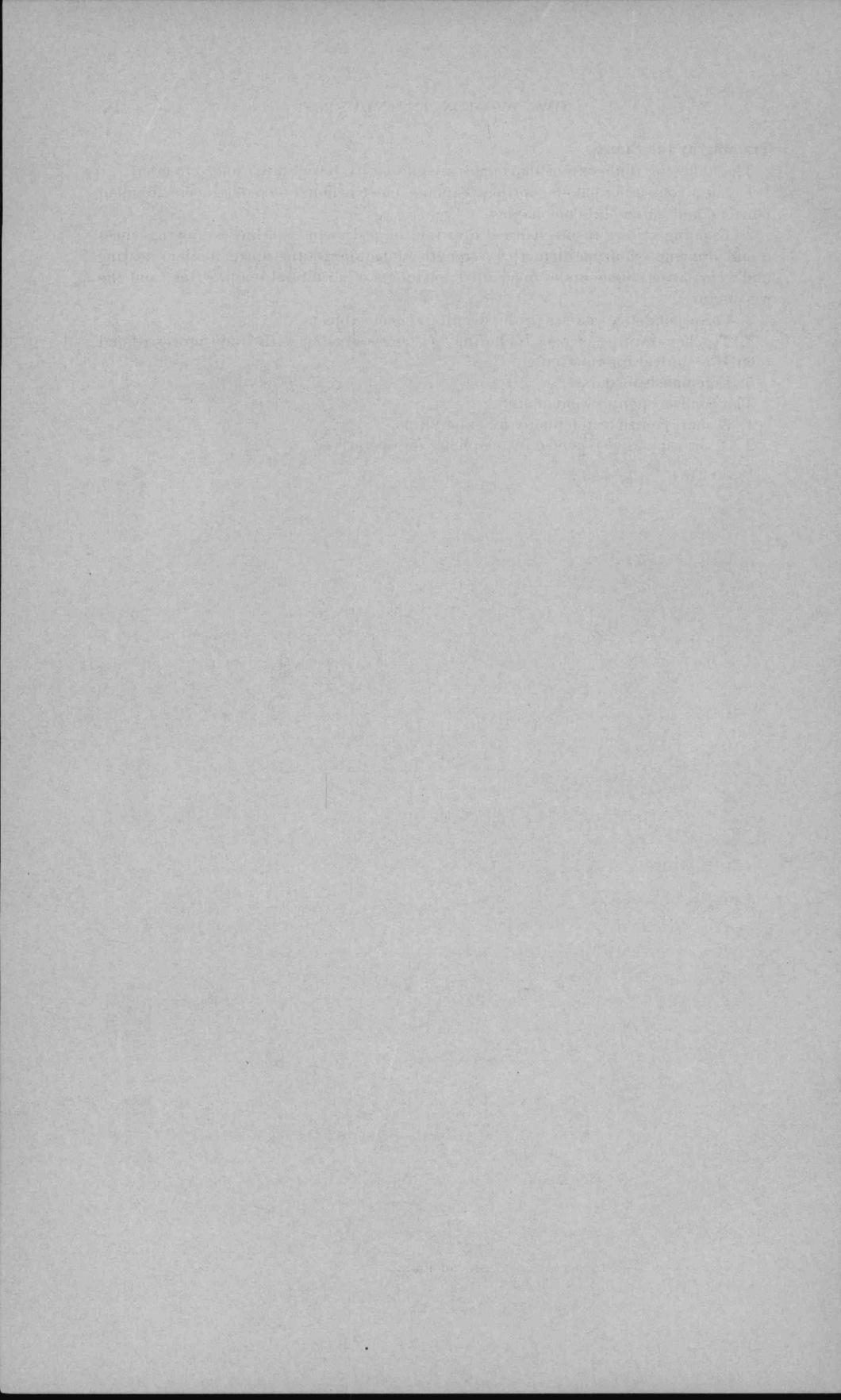
Training by the State.

The following trade extension courses are offered by Iowa State College to men:

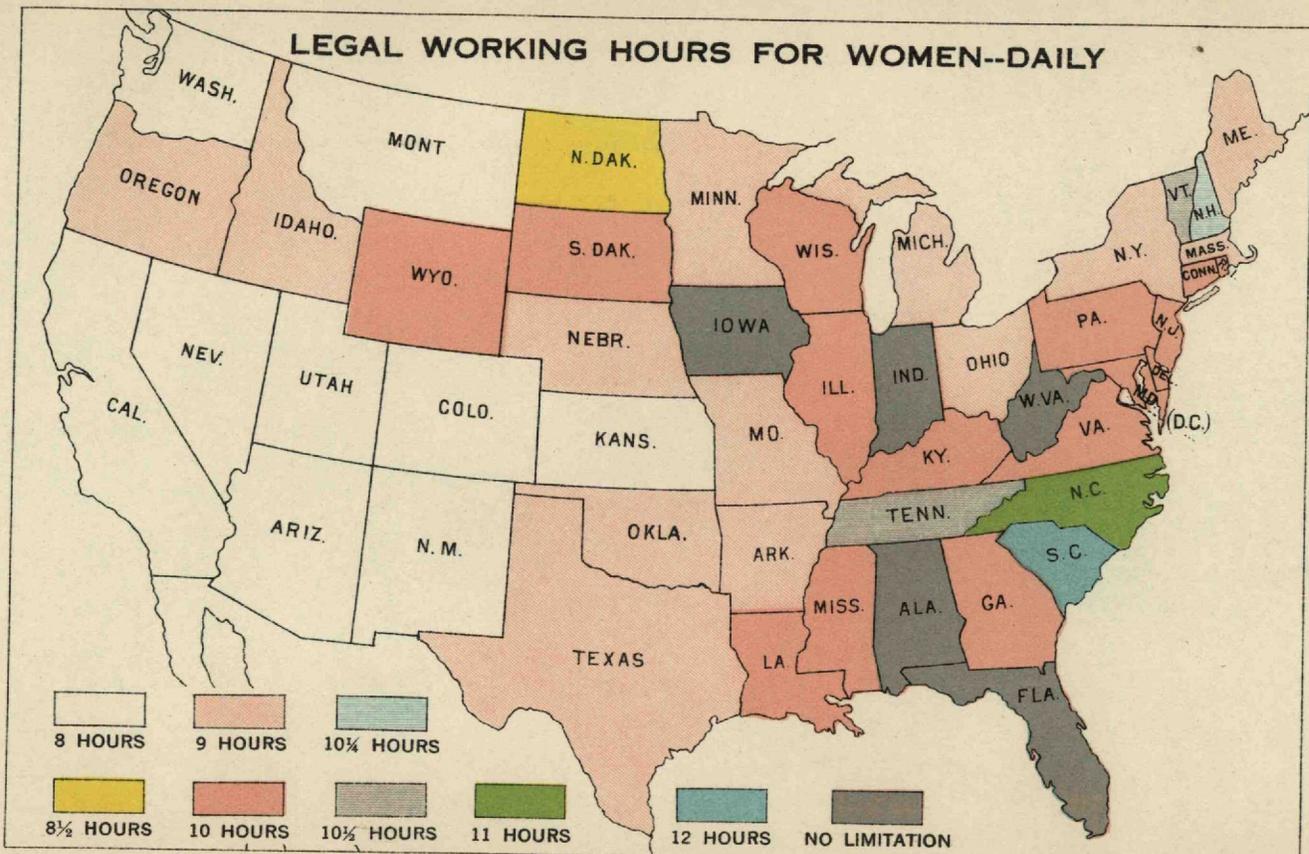
1. Short courses for bakers, bottlers, canners, electric meter men, engineers, firemen, janitors, and automobile mechanics.
2. Evening classes in mechanical drawing, map drawing, builder's drawing, sheet metal drawing, shop mathematics, strength of materials, the steam boiler, heating and ventilating, elements of mechanics, elements of structural engineering, and the gas engine.
3. Correspondence courses in the evening school subjects.
4. Teacher training courses including 14 courses dealing with trade processes and related technical information.
5. Foremanship courses.

The courses open to women are:

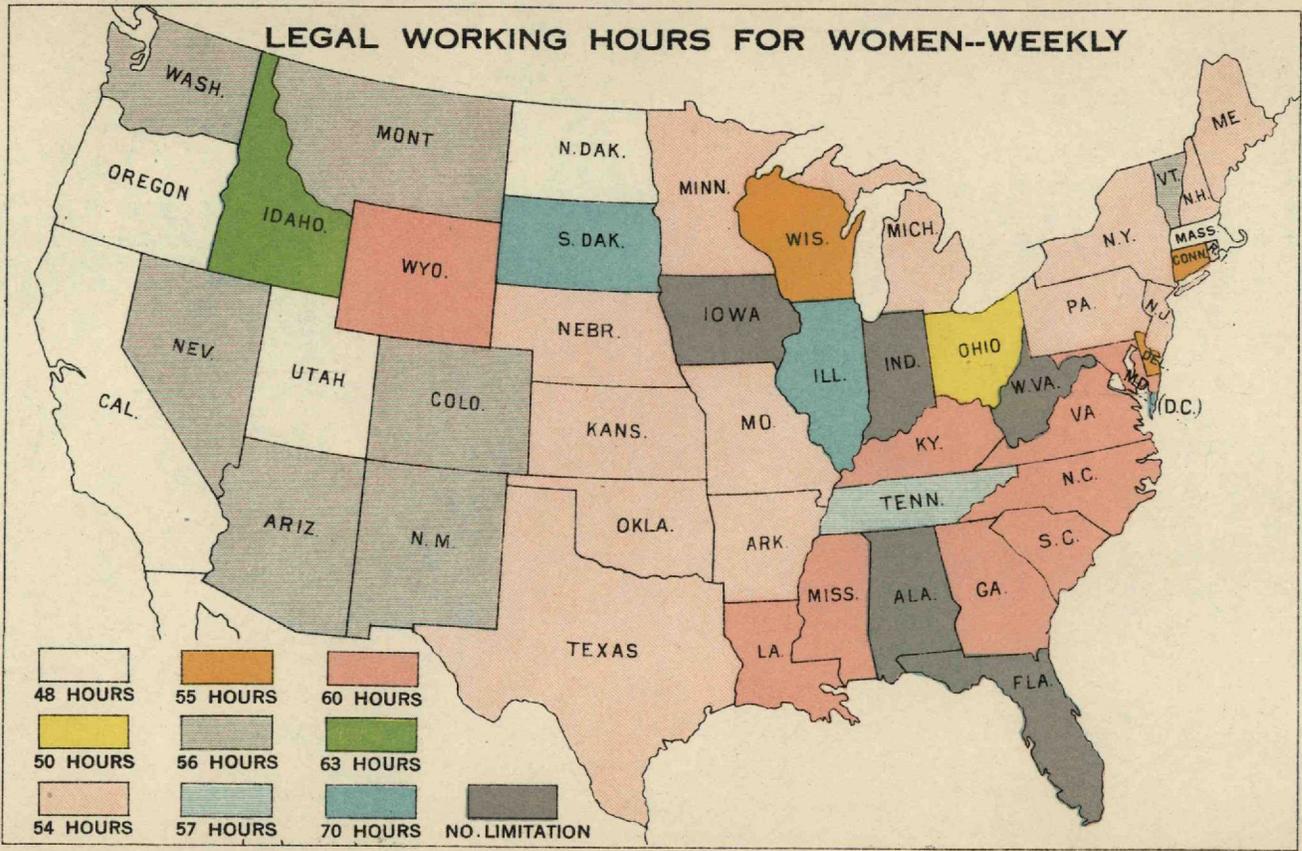
1. A short course in telephony for supervisors.
2. A correspondence course in telephony for operatives.



LEGAL WORKING HOURS FOR WOMEN--DAILY



LEGAL WORKING HOURS FOR WOMEN--WEEKLY



PART I. HOURS AND WORKING CONDITIONS.

HOURS.

The laws of Iowa say nothing as to the number of hours a wage-earning woman may work. Iowa is one of the five States printed black on the map showing the legal maximum weekly hours of employment for women. This means that the supposed necessity or zeal of the employer in making his employees work long hours is not restricted. He would break no law if he required his women employees to work the physically impossible schedule of 24 hours a day 7 days a week.

Iowa, with its weekly hours unlimited, is black also on the second map, showing the legal daily hours. Here it is entirely surrounded by "pink" States that have progressed with the tendency throughout the country toward the shorter working day, especially for women. Minnesota on the north has a "9-54"¹ standard (9 hours a day and 54 hours a week). South Dakota and Nebraska on the west have "10-70" and "9-54," respectively. Missouri on the south has "9-54," and Illinois and Wisconsin on the east have "10-70" and "10-55," respectively. To the west, though not contiguous, there are nine "white" States with the 8-hour day and four "white" States with the 48-hour week.

Certain establishments in Iowa have voluntarily adopted the better standards of neighboring States. There are both large and small establishments that have accepted the "8-48" standard.

Length of week.

At the time of the investigation certain button and clothing factories were running only three days a week, and two other factories were running 5 days a week. Therefore, in order to show normal conditions, the customary weekly hours of these firms were tabulated. Hotels and restaurants in almost every instance had a 7-day week.

Sixty hours and over.

According to Table I in the appendix (p. 72), a week of 60 hours or more was worked by 281 (2.8 per cent) of the women and by 740 (7.4 per cent) of the men.

More detailed figures from which this table was compiled show that all but 44 of these women were working 60 hours, but that 37 of the 44 had a week of 84 hours.

¹ In cities of first and second classes; "10-58" in others.

The long week was found principally in the button, candy, food, and miscellaneous industries. Practically all the button workers had a 60-hour week and a 10-hour day when the industry was in full swing.

The maximum week in both miscellaneous manufacturing and in general mercantile was found to be 78 hours, worked by men only; the maximum in candy manufacturing was 73 hours for women and 77 for men. The maximum in all industries other than restaurants was 84 hours in one food factory, where 37 women and 292 men worked on a 12-hour shift, 7 days in the week, for 3 consecutive months.

Hours of largest groups.

The largest group of women in all industries (35.7 per cent) worked from 48 to 50 hours a week, but this proportion did not hold throughout the industries. In printing and publishing, 5-and-10-cent stores, general mercantile, and clothing manufacturing, one-half or more of the women worked from 48 to 50 hours, but less than 20 per cent of the women in the box, candy, and miscellaneous food manufacturing, and less than 10 per cent in button manufacturing and laundries, had these hours. A considerable proportion (23.4 per cent) of the women in all industries worked from 50 to 52 hours a week, the industries having the largest representation in this group being button manufacturing with 59.3 per cent and laundries with 56.3 per cent of their women employees working within these hours.

The following table shows by cumulative percentages the hours worked by men and women in all industries combined, restaurants excepted:

TABLE 3.—*Cumulative percentages, full-time¹ employees working each specified number of hours weekly.*

ALL INDUSTRIES EXCEPT RESTAURANTS.

Hours.	Male.	Female.	Hours.	Male.	Female.
Less than 44.....	3.0	1.6	Less than 54.....	57.6	85.4
Less than 46.....	12.1	13.2	Less than 56.....	90.5	92.7
Less than 48.....	14.6	17.0	Less than 58.....	92.3	96.4
Less than 50.....	34.3	52.7	Less than 60.....	92.7	97.2
Less than 52.....	51.9	76.1	60 hours and over.....	7.4	2.8

¹ Employees working less than 33 hours a week are not considered full-time employees.

Length of day.

The working day in Iowa varies from short to long, from less than 6 to 12 or more, but of the 9,906 women whose hours were considered (exclusive of restaurant workers), only 189 (1.9 per cent) had a day shorter than 8 hours.

Table II in the appendix shows in detail the daily hours of the women included in this survey.

Slightly more than one-half of the women included in the survey had a working day of 8 and less than 9 hours. Including in this group the women who were working less than 8 hours a day, the number working less than 9 hours a day amounts to 55.4 per cent of the total number employed in the industries investigated (exclusive of restaurants).

Saleswomen in stores, the largest single group studied, almost universally had an 8-hour day. The women employed by printing and publishing firms quite generally worked an 8-hour day.

A very large group, more than one-third of the total (34.3 per cent), were working 9 but less than 10 hours a day. In this group are included 54.3 per cent of the women in miscellaneous manufacturing, 57.6 per cent of those in clothing manufacturing, 59.6 per cent of those in the candy industry, and 63.6 per cent of those in button manufacturing.

The figures in Table 4, from Table II in the appendix (p. 72), show that the percentage of women working less than 10 hours was 89.7. This leaves 1,025 of the 9,906 women—more than 10 per cent—working 10 hours a day or more. Few of these worked as much as 11 hours, but, as already stated, 37 worked 12 hours daily.

TABLE 4.—Cumulative percentages, full-time employees working each specified number of hours daily.

ALL INDUSTRIES EXCEPT RESTAURANTS.

Hours.	Male.	Female.	Hours.	Male.	Female.
Less than 8.....	1.5	1.9	Less than 11.....	94.8	99.7
Less than 9.....	41.4	55.4	Less than 12.....	97.4	99.7
Less than 10.....	81.3	89.7	12 and over.....	2.7	0.4

Overtime.

While the length of the day's work often does not fluctuate in the industries studied in this survey, still there are many cases of overtime. Overtime in Iowa does not refer to time worked beyond the legal limit; Iowa has no standard of hours and sets no hour limit. For the purposes of this discussion "normal" hours are those which the firm has set as the limit of its day's work; these hours may be overlong, but they do not constitute overtime, that condition as here discussed being the time worked in excess of the normal hours.

Leaving restaurants out of the count, where a long day often alternates with a short day, more than one-half of the establishments scheduled occasionally extended the day beyond the normal hours. There were 99 firms which admitted that they had overtime; 69 stated they had no overtime, 4 made no report, and 21 said "no evening work," but did not make the statement that daily hours were never extended.

Against certain of the firms' statements in these 69 cases which were reported as having no overtime, may be set the statements of individual workers who declared they had sometimes worked later than normal. Among these were some laundry workers who worked till 9 p. m. during the summer, although the firms had reported closing at 2 p. m. during those months.

No button establishments reported definitely that overtime was necessary. Printing and publishing establishments all reported overtime, while practically all retail stores reported staying open until 9 or 10 p. m. for from 3 to 9 days before Christmas. More than one-half of the candy factories and 14 of the 20 food factories reported overtime. Fewer than one-half of the cigar, clothing, and miscellaneous factories reported overtime. Twelve laundries definitely reported that work was done beyond the normal hours.

In the past, more of the firms had required the worker to extend her day, but an analysis of output and of workers' speed had shown some employers that "it does not pay, as the workers are apt to stay out next day or some other day."

The superintendent of a basket factory said: "An employee can do only so much—if she does it at night she does not do it next day; overtime does not mean a steadily increased output for the plant." The owner of a box factory admitted that he had required "quite a lot of overtime at certain periods, one period of one month in the summer for two hours after supper every other night. The output was not increased if the girls worked every night."

The vice president of a candy factory stated that overtime did not pay, but when the establishment was rushed with work they resorted to it in order not to lose the trade. In another candy firm the superintendent declared that overtime one day is balanced next day by slower work, and when asked why it was permitted, he said, "the manager orders it in rush seasons and I have to make the employees put it in."

The owner of a shoe factory, having become dissatisfied with the overtime output, had called in an efficiency expert to study the workings of the plant and to see how the work could be better routed with the least possible congestion.

On the other hand, a few employers who claimed to have analyzed the output with reference to overtime asserted, without evidence, that the proper use of limited overtime did pay.

From detailed material showing the difference in the regular hours worked during the slack and busy seasons, it is interesting to find that there was only a slight variation noticeable. Where 40 per cent of the establishments reported a day of from eight to nine hours in the slack season there were 38 per cent who reported such a working day for the busy season. Nine and under 10 hours was worked by 46 per

cent of the firms in the slack season and 50 per cent in the busy season, and 10 hours or over was worked by 9 per cent in the slack and 11 per cent in the busy season.

Firms working less than eight hours were more numerous during the slack than during the busy season, 5 per cent working these hours during the former and 1 per cent during the latter.

Lunch periods.

A study of the lunch periods in 193 establishments (restaurants omitted) shows that 67 plants had a 30-minute period for lunch and 99 had a 60-minute period. Only five establishments gave more time than this, the longest being 90 minutes in two establishments. Only one plant, a food manufacturing establishment, had as short a period as 25 minutes.

General mercantile and 5-and-10-cent stores in no case had less than 60 minutes. There was a greater range in the length of lunch period in the box, cigar, clothing, miscellaneous manufacturing, and printing industries. More laundries, food manufacturing establishments, candy, and box factories had 30 minutes than had 60 minutes.

Saturday lunch hours were similar, except in the case of plants which were open until 1 or 1.30 and had no lunch period. Mercantile establishments and 5-and-10-cent stores gave a second period for supper on Saturdays. This period usually was one hour long.

Hours of beginning and ending work.

The following summary of hours of beginning and ending work is made from detailed material which is not presented in this report.

The range of daily hours for box and basket manufacturing was not excessive. Most plants opened during the week at 7.30 and closed at 4.30. The Saturday hours were short, the majority of the workers going home before 12.30.

Button factories had a wider range of hours. They opened from 7 to 7.30 and closed from 4.45 to 6. On Saturday the majority closed at 12. This industry had not cut down its working hours, although production was limited due to conditions of the trade. Instead it decreased its working force.

In 7 of 11 cigar factories hours were from 7 to 5. On Saturday 8 factories worked from 7 to 12, and none was open later than 2 o'clock.

The greatest number of candy workers had daily hours of from 7 until 5.30. On Saturday a large number stopped work at 12 or 12.30, and another group between 4.30 and 6.

Workers in food manufacturing establishments began work during the week at 7, stopping as early as 3 in three establishments and as late as 6.30 in three others. The majority closed at 5.

The hours of clothing manufacturing establishments during the week were from 7 or 8 until 5 or 5.30. On Saturday most of the

plants closed by 12.30. These hours were perhaps shorter than might be expected, because of the unsettled conditions of the industry.

The usual hour of opening was 7 a. m. in miscellaneous manufacturing establishments. The hours of closing covered a great range of about 15-minute intervals from 4 until 6, the same diversity, from 1 to 7, existing on Saturday.

General mercantile and 5-and-10-cent stores opened during the week in nearly every case at 8.30 and closed at 5.30. Saturday closing hours ranged from 5.30 or 6 to 9 or 10 o'clock.

The largest group of women for whom hours were reported were working in stores (2,502 women), and even though the 8-hour day generally prevailed their week was extended by working Saturday nights. As long as the Iowa public is encouraged to shop in the evening, especially on Saturday with its extra marketing, long hours will be in force on that day. But until conditions are improved excessive Saturday hours of clerks could be controlled by the use of shifts. This is done in certain of the better managed department stores by having a group of workers coming early and going at the normal closing hour, other workers coming later and working till the Saturday closing hour.

"It takes all day Sunday to get rested from Saturday," was the complaint of more than one interviewed during the course of the survey.

As already stated, report was made of many stores remaining open other evenings than Saturday during the holiday shopping period, the saleswomen being expected to come at the usual morning hour and to remain on duty until after 10 o'clock at night. This practice, formerly almost universal, was abandoned some time ago in a number of cities in various parts of the United States where public opinion has aided employers in making the holidays a season not to be dreaded by girl and women employees in stores.

Laundry hours generally were uniform for Tuesday, Wednesday, Thursday, and Friday. On Monday a small group began work between 7.30 and 12 and stopped between 4 and 6. On Saturday hours of beginning work were from 7 to 8 and closing hours were from 12 to 5. This is due to the fact that clothing must be sorted and marked before washing Monday morning, and there is little or no work for ironers early in the day. Much irregularity could be avoided if patrons were willing or could be educated to send their laundry at other times during the week.

The greater number of workers in printing and publishing establishments worked from 8 to 5 during the week. Some plants began work earlier than 8. On Saturday, however, all but one closed before 1.15.

Saturday hours.

The Saturday half holiday was observed to a greater or less extent in every industry. In some establishments it was stated that a half holiday on Saturdays was the custom, but a study of the regular schedule of hours showed that the "half" day worked on Saturday was only slightly shorter than the regular workday. In 53 establishments, however, less than 5 hours work—in some cases no work at all—was required on Saturday, and in 56 establishments 5 but not 6 hours was worked. Eighty-one establishments worked 6 hours or more on Saturday.

For 56 per cent of the women work stopped on Saturdays between 11 and 1, for 24.5 per cent between 5 and 6, and for 6.6 per cent at 9 p. m. or later. The girls working until 9 or later were employed in general mercantile and 5-and-10-cent stores. Those figures are exclusive of restaurants and hotels, where the hours were so irregular as to be not comparable with those of other occupations.

Daily and weekly hours.

Considering the daily hours and the weekly hours together, in order to determine toward what standards Iowa is working without legislation, a "9-50" standard is hinted at, i. e., 9 hours a day, 50 hours a week. Slightly over one-half of all the women studied in the investigation were working within these limits; 55.4 per cent of the women worked less than 9 hours a day while 52.7 per cent of them worked less than 50 hours a week.

But to be satisfied with this achievement, secured through the action of enlightened employers (or perhaps through a slump in activity in the industry), is to ignore the condition of the other half of the army of working women in Iowa who have not the benefit of these hours. There were found 1,331 women who were working less than 46 hours a week, but against these must be remembered the 1,025 women who were working more than 10 hours a day.

More than one-third of the women (35.7 per cent) worked a 48 to 50 hour week, while slightly less than one-fifth of the men (19.7 per cent) worked these hours. Nearly one-third of the men (32.9 per cent) worked 54 to 56 hours, and only 7.3 per cent of the women had a week of this length.

Piecework.

Within the given hours in each of the industries there were time-workers and pieceworkers. Of the 22,413 workers included in the investigation, one-fourth (25.9 per cent) were pieceworkers and three-fourths (74.1 per cent) were timeworkers. Thus there were three times as many who took their day as it came and went, measuring work by the hours put in, as took the day under a continued urge, measuring work by the output.

Table 5 shows the number of men and women pieceworkers in the establishments visited.

TABLE 5.—Number of pieceworkers and of timeworkers, by sex and industry.

Industry.	Pieceworkers.				Time workers.			
	Male.		Female.		Male.		Female.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Box and basket manufacturing.....	51	32.7	105	67.3	77	45.8	91	54.2
Button manufacturing.....	117	24.0	371	76.0	144	60.8	93	39.2
Cigar manufacturing.....	197	25.7	569	74.3	32	34.8	60	65.2
Clothing manufacturing.....	74	6.8	1,010	93.2	318	39.6	485	60.4
Candy manufacturing.....	23	5.5	396	94.5	552	50.2	547	49.8
Miscellaneous food manufacturing.....	8	2.2	351	97.8	2,919	77.6	844	22.4
Miscellaneous manufacturing.....	2,019	85.3	347	14.7	2,688	74.5	922	25.5
General mercantile.....					829	26.7	2,280	73.3
5-and-10 cent stores.....					72	18.4	319	81.6
Laundries.....					370	30.9	828	69.1
Printing and publishing.....			55	100.0	586	53.7	505	46.3
Restaurants.....			1	100.0	291	41.6	409	58.4
All industries.....	2,489	43.7	3,205	56.3	8,878	54.6	7,383	45.4

Industry.	Male employees.		Female employees.		All employees.		
	Number reporting.	Per cent on piece-work.	Number reporting.	Per cent on piece-work.	Number reporting.	Per cent on—	
						Piece-work.	Time-work.
Box and basket manufacturing.....	128	39.8	196	53.6	324	48.1	51.9
Button manufacturing.....	261	44.8	464	80.0	725	67.3	32.7
Cigar manufacturing.....	229	86.0	629	90.5	858	89.3	10.7
Clothing manufacturing.....	392	18.9	1,495	67.6	1,887	57.4	42.6
Candy manufacturing.....	575	4.0	943	42.0	1,518	27.6	72.4
Miscellaneous food manufacturing.....	2,927	.3	1,195	29.4	4,122	8.7	91.3
Miscellaneous manufacturing.....	4,707	42.9	1,269	27.3	5,976	39.6	60.4
General mercantile.....	829		2,280		3,109		100.0
5-and-10-cent stores.....	72		319		391		100.0
Laundries.....	370		828		1,198		100.0
Printing and publishing.....	586		560	9.8	1,146	4.8	95.2
Restaurants.....	291		410	.2	701	.1	99.9
All industries.....	11,367	21.9	10,588	30.3	21,955	25.9	74.1

In the industries investigated women pieceworkers formed 30.3 per cent of the total women workers and men pieceworkers formed 21.9 per cent of the total men workers. Only in miscellaneous manufacturing did the percentage of pieceworkers among the men exceed the percentage of pieceworkers among the women. But as "miscellaneous manufacturing" is a general classification the indications are not so conclusive as in the specified industries.

In box factories the time and pieceworkers were about half and half, more evenly divided than in any other industry. Women formed more than two-thirds of the group of pieceworkers.

Cigar manufacturing led in the proportion of pieceworkers; in this industry 89 of every hundred employees were on piecework, and women formed three-quarters of this group. Ninety of every 100

women working in cigar factories were pieceworkers, as were 86 of every 100 men.

The button industry had twice as many pieceworkers as time-workers, and among the pieceworkers there were three times as many women as men.

In the clothing factories time and pieceworkers were more evenly divided than in any other industry but box manufacturing, but even here the per cent of pieceworkers was greater than that of time-workers by about 15. Of all the women in this industry 67.6 per cent were found concentrated in the piecework group, while only 18.9 per cent of all the men were on piecework. The preponderance of women on piece work in this industry is more clearly shown when all the pieceworkers are considered as a group, women forming 93.2 per cent of the whole.

Candy making in Iowa is not a piecework industry; nearly three-fourths (72.4 per cent) of the workers were found to be on time work, and these were divided about evenly between women and men. However, of the one-fourth (27.6 per cent) who were on piecework a very great majority were women, only 5.5 per cent of the entire piece-working group being men.

Hours in hotels and restaurants.

Public housekeeping is one of the most difficult industries to regulate. It has all the incident and irregularity of private housekeeping. But while the housewife can arrange for leisure time unless her household duties are all absorbing, the woman who sells her time retains no right over any part of it—while she is "on the job" she is at the service of the employer. Restaurant workers—cooks, dishwashers, and waitresses—are paid a fixed wage, and that wage is the exchange for their time, usually a large part of the day. Because of the irregularity of their hours it is necessary to consider them separately from other industrial groups.

Weekly hours.

The number of hotels and restaurants investigated during this survey was 30; the number of women reporting on hours was 366². These women were working according to the following schedule of weekly hours, computed from Table III in the appendix:

	Per cent.
Under 50 hours.....	43.7
50 and under 56 hours.....	6.0
56 and under 60 hours.....	18.9
60 and under 70 hours.....	13.2
70 hours and over.....	18.2
80 hours and over.....	3.2

² This group includes 7 hotels. The other establishments in the classification are restaurants, tea rooms, dairy lunches, and bake shops where food was sold.

Statistics taken in a restaurant investigation made by the State bureau of labor statistics in 1912 covered 351 women. The figures for the 340 women who reported on hours show that they were working at that time according to the following schedule:³

	Per cent.
Less than 50 hours.....	2.9
50 and under 56 hours.....	6.5
56 and under 60 hours.....	12.6
60 and under 70 hours.....	28.2
70 hours and over.....	49.7
80 hours and over.....	16.5

Comparing the hours of 1920 with those of eight years ago, it will be seen that notwithstanding the present long hours there appears to have been some improvement. In 1912 only 2.9 per cent of the restaurant women had a week shorter than 50 hours, while in the 1920 survey the proportion working less than 50 hours was 43.7 per cent. In 1912 there were found 12 women who were working weekly hours of 90 to 98; in 1920 there were found two women working 90 but under 92 hours. In 1912 the percentage of women working 60 hours and over was 77.9; in 1920 the percentage of women in this group was 31.4.

Daily hours.

But although the figures on weekly hours indicate such improvement over the conditions of eight years ago, they reveal, nevertheless, a very unsatisfactory standard. No less unsatisfactory is the standard of daily hours found to exist in many establishments. These hours were so irregular that it was impossible to secure them for all of the women employed in the hotels and restaurants investigated. A sufficient number of daily schedules were secured, however, to give a representative picture of conditions. Week-day hours were secured for 174 women in 30 establishments. These women were employed in various occupations; 92 were dining-room workers or waitresses and 82 were kitchen and pantry workers, including cooks, dishwashers, vegetable girls, pantry girls, and glass washers. Sunday hours were secured for 75 dining-room workers and 78 kitchen workers in 27 establishments.

The irregularity of restaurant hours as they run through the day is apparent from an analysis of daily schedules. Variations are not unusual in this trade, on account of its relation to the food-consuming public with its habit of lunching at any and all hours.

The more regular hours of five days in a week often are increased on Saturday, and are later, though not always so long, on Sunday. Of the women working in restaurants whose daily schedules were sufficiently definite to be tabulated, only 20 (about 17 per cent) did not work on Sunday, leaving 154 women who worked a 7-day week.

³ Iowa Bureau of Labor Statistics 16th Biennial Report, 1912-13, pp. 172-183.

Twelve women worked all night long, and 10 of these worked all night on Sunday. All of the 12 were on a regular 7 (or 7.30) p. m. to 7 a. m. schedule. A number of women who were not night workers worked late evening hours. Nineteen women worked after 10 p. m. week nights, and the same number worked equally late on Sunday.

No woman is reported as starting work in a restaurant before 5 a. m. The greatest number went on duty between 6.30 and 8.30 in the morning and went off duty between 7 and 8 at night. This schedule prevailed in both the 6-day and the 7-day week. The usual beginning hours on week days were between 6.30 and 7, and by 8 o'clock 52 per cent of the women had started work. On Sunday the general tendency was toward later beginning hours; only 37 per cent of the women working that day had started by 8 o'clock. In the same way 29 per cent started work daily after 11 o'clock, and on Sunday a much higher proportion began work as late as this.

Time off.

For the majority of the workers the long day was broken by time off. There were 45 during the week and 43 on Sunday who had no time off, and a few who had no time to eat while on duty; these workers generally had a short day. There were 19 daily and 5 Sunday workers whose lunch time or rest time was so irregular that it could not be tabulated. Forty-eight of the women were required to snatch time for meals while on duty during the week, and on Sunday 38 ate while on duty. However, none of these groups is distinct; some had time to eat on duty and additional time off for rest, others had only lunch or rest time.

Eighty-four of the 174 women who worked a 6-day week, and 73 of the 154 who worked a 7-day week, had a spread of hours of 12 or more but did not work through the entire period. At convenient times during the day—the convenience of the public and not of the workers being consulted—the work day of these women was broken and they were given time off. The following table shows the length of time off for those women whose hours were regular enough to permit such a compilation:

TABLE 6.—*Time off duty, hotel and restaurant workers having regular hours.*

Time off duty.	Number of workers.		Time off duty.	Number of workers.	
	Daily.	Sunday.		Daily.	Sunday.
One-half hour.....	3	6	4 hours.....	9	10
1 hour.....	7	8	5 hours.....	8	9
1½ hours.....	10	14	More than 5 hours.....	2	.....
2 hours.....	11	7			
3 hours.....	16	11	Total.....	66	65

Hours of workers on shift.

The foregoing figures show the time off during the working day for a group of workers who worked the same hours each day of the week. In addition to this group, there was another in which the workers were employed for varying periods on different days of the week. These weekly schedules or "shifts" show very long and irregular hours for a number of women employed in restaurants.

Many of these weekly schedules regularly required six long days and one short day, the latter not necessarily Sunday. In other schedules the shift required equally long over-all hours (hours within which work must be performed) on the long and short days, a longer time off duty being provided for on the short days.

All of the shift workers were waitresses except 3 dishwashers and 2 pantry girls. If 2 waitresses alternated shifts, 1 would come late and work straight through to allow the other time off, perhaps only a few hours or it might be a whole day. In one restaurant 5 waitresses worked on schedules which gave each one a short day, from 11 a. m. to 7 p. m., before Thursday, while the remaining days of the week all worked full time from 11 a. m. to 11.30 p. m.

As in the case of workers on regular schedules, mealtime for shift workers was in some cases allowed in addition to regular time off duty. It was more often the case, however, that the workers were permitted to eat while on duty.

Hours of beginning and ending long shifts for waitresses were noted as follows:

- 6 a. m. to 7 p. m. (eat on duty) alternated with 6 a. m. to 8 p. m. with 4 hours off in afternoon.
- 7 a. m. to 7.30 p. m. (eat on duty) alternated with 7 a. m. to 7.30 p. m. with 4 hours off in afternoon.
- 7 a. m. to 8 p. m., 3 hours off in afternoon, alternated with 7.30 a. m. to 8 p. m., 3 hours off in afternoon.

The longest shift had a spread of 13½ hours. Four waitresses worked from 6.30 a. m. to 8 p. m., with regular time off twice a day amounting to seven hours. Two waitresses at the same place worked from 7 a. m. to 8 p. m., with four hours off three days a week and seven hours off on the other days.

Labor turnover.

In the restaurant business the labor turnover is tremendous. Largely because of the long hours there is much shifting from job to job. "Help wanted" is a sign in precise correlation with "Meals at all hours." The employer who complains "always short-handed—glad to have anybody I can get" has evidently not considered the influence of excessive hours on steadiness of employment.

"Eat on duty," "Sit when not busy," means no relief from tension during the day. The sign "We never close" too often means

days and nights of prolonged hours for the workers. But even with the peculiar demands of restaurant service, and the peculiar relation of restaurants to the public, it is possible to make a reasonable adjustment of hours by more attention to the human needs of the workers, and a better adjustment of work by more attention to routing the service.

It was not possible to secure records of labor turnover among restaurant workers in Iowa, but according to an investigation in Kansas made by the Women's Bureau the restaurant workers of that State show certain significant variations from other industries in steadiness of employment.⁴ As conditions in the Middle West are sufficiently similar among the States to justify applying general conclusions from one to the other, the findings reported for Kansas restaurant employees are valid to a certain extent also for those in Iowa. It was discovered that of the 11 industries investigated in Kansas, restaurant workers showed the greatest instability. Not only were they employed but a short time as restaurant workers (only 17 per cent had been employed from 5 to 10 years in the trade) but a larger proportion (53.6 per cent) of the workers in restaurants than of those in any other industry had changed employers while remaining in the same trade.

One-fourth (25.4 per cent) of the women in Kansas restaurants had worked in the trade less than three months and more than one-half (52.9 per cent) had worked less than one year. This instability on the part of the workers is particularly striking when it is realized that they were not young girls; 42 per cent were over 30 years of age and 23 per cent were over 40.

Although figures on length of time in the trade were not secured for the industries of Iowa, there is no reason to suppose that the restaurants in Kansas were unique in their labor turnover. Figures for them can be applied in a general way to other States. It seems probable that the arrangement of hours and shifts resulting in such long and irregular working hours as have been detailed for the restaurants in Iowa would be reflected in a labor turnover similar to that of Kansas restaurants.

Extra work at home.

Women workers in restaurants often have family financial responsibilities and duties which they must fulfill in the scant hours left them from work. Take the case of one waitress in an Iowa restaurant who had a 7-day week, 78 hours long. She was a woman of 27, with a totally dependent husband and a child, the former in the clutches of tuberculosis. She was given meals in the restaurant for all three, and was paid \$12 a week. In her leisure moments,

⁴ Women's Wages in Kansas, U. S. Department of Labor, Women's Bureau. 1921.

after putting in a day that averaged over 11 hours, she cared for her family and the rooms in which they lived, and did the sewing and mending and multitudinous other things required of a homemaker.

Another restaurant worker, aged 57, had been working since she was 12 years of age, "after having gone through the third reader and learned the multiplication table." She did farm work until she married at 18, and for 15 years lived the life of a farmer's wife. Then her husband died. She tried to run the farm, but gave it up, came into town, and did "everything and anything to support the children." Now she is a dishwasher, working at her trade 75½ hours in a 7-day week, and selling this service for \$12 and meals. She has brought up three children. In the past year she has had four jobs and has buried one child.

EMPLOYMENT RECORDS AND EMPLOYMENT FLUCTUATION.

Iowa laws do not require the keeping of employment records. But the laws have something to say about the age below which girls may not work, and the age below which no woman may do work requiring constant standing. In order to observe these laws the firms must keep employment records of the age and occupation of each girl.

The child labor law, relative to "children under 16," is generally observed. The child labor situation in Iowa is good. Few children are employed. But on the statute books there is a law which is neglected and often unknown: ⁵

No female under 21 years of age shall be employed in any capacity where the duties of such employment compel her to remain standing continuously.

If this law were recognized and observed, every firm would perforce keep records. As a matter of fact only 54 were reported as keeping any kind of employment records.

Number of establishments with records.....	54
Number of establishments without records.....	163
No report on records.....	6
Total.....	223

Often these "records" were merely application blanks, or cards containing such information as name and address, telephone number, and name of person to notify in case of accident. In one establishment there were detailed records kept on file with personal information, including such items as educational history, employment history with references, and so forth.

In another establishment the firm had kept cards on file with the name, address, and telephone number of the worker and the name

⁵ Iowa. Acts of 1906, chapter 47, amended 1919.

of the person to be notified in case of accident. This was done only after an employee had died in the plant and had to be buried at the company's expense because no relatives could be found. Another firm used to have employment records but had given up the system because the force changed so rapidly.

Even on the cards kept by the 54 firms there was occasionally no provision made for recording the age. There was almost no attempt made to keep count of the number under 21. To the question, "How many women under 21 years of age do you employ?" the frequent answer was "We don't know" or "Oh, yes, about —." In one case a canvass during the year had been made, and two or three girls under 21 were found; but it was "2 or 3" and not "2" or "3." In a very few cases the number could be ascertained by going over the employment records, but often this was more or less of an estimate, since the files were not kept up to date. One man stated that he was "too modest to ask."

The value of a statute prohibiting the continuous standing of women under 21 years of age is not very great. Even with adequate employment records the problem of enforcement would be almost insurmountable. But if employment records were kept with any degree of completeness, valuable material would be furnished for an analysis of business conditions relating to the turnover of labor in the plant.

The problem of labor turnover was found to be serious in the majority of plants visited. More than one employer said the turnover was so great he had lost count and could not keep records. Only one firm had given up records for the opposite reason, i. e., that the force was practically permanent.

Not one employer, even when complaining of a continually changing labor force, had tried to make an analysis of his plant to determine whether it was the wages, hours, working conditions, lack of interest in the particular job, or home conditions that caused his labor turnover. As a good business man and as an intelligent employer he should at least make an effort to discover for himself why his employees were dissatisfied, why there was so much absenteeism, why so much shifting from job to job. The records of employment of men and women during the year should be as important to an employer as the debit and credit of his books. The two have an intimate relationship.

Fluctuation in number of women.

Table 7 shows the fluctuation in employment in the industries in Iowa through the busy and slack seasons.

TABLE 7.—*Fluctuation in numbers of employees according to season.*

Industry.	Busy season.		Slack season.		Decrease in total number of employees in slack season.	Increase (+) or decrease (-) in slack season in per cent women form of total employees.
	Total employees.	Per cent women form of total employees.	Total employees.	Per cent women form of total employees.		
Box and basket manufacturing....	396	58.8	321	59.8	75	+1.0
Button manufacturing.....	1,951	55.3	1,050	62.8	901	+7.5
Cigar manufacturing.....	820	73.0	623	77.5	197	+4.5
Clothing manufacturing.....	2,650	78.3	1,498	78.5	1,152	+2
Candy manufacturing.....	1,693	63.9	1,308	59.9	385	-4.0
Miscellaneous food manufacturing.....	4,729	32.0	3,304	26.8	1,425	-5.2
Miscellaneous manufacturing.....	7,445	20.9	5,111	27.1	2,334	+6.2
General mercantile.....	2,691	73.7	2,161	74.0	530	+3
5-and-10-cent stores.....	404	81.9	251	75.7	153	-6.2
Laundries.....	1,284	70.3	1,141	68.4	143	-1.9
Printing and publishing.....	1,241	49.4	1,091	47.1	150	-2.3
Restaurants.....	452	60.8	425	60.7	27	-.1
All industries.....	25,756	47.5	18,284	47.4	7,472	-.1
All manufacturing industries.....	19,684	41.3	13,215	40.3	6,469	-1.0

In general in the industries of Iowa men and women were laid off and taken on in the same proportion. In slack times women formed 47.4 per cent of the employees; in busy times they gained one-tenth of 1 per cent, amounting to 47.5 per cent of the total. In restaurants there was practically no change in either the number of employees or the proportion of men and women employed in the two seasons. In general mercantile establishments also, although there was a decrease of nearly 20 per cent in the total number of employees in the slack season, the proportion of women remained practically the same.

The proportion of women increased in the slack season to the greatest extent in button manufacturing (7.5 per cent), in miscellaneous manufacturing (6.2 per cent), and cigar manufacturing (4.5 per cent). In these industries there were decreases in the slack season of 46.2 per cent, 31.3 per cent, and 24 per cent, respectively, in the total number of employees. But the increase in proportion of women indicates that they were not laid off to so great an extent during the slack season as were the men. In clothing and miscellaneous food manufacturing and in 5-and-10-cent stores, the three other industries where in the slack season there was a considerable reduction in the total number of employees (43.5, 30.1, and 37.9 per cent, respectively) the proportion of women employed in the slack season did not increase. On the contrary in the manufacture of clothing the proportion of women remained practically the same, while in the manufacture of miscellaneous foods there was a decrease of 5.2 per cent and in 5-and-10-cent stores a decrease of 6.2 per cent in the proportion of women employed in the slack season.

HOME RESPONSIBILITIES.

The greater number of women who work live at home. This investigation did not include a survey of the home conditions of the workers, but other investigations made by the Women's Bureau have yielded definite and representative information on this subject. The figures secured in these investigations show a picture of the responsibilities and duties of wage-earning women which is representative enough to apply to similar groups in other States. An investigation in Kansas showed that 84.3 per cent of the women in the industries of that State lived at home, only 15.7 per cent living independently. Practically all wage-earning women who live at home have home duties. It may be merely the drying of the dishes or it may be wholly caring for the house and the household, and when these home duties come after too long hours of work in industry, overfatigue is a natural result.

In Kansas about one-half of the women in restaurants and laundries and about one-third of the women in clothing, food, and miscellaneous manufacturing and in the general mercantile industry were married. But single women also have home duties, and their contribution to the home in the form of housework often exceeds in value their financial contribution.

An investigation in Manchester, N. H., preceded those in Kansas and Iowa, and emphasized the subject of dependency. From unpublished data the New Hampshire survey yields certain definite information on home responsibilities of women which shows the economic value of the woman wage earner in the family unit. Nearly 19 per cent of the women covered by the survey in Manchester were mothers with children at home to care for in addition to their work in the factory. All of their earnings were contributed to the family by 67.8 per cent of the women and by 69.6 of the men, a similarity which shows that the two sexes do not differ so much as has been supposed in the extent of their responsibility for the support of families. It was also found in this survey that there was a very general similarity in the length of time men and women had been contributing all of their earnings, except for the fact that 36.5 per cent of the men and only 18.5 per cent of the women had contributed all of their earnings for 10 years or more. As 58.1 per cent of the men and only 24.2 per cent of the women had worked as much as 10 years, the difference in the proportion of each sex who had contributed all of their earnings for that period is easily explained and the similarity of the percentages of men and women who had contributed all of their earnings for from 5 to 10 years (25.3 per cent of the men and 27.4 per cent of the women) becomes more significant.

If the women of Iowa are assuming an equally important relationship to their families—and there is no reason to suppose that Iowa

women are on a different plane of responsibility from Kansas women—their hours, wages, and working conditions assume a great significance. They should have wages adequate to help in the support of their dependents, they should have hours short enough to leave them time and strength for the inevitable home duties, and they should have working conditions which conserve their health and vitality. All these are essential if this group of women, usually home makers and wage earners both, are to become an asset and not a liability to the community.

WORKING CONDITIONS.

Iowa has no code of hours or minimum-wage scale for women, nor has it a complete code regulating conditions.

In the establishments throughout the State there are instances in which wise employers, recognizing that labor is human and subject to fatigue of body and spirit, have installed modern sanitary facilities and arrangements for the health and comfort of their employees, men and women. These instances are few.

The instances are many where nothing has been done for the workers; or where, though the mechanical equipment of the plant is up to date in every respect, the human equipment has not even been given the recognition the machinery commands in oiling and cleaning.

To women especially, and to men a little less consciously, surroundings make a difference in the upkeep of physical strength and mental alertness. Safety devices have made it possible to forget the danger of the machine and concentrate on the output. Sanitary devices, increasing cleanliness, and ventilation and convenience have an equally important influence on workers and therefore on the work; while facilities for food and rest and recreation are valuable assets for the production efficiency of any plant.

In some individual States standards of working conditions are clearly written in the law or are regulated by an industrial commission to which has been given full power to define and enforce the industrial code. In Iowa the laws are vague and inadequate, the power to enforce them limited, and the appropriation small.

Cleaning.

One of the most elementary of the recognized standards for good working conditions in industry is a clean workroom. Cleanliness of industrial establishments adds to the health and comfort of the workers and to the preservation of the product, and assures lengthened life to the plant itself.

In some establishments in Iowa this kind of work has been systematized; janitor and matron service is of the best. There were smaller

establishments where the cleaning was as thorough as in a well-ordered home. But there were floors which, however much they might need it, could not be washed because "they were shellacked and scrubbing would ruin them"; there were walls, ceilings, and equipment grimy with accumulations of dust and lint; there were windows so covered with grease and dust that shades were not needed and the natural supply of light was reduced; there were filthy cuspidors which were a menace to health.

One custom, too general, was that of making the workers act as the janitor force, spending the last 5 or 15 minutes of the day in a general shop cleaning, to "keep things picked up constantly." Some plants reported that "the girls take turns, and if they don't do it it's up to them," or "the forewoman sweeps whenever she sees it needs it."

In 63 establishments the cleaning was done wholly by the women employees, and in 11 others it was done by the workers with the aid or supervision of the janitor or matron.

Of 217 establishments for which a report as to cleanliness was made, 164 were considered clean and 53 neglected. Basket, cigar, and candy factories were in many cases reported neglected. The fact that all stores were reported to be clean may be due largely to the necessity of maintaining an attractive appearance for the benefit of their patrons.

Of those establishments reported as neglected many were cleaned only by the workers, but in every case the general mercantile and 5-and-10-cent stores were cleaned by the janitor or other person employed for that purpose only. However, this relationship between cleanliness and work by the janitor is not borne out in the case of the button factories, where the workers cleaned 9 of the 10 establishments and only 2 of the 10 were reported to be neglected.

In 13 cases cleaning was done by women on piecework, that is, by women who must contribute their own time to the cleaning since they are paid only for what they produce. "It takes only about five minutes," said one foreman. But in this five minutes a few more cents might be added to the worker's wage through her real work. In button factories it was found that 9 of the 10 plants were cleaned by the women workers, and most of these women were on piecework.

In restaurants the cleaning generally was done by the waitresses, that is, they were charwomen as well as waitresses.

In many instances the toilets were cleaned, if at all, by the women employees. Sometimes the women complained that they had to do the work although it was one of the duties of the janitor, because he did not do it properly.

The fact that the majority of Iowa factories are small may have led employers to feel that a woman can be shifted from her work as

though she were a "hired girl." The cases just quoted seem to show that in this State employers have not yet come to an understanding that a woman employee is hired to do a special factory job and should not be arbitrarily assigned to the job of cleaning.

Lighting.

There is no law regulating lighting in Iowa industries. But the Iowa bureau of labor statistics has a definite word to say upon this:⁶

Modern shop engineering places great stress on proper shop lighting. No other agency is more conducive to accident than poor light in factory, work shop or other places of employment. Many of the establishments in Iowa are housed in other than buildings constructed upon modern plans, with the result of miserable lighting facilities, endangering life and limb and ruinous to the eyesight, the latter in turn productive of greater accident hazard. Provision should be made to provide an abundance of light, based upon approved modern lighting principles.

The Iowa plants visited were found on the whole to use sufficient natural and artificial light. There are certain plants in the State, notably one new laundry, which are flooded with daylight so that the need for artificial light, with the consequent big bill, probably is reduced to a minimum.

Certain of the more common lighting defects found in Iowa factories were: Stairways inadequately lighted, plants with inside rooms, basement workrooms with no natural light, workers badly placed in relation to natural or artificial light, outside light so badly directed that workers preferred to pull down curtains, and unshaded or badly shaded lights.

Six box and basket factories were reported as not having sufficient light, as were seven candy factories and two cigar factories. Because natural light was supplemented by artificial light only one of the 17 mercantile establishments—in fact, only one department within that store—was reported as having insufficient light. In the other industries the lighting was reported generally as adequate.

Local lights were found in 91 factories, but local adjustable lights for all workers in only 25. Fourteen of the establishments with local lights manufactured clothing, and six others were of the miscellaneous manufacturing group. Twenty-three plants had neither local nor adjustable lights.

Seats.

Comfortable adjustable seats for all workers are a very necessary part of the equipment of a plant which wishes to secure the highest efficiency from its employees and reduce the fatigue incident to factory occupations. In many occupations it is possible to adjust machine or work bench and seat so that the worker may be able either to stand or to sit at work. In cases where standing is unavoid-

⁶ Iowa Bureau of Labor Statistics Biennial Report, 1916-1918, p. 21.

able, it is possible and necessary to have a chair provided for use during regular rest periods or during temporary cessation of work because of repairs to machinery, waiting for material, and so forth.

In Iowa the law provides that—

All employers of females in any mercantile or manufacturing business or occupation shall provide and maintain suitable seats when practicable for the use of such females at or beside the counter or work bench where employed, and permit the use thereof by such employees to such extent as the work engaged in may reasonably admit of.⁷

And no females under 21 years of age shall be employed in any capacity where the duties of such employment compel her to remain constantly standing.⁸

The difficulties in enforcing the laws are apparent from a study of their phraseology.

“Shall provide * * * *when practicable;*” “permit the use * * * to such extent as the work engaged in *may reasonably admit of*” are definite specifications which make enforcement difficult. It has already been pointed out that the prohibition of standing continuously for females under 21 years of age is almost impossible of enforcement because of the continuous supervision and examination of records which would be required to get accurate information as to the age of each woman worker.

The reports on seating in Iowa establishments vary from “workers stand all day” and “not a chair in sight” to “all of them sit all the time.” Either extreme may produce fatigue; which extreme prevails depends upon the occupation.

One hundred and three establishments did not provide seats for all workers. No button factories are included in this number, as in every instance seats were provided for all employees in this industry. Cigar, printing, and food manufacturing establishments, laundries, restaurants, general mercantile, and 5-and-10-cent stores did not generally provide seats for all workers. Of clothing and candy manufacturing establishments a majority did.

In the cigar factories a large group of women packers and labelers stood at work, and seats were not provided for them. In three food-manufacturing establishments there were no seats whatever. In the establishment of this group employing the largest number of women, only 10 seats were provided for 229 women. If proper equipment were installed, more than 200 women could either sit or stand at work. In two retail bakeries there were no seats for the saleswomen. In two other bakeries there was only one seat for several saleswomen.

In laundries most of the work was done standing. In three there was a single chair. The women who remained for lunch ate sitting on the tables, and for the remainder of the lunch period tried to

⁷ Acts of 1892, chapter 47.

⁸ Acts of 1906, chapter 103, section 2; Acts of 1915, Senate File 189, section 3.

recover from the morning's fatigue by lying on the tables. In some laundries it has been proved that all menders and markers and some folders and flat workers can sit at work, and it would seem practicable for many others to do so if different equipment were installed.

In the kitchen of more than one restaurant there was not even a stool, and one cook was found resting on a garbage can. Waitresses occasionally were allowed to sit in the seats provided for the patrons in the dining room.

In mercantile establishments there was the same indifference on the part of employers to seating and to the unnecessary fatigue resulting from continuous standing. There were seats for all in 10 of the dry-goods stores and in 4 of the 5-and-10-cent stores. But there were also mercantile establishments where the use of seats was frowned on. There were stores where seats had been provided and their use permitted in some departments, while their use was forbidden in others by the department head.

In the miscellaneous manufacturing establishments, core makers were found standing in two establishments. Workers who sorted, weighed, wrapped, and packed, and machine operators of many kinds, stood. Many of the latter could have performed their work either sitting or standing if they had been provided with adjustable chairs or if their machines had been adjustable.

In candy factories, packers and a few machine operators stood, though seats generally were available; little attention had been given to the height or kind of seat, which probably explains the fact that they were not used. In clothing factories machine work necessitated seats for all but the few inspectors, folders, and packers.

In printing establishments press feeders, folding-machine operators, and envelope gatherers generally stood. These groups were nearly always small.

In the factories there was great variation in the attitude of the firms toward seating. A few firms made a practice of rotating jobs to enable the workers to stand and sit alternately. In others, girls sat on chairs, stools, or boxes. Sometimes they improvised cushions for themselves, sometimes the foremen fitted pieces of hollow piping into the chair legs to adjust them to the workers. In one factory the girls said they had asked several times for chairs with backs but had not been given any.

The haphazard construction of what chairs were supplied emphasizes the need for a definite seating code in Iowa, and recalls the remark of a well-known officer of the United States Army that—

The average factory chair reminds one of the description of a coffin—"The man who made it didn't want it; the man who bought it didn't use it; and the man who used it didn't have much to say about it."

Uniforms.

The need for uniforms or work dresses varies, of course, with the kind of work performed, but in many industries a special work dress is an essential of either safety or sanitation. Full skirts and flying hair in a machine shop are very real elements of danger, while the least exacting sanitary standards would require that outdoor clothing be changed when food products are handled. Even if the employer does not feel that workers in candy and other food manufacturing trades are entitled to the protection of their clothes, the public is interested in uniforms from the point of view of the protection of the purity of the food product.

In Iowa very few employers recognize the uniform as a part of the plants' equipment. Occasionally it was provided, less frequently it was laundered, by the firm. Too often the girls came "pretty well dolled up," as one button factory manager said, and even in that dusty trade workers neglected to wear suitable working clothes.

Of the 193 plants visited (excluding restaurants where uniforms or aprons and caps were worn), only 12 provided and laundered the uniform; 6 others provided but did not launder them; 29 did not provide but did launder them. Caps were worn in 23 plants and hair nets in one.

Eighteen laundries made some arrangements to wash the workers' cotton work dresses on the laundry's time or at cost.

Of the 20 food manufacturing establishments visited only 4 supplied uniforms or aprons, and in 10 the workers supplied their own. In 9 establishments the workers laundered their own and in 5 the firm assumed this responsibility.

In the miscellaneous manufacturing group of 37 establishments, uniforms were provided by the firm in 3 instances—for all the workers in one establishment and for only some of the workers in the other two. Workers provided their own aprons in 4 other factories; in one of these plants, in one department of another, and in two plants handling a very dusty product women wore caps. In one broom factory the need for caps was noticed to be particularly great, but they were not worn.

In some plants the uniforms were sold to the girls at cost; other firms which had provided them at cost had discontinued the practice on account of the price of materials.

In one plant the girls preferred to furnish their own uniforms in order to have the correct size.

Drinking facilities.

Another part of the equipment of a factory of prime importance to the workers is the drinking facilities. The law in Iowa requires

that "A sufficient supply of water suitable for drinking purposes shall be provided."⁹

The law is not explicit, and while the interpretation of the term "suitable for drinking purposes" may have been standardized because of the increased knowledge of epidemics, a recognition of the dangers lurking in drinking utensils—faucets, bubblers, pails, and tanks—is important.

The drinking facilities of the Iowa factories varied from convenient and sanitary bubblers of the most approved fashion to no provision whatever. The majority of the employers have recognized the problem and quite generally have installed bubblers. However, the commercial bubblers, of the kind where the mouth of the drinker can touch the metal surface over which the water flows, or some of the partly consumed water falls back into the fresh stream, are insanitary.¹⁰ The oblique bubbler is a recent development and it may take time for employers to realize that every bubbler is not a sanitary bubbler. Seventy-eight establishments were reported as having provided bubblers, but in only 28 of them were the bubblers considered sanitary.

Many of the firms expected the girls to provide their own drinking glasses, and occasionally the glasses could be seen standing together on a shelf above a faucet, or sometimes at the worker's place. But there are still common cups and common pails in Iowa factories. And there is occasionally an unwillingness to admit that disease may be circulated by these utensils used in common, and that the working force and the work suffer thereby.

The common drinking cup was used in 92 establishments and the individual drinking cup in only 57 of the establishments visited.

Four plants having bubblers also used the common cup.

In two establishments open pails were found to be the source of supply for drinking water.

Lunch rooms.

Most manufacturers pay as much attention to their stock of raw materials as to their stock of finished product. But employers in less than one-half the firms visited in Iowa seemed to understand that the human energy which goes daily into the making of their factory product is a stock which must be replenished with daily care. The worker's food is an important factor in her health and consequently in her productive ability. An essential part of her food is her noon lunch, which should be eaten away from her machine and workroom and should be hot and nourishing.

Of the establishments visited in this investigation only 17 provided cafeterias or dining rooms where hot food was obtainable, but 65

⁹ Acts of 1902, chapter 149, Amended Acts of 1911, chapter 171.

¹⁰ The Journal of the American Medical Association, Chicago, November, 1916.

had other lunch facilities. One hundred and eleven, more than one-half, had no lunch rooms. Four of these establishments had maintained lunch rooms and for one reason or another abandoned them. In 12 of these all the workers went home to lunch and in the remaining 99 they ate in the workroom.

A tabulation of lunch rooms and lunch-room facilities according to industry shows that nearly one-half of the mercantile establishments and all but one of the 5-and-10-cent stores had separate lunch rooms for employees. Clothing manufacturing establishments also ranked high in providing lunch rooms. Very few laundries or cigar and candy factories reported such rooms, while 24 of the 37 plants in the miscellaneous manufacturing group had none.

Cafeterias or dining rooms in plants.

The cafeterias in the 17 plants were distributed according to industry as follows:

General mercantile.....	3
Food manufacturing.....	5
Printing.....	2
Miscellaneous manufacturing.....	7
Total.....	17

The plants with cafeterias formed 8.8 per cent of all plants visited, exclusive of hotels and restaurants.

Although several establishments furnishing cafeteria facilities employed large numbers, an attempt to provide similar equipment was made by some smaller employers. The smallest plant with a cafeteria employed only 35 persons, 23 men and 12 women. The largest number employed in a firm with cafeteria facilities was 906, of which 720 were men and 186 women. The largest group of women having the use of a cafeteria was 532 of 741 employees in a retail store. Here the equipment was really part of the public restaurant, where the employees were given service in a special section of the room.

Cafeteria facilities ranged from a room with a long counter with high stools for 45 workers to an elaborately equipped café with small tables, attractive fixtures, and curtains. In the latter a menu card was printed daily from which the employees could select a hot meal.

Other lunch-room facilities.

In 65 of the 193 plants studied (33 per cent) other lunch-room facilities were furnished. This equipment ranged from a few chairs placed in a combined washroom and toilet to a separate room furnished as a lunch room with tables, chairs, a gas plate for cooking, and a matron in charge to prepare coffee and keep the place clean.

In four cases only some of the employees in an establishment had the use of separate lunch-room facilities. In one hotel the colored

maids had a room set aside for them, with cloak, wash, and lunch-room facilities. The white maids, however, left their wraps and ate their lunches in small supply rooms, really closets, where the porter brought them hot coffee.

In one plant the office employees had the use of long tables in a separate room, but the factory employees ate at their work tables.

In two other establishments the men were provided with separate lunch rooms in which they could rest, but the women had to eat in the workroom. One of these firms employed 15 men and 15 women, the other 27 men and 56 women, so the reason for giving the men employees this advantage was not the larger number of men employed. In the latter case the employer had planned facilities for the women also, but was dissuaded from carrying out his plans by a conservative forewoman who had been in his employ for a long time.

Occasionally the lunch room served several purposes. A couch and comfortable chairs would make it a rest room, or it might contain a shelf for hats and hangers for wraps and serve as a cloak room and dressing room. In six factories women ate their lunches in the room which contained the toilet.

Conditions of sanitation, cleanliness, and comfort of the lunch rooms varied greatly, as they did in workrooms. In many cases this was due to the fact that the responsibility for the care of the rooms was not definitely assigned. In some plants matrons were in charge and everything was clean and orderly. Again, a forewoman was responsible or a janitor cleaned the rooms when he did the general cleaning. Some employers left the lunch rooms in charge of the girls themselves "to make them more careful," and sometimes no one was responsible.

As a result, in some cases the workers ate their lunches in rooms that were untidy, uncomfortable, even insanitary. In one establishment a big garbage barrel stood in the lunch room, which was really the wash and toilet room but was furnished with chairs and a gas plate. The entire surroundings were uninviting and neglected. Poorly repaired toilets in the basement of one establishment made the lunch room very unpleasant because of their bad odor.

Another room, equipped with tables and kitchen chairs but having no heating facilities, was very little used by the workers, who preferred the warm workroom.

Abandoned lunch-room facilities.

Five establishments—two laundries, two candy factories, and one other factory—had provided lunch-room facilities but had abandoned them.

In one of these cases a new owner had increased his business greatly. Because he thought the lunch room was not appreciated he used it as a place in which to store lumber and barrels.

In another factory a lunch room on the second floor was abandoned because the employees preferred to go to a near-by delicatessen store or to eat in the workroom, rather than to climb the stairs.

In a third factory the lunch room was abandoned because it was stated the office girls refused to eat with the factory girls and the girls from certain departments refused to eat with the girls of other departments. It seems quite possible, however, that the real objection to the room was its location on the third floor in a wing rather remote from the greater part of the factory workrooms.

In the fourth plant the management stated that the workers preferred to eat at their worktables. This was allowed and the lunch room was finally taken over for a workroom.

The fifth firm had installed a cafeteria, but the employees complained of the food. When it was found that the firm was losing from \$25 to \$50 a month the use of the equipment was discontinued, and the employees brought their lunches and ate them in the cloakroom.

No lunch-room facilities.

The following list shows the number of firms in each industry having no lunch-room facilities:

Box and basket manufacturing.....	5
Button manufacturing.....	7
Cigar manufacturing.....	9
Clothing manufacturing.....	8
Candy manufacturing.....	13
Miscellaneous food manufacturing.....	8
Miscellaneous manufacturing.....	22
General mercantile.....	11
5-and-10-cent stores.....	1
Laundries.....	24
Printing and publishing.....	3
Total.....	111

More than one-half of the plants visited made no provision whatever for an employees' lunch room. In 12 of these the workers could go home for lunch, thus leaving 99 where the employees ate their lunches in the workroom, either at the workbench or table or at a special table placed in the room for that purpose. About 30 plants provided gas plates for heating coffee or food, and a few firms provided coffee; 85 establishments had no facilities whatever for heating food. In two laundries the workers were able to get hot water from the boiler room for tea.

In the groups of establishments investigated, lunch-room facilities were noticeably lacking in laundries and cigar factories, where the conditions existing in the workroom, due to the nature of the work and the product, are apt to be unpleasant and sometimes insanitary.

Of the 29 laundries visited it was found that 2 had abandoned lunch rooms, 3 had some lunch-room facilities, in 2 all employees went home at noon, and in 22 the absence of lunch-room facilities necessitated the employees eating in the workroom.

In only two cigar factories were there lunch-room facilities. In the remaining nine workers ate their lunch at the worktables, and in but two of this latter number could the employees heat food or coffee. In one factory a "coffee club" had been started. Each employee contributed 10 cents a week for the coffee and cream. The firm allowed one girl to make the coffee.

The general workroom conditions in which employees were compelled to eat their food varied greatly. In a biscuit factory the sanitary conditions were very good. The hardwood floors were kept free from dust or other accumulations. The walls were painted and clean. The girls ate in the packing department where probably the cleanest conditions prevailed. However, the objection to having girls who handle food eat at their worktables is obvious.

In another plant, employing 1,852 men and 91 women, workroom conditions were such that the employees ate their lunches under undesirable surroundings. There was not one chair to sit on; there were no heating facilities or hot water; the workbenches at which women ate were oily and sandy. As a result the hour lunch period was not used for relaxation; instead the women on piecework worked the greater part of the time. The employment manager stated that "if men were doing the work they'd find a seat all right on a box or piece of machinery."

The 12 plants from which all workers went home for the noonday meal were distributed among the following industries:

Retail mercantile establishments.....	6
Bakeries.....	3
Laundries.....	2
Other industries.....	1
Total.....	<u>12</u>

One-half of the number were retail establishments where small numbers were employed.

In 10 of these 12 plants all employees had one hour for lunch; in one case the women had one hour and the men three-quarters of an hour, and in another the lunch period was one and one-half hours.

Rest rooms.

Of all the firms scheduled only 74 (33 per cent) had any provision for resting.

Twenty-two establishments provided a rest room separate from the lunch room and workroom. These plants employed from 12 to 600 women. Other small plants employed only 20, 25, and 30 women, yet set aside one room where the women might go in case of illness.

In 52 other plants the need was recognized in varying degrees and some provision was made for rest. One-half of these combined rest and lunch rooms and one-half had made some small provision elsewhere than in the lunch room.

In order to be counted as "resting facilities in connection with a lunch room," the lunch room had to be provided with at least one rocking chair, or one couch or canvas cot. In one case the rest and lunch room was kept locked during the day and was opened only at noon, destroying the real value of the rest equipment.

An example of the best type of combination room was described by one investigator as "big lunch and rest room on second floor, comfortable chairs, pictures, victrola, magazines, and tables for sewing or eating lunches. Screen separates these tables from rest of room." Another good example read "rest room, plainly but well furnished, with rug, curtains, piano, leather couch, table, chairs. In one corner, screened off, is a gas plate and cupboard of dishes."

In the 27 establishments with "resting facilities elsewhere," 13 provided a couch in a dressing room, a bed in a coat room, a couch with "clean but ragged quilts" in the basement, a cot in the office of the foreman, a couch in a wash room, a rocker in a cloakroom used by the office girls only, a few rockers in the dressing rooms of only those girls in the plant who had to change their clothes.

There were 149 establishments (including one in which the rest room had been abandoned) which had no provisions whatsoever for rest. Certain of these plants employed 200 or 300 women. These were generally the same plants which did not provide lunch facilities.

No restaurant was found to have made provision for resting. Yet in the occupation of waitress there is strain from standing and from carrying heavy trays. There is also unoccupied time between shifts. This time off may be three or four hours in the afternoon, or may come in shorter periods twice a day. Waitresses with such rest periods do not always live near their work and often can not afford car fare to make the trip from their homes twice a day. Without a rest room not only is their time wasted but their fatigue is increased, as they have no chance to relax.

In two such instances girls who needed a place in which to rest or to wait before going on duty went one to a public-comfort station, the other to the ladies' waiting room in the railroad station.

In a few plants hospital rooms were provided, but these have not been included with the description of rest rooms, for they were generally used only in case of accident and by both men and women.

One employer in a plant that had a lunch and smoking room for men wanted to add a lunch and rest room for the women. The order for the furniture was canceled because the forewoman, who had been with the plant for 30 years, opposed it on the ground that she had "got along without a rest room all her life and so could the girls nowadays."

In another case the employer expressed his objections to a couch for the reason that "the girls would use it as a springboard and would ruin it." Yet the girls in this plant had tried to improvise a couch. "It is made of two boxes with board spread across, covered with newspapers, and a roll of some material serving as a pillow."

In other plants the investigators came upon girls who were trying to rest in their time off. In one plant a girl was found lying on the floor of the dressing room. In another girls used the work tables as couches. In still another a girl was trying to rest on a hard bench in a dressing room, using a towel as a pillow.

Rest periods.

The wise provision of regular rest periods of a few minutes in the middle of forenoon and afternoon was found in only a few establishments in Iowa. Rest periods may mean a chance to relax at the machine; or an opportunity to walk around the workroom or to take part in some regular drill in physical exercises. They have been found also to mean considerable increase in production.

One firm, which provided a 10-minute rest period morning and afternoon, says of rest periods in a booklet describing its plant:

The object is to avoid the prolonging of effort to a point where it becomes a strain and the results accomplished are lessened. It is found that employees start with new vigor following the rest periods.

Cloakrooms and wash rooms.

The cloakroom of a plant is important, for here the worker deposits her property, her hat and coat. Responsibility for this property should rest with the employer.

But when the employer does not assume this responsibility, the worker naturally prefers to keep her things where she "can keep an eye on them," and she hangs her hat and coat in the workroom. It may be in a broom or button factory, with dust from the processes of manufacturing filling the air; it may be a tobacco or candy factory, with every likelihood of the product harming her clothes and

with the possibility of outdoor clothes bringing contamination to the product. The undesirability of such a practice is reflected in the law of Iowa, which states:¹¹

When the labor performed by the employees is of such a character as to require or make necessary a change of clothing, wholly or in part by the employees, there shall be provided a dressing room, or rooms, lockers for keeping clothing and suitable washing facilities, separate for each sex, and no person or persons shall be allowed to use the facilities assigned to the opposite sex.

The well-equipped factory has a cloakroom—preferably with lockers—and a wash room supplied with cold and hot water, soap, and towels, convenient or adjacent to the workrooms. There were 34 such rooms in Iowa. This is the desirable standard expressed in the law quoted above for work which necessitates a change of clothing. Of the 223 establishments visited 39 had no cloakrooms whatever. In 125 plants there was only cold water at the workroom or dressing room sink and in 34 no soap was provided.

Common towels were provided in 145 plants. Individual towels were supplied in 51 plants; in 32 of these the towels were of paper. In one plant old sugar bags were distributed to be used as towels.

In 25 establishments no towels were supplied. Some of these 25 came under the law applying to establishments where food is handled which requires that—

* * * Lavatories and wash rooms shall be adjacent to toilet room and shall be maintained in a sanitary condition. Operatives, employees, clerks, and all persons who handle the material from which food is prepared or the finished product, before beginning work or after visiting toilet or toilets, shall wash their hands and arms thoroughly in clean water.¹²

In spite of the provisions of this law requiring "thorough" washing, 3 candy factories, 3 food-manufacturing establishments, and 4 restaurants did not supply soap; 7 candy factories, 8 food factories, and 9 restaurants supplied cold water only; and 1 candy factory, 3 food-manufacturing establishments, and 3 restaurants supplied no towels, while 13 candy factories, 17 food factories, and 12 restaurants supplied only a common towel.

Toilets.

There are laws in Iowa in regard to toilets in two classes of establishments where women may be employed. The first quoted below is in that part of the code devoted to criminal procedure; the second is in that part devoted to public laws, this particular section coming under the police powers of the State.

Every manufacturing establishment, workshop, or hotel in which five or more persons are employed shall be provided with a sufficient number of water-closets, earth closets, or privies for the reasonable use of persons employed therein, which

¹¹ Acts of 1902, chapter 149; Amended Acts of 1911, chapter 171.

¹² Acts of 1913, chapter 201, section 5.

shall be properly screened and ventilated and kept at all times in a clean condition, and free from all obscene writing or marking; and such water-closets or privies shall be supplied in the proportion of at least 1 to 20 employees; and if women or girls are employed in such establishments, the water-closets, earth closets, or privies used by them shall have separate approaches and be separate and apart from those used by the men.¹³

It shall be the duty of the commissioner of the bureau of labor of the State and the mayor and chief of police of every city and town to enforce the provisions of the foregoing sections.¹⁴

Every building, room, basement, or cellar occupied or used for the preparation, manufacture, packing, canning, sale, or distribution of food, shall have convenient toilet or toilet rooms separate and apart from room or rooms where the process of production, manufacture, packing, canning, selling, or distribution is conducted. The floors of such toilet rooms shall be cement, tile, wood, brick, or other nonabsorbent material and shall be washed and scoured daily. Such toilet or toilets shall be furnished with separate ventilating flues or pipes, discharging into soil pipes, or on the outside of the building in which they are situated. Lavatories and wash rooms shall be adjacent to toilet rooms and shall be maintained in a sanitary condition. Operatives, employees, clerks, and all persons who handle the material from which food is prepared or the finished product, before beginning work or after visiting toilet or toilets, shall wash their hands and arms thoroughly in clean water.¹⁵

Violation of these laws often can not be adjudged because of certain weaknesses and ambiguities in their working. There is only one woman inspector for the entire State of Iowa and as her duties include enforcement of the child labor law it is a physical impossibility for her to cover the entire State of Iowa.

Iowa requires that toilets shall be "screened and ventilated and kept at all times in a clean condition," but does not define these provisions for the instruction of the employers. While these requirements in the first law are for manufacturing establishments, workshops, and hotels, such large woman-employing plants as mercantile establishments are not covered by the law.

Iowa has special and exacting requirements in toilet and wash-room facilities and in cleanliness on the part of employees, for places where food is manufactured, but fails to demand separate facilities for women.

However, all of these provisions are as often neglected as observed, especially in the smaller establishments which are numerous in Iowa. There are plants which not only meet the requirements of the law but set up their own higher standards; require conformity from the employee, and make the cleaning of the toilets the definite job of the janitor or hire a matron to care for the facilities. But too often the toilet is a neglected part of the factory, insanitary, not kept clean at any time, or with the cleaning left to the employees themselves.

In many cases the toilet compartments investigated were not provided with doors, nor properly screened from the workrooms or

¹³ Acts of 1902, chapter 149; amended 1911, chapter 171.

¹⁴ Acts of 1902, chapter 149, section 4.

¹⁵ Acts of 1913, chapter 201, section 5.

from the public passageway or stairway. Several toilets were found entirely out of condition. Often they were dark and without outside ventilation, or, what is as bad, ventilated into the workroom, which in one instance was a kitchen.

The Iowa law on toilets in manufacturing establishments is definite as to the maximum number of employees per seat, but many of the toilets were used by more than the statutory number.

Three establishments had no toilets on the premises for 15 women employees. One of these was a bakery which had been 12 years without one, and whose women employees were obliged to walk a block and a half to the nearest public rest room. The two others were a retail candy store and a lunch room where the toilets were in the same building but on another floor so that the employees had to use the public elevator to reach them.

Four establishments—one bakery and three restaurants—made arrangements for their 26 women employees to use toilet facilities with families in the same buildings.

Twelve establishments, employing 60 women, provided toilets to be used by both men and women. Five of these establishments were restaurants or cafés where separate toilets for men and women are not required by law. The fact that in two of the five cases the women sought places elsewhere shows that this law does not attain the standard of decency which some of the women employees demand for themselves. Except for the five restaurants the failure to provide separate toilets for men and women was a direct violation of the law.

In nine establishments 235 women employees used the toilets designated for the public. Five of these establishments were hotels and three were restaurants.

In 52 establishments (26 per cent of those which provided separate toilets for women) each of the toilets was used by 21 women or more.

One of these establishments was a confectionery store and 10 others were mercantile establishments, which, through a weakness in the law, can not be forced to maintain the standard set for manufacturing establishments and hotels. The other 41 establishments did come under the law but, apparently through the lack of sufficient inspectional force to cover the industries at frequent intervals, had not been brought up to the acknowledged proper standard.

More than 35 women to each toilet was the ratio found in 17 establishments, in seven of which only one toilet was supplied for more than 60 women.

Screening of toilets.

The first law quoted states that the toilets shall be "properly screened," and if women or girls are employed "the water closets, earth closets, or privies used by them shall have separate approaches

and be separate and apart from those used by the men." No further definition of these clauses exists in the law.

For the purpose of this study toilets are reported as inadequately screened when—

(1) They were located in a workroom or on a stairway landing, the partitions of which did not reach to the ceiling, or which were not inclosed overhead.

(2) The approach to them had no screen or there was no screen inside the door before the separate compartments. (These toilets were generally located in the workroom where both men and women were at work. When the door was opened the occupant could be seen.)

(3) There was no partition between the seats.

(4) Having partitions between the seats, they had no door to the front of the partitions.

Using these standards there were found 77 toilets inadequately and 143 adequately screened. In other words, 35 per cent failed to screen adequately, if the State law can be interpreted according to the above standards.

PART II.

INDUSTRIAL OPPORTUNITIES AND TRAINING.

The industrial section of the Iowa survey portrays the occupational surroundings and hours of labor of over 22,000 employees in the principal industries of the State. It shows the need of hour legislation and of sanitary and safety measures to protect health and to provide the essentials of physical comfort.

In the pages following are listed the actual occupations of the workers included in the survey and the distribution of women workers in trade and industry. The material presented shows what system of instruction existed in the various plants and what industrial training was desired by employers. It also shows what opportunities for industrial training were available in the State at the time of this investigation.

Because opportunities for vocational training for women are known to be so limited, and believing that women should find opportunities for service in any line of work which they are physically able to perform, provided the surroundings are adequately regulated to conserve health and energy, this part of the Iowa survey attempts to throw some light upon their occupations.

No special investigation was made to cover this subject. The occupations of the workers employed in each plant were called for on the regular schedule used by the Women's Bureau. The opinions of the employers on the type of vocational training desired were secured during the course of the interview preliminary to the inspection of a plant. In the following pages these opinions are quoted.

The Women's Bureau is not laying out a program of vocational training for women. That is not within its province. It is, however, always alert to emphasize the needs of the women workers in industry, and for this reason the material on industrial opportunities and training is presented.

Occupational groups in Iowa.

In each establishment investigated during the course of this survey the occupations of the workers, both men and women, were listed. Among the workers listed were those who were engaged not only in "manufacturing" raw materials into a finished product, but also those who were purchasing, handling, and caring for raw materials, stock,

and supplies; those who were packing and shipping as well as those who were selling or promoting the sale of the product; those who were supervising the processes of production and the welfare of the workers in the workroom as well as those who were recording the volume, cost, profit, and loss of the business in the office; those who were operating heat, light, and power equipment for the plant, and those who were engaged in its upkeep, maintenance, and repair. Finally, there was a small group of workers preparing and serving food in employees' lunchrooms.¹

In general terms it may be said that each of these service groups constitutes one of the various "departments" of the establishment. Plant equipment is arranged, work is routed, and even pay-roll lists of employees are made up according to these departments of service, and therefore the men and women included in the Iowa survey are classified here in a "departmental table," and the occupations found in the different departments are indicated in the text. From the point of view of industrial opportunities and training this classification results in a clearer presentation of the vocational needs of the workers studied.

¹ In stores all of these occupational groups are common, including manufacturing. Eight per cent of store employees were employed in manufacturing departments or "workrooms." In hotels, restaurants, and laundries, for the purposes of this report, it has been considered that services were rendered rather than that products were manufactured. Even hotels and restaurants had all departments except packing and shipping, although these would certainly have appeared in any restaurant had outside catering been done.

TABLE 8.—Number of employees in each industry and in the departments within the industry, by sex.

Department and sex.	Total number of employees.	Stores.			Restaurants and cafes.	Hotels.	Food manufacturing.				Candy manufacturing.	
		Department.	Dry goods.	5-cent to 50-cent.			Bread.	Crackers.	Cereals.	Miscellaneous food.	Factories.	Shops and refectories.
Number of firms visited (223).....		6	13	9	14	7	9	6	5	4	17	6
Number of employees: ¹												
Men.....	11,644	177	592	48	69	166	156	404	2,188	499	472	38
Women.....	11,603	757	1,567	309	97	242	115	525	648	183	1,184	68
Stock and supply:												
Men.....	634	3	45	17		3	2	12	156	109	4	
Women.....	145	4	33						1			
Manufacturing:												
Men.....	6,426	2	43		19	55	88	189	711	171	237	13
Women.....	5,278	47	172		23	39	64	275	13	60	763	18
Container manufacturing:												
Men.....	218							17	184	8	2	
Women.....	108							17	75	2		
Packing:												
Men.....	582						1	13	454	31		
Women.....	2,537	30	98				5	165	522	93	355	
Shipping:												
Men.....	832	31	44	1			42	64	219	36	85	
Women.....	12	1	1					4			2	
Supervision:												
Men.....	801	40	89	23	18	20	10	15	105	38	40	6
Women.....	236	23	66	7	11	12	2	10		5	12	2
Office—clerical:												
Men (not executive).....	541	12	36			2	1	35	49	17	20	
Women (not executive).....	1,031	74	202	15		6	10	46	33	16	51	
Sales:												
Men.....	703	51	256	3	30	62	6	17	4	9	49	19
Women.....	2,157	572	964	287	63	165	34					48
Operating, or heat, light, and power service:												
Men.....	269	4	9			9		21	76	21	15	
Women.....												
Maintenance and repair:												
Men.....	612	34	40	4	2	15	6	21	230	51	20	
Women.....	77	6	31			20		5	4	1	1	
Employees' lunch room:												
Men.....	22							3		6		
Women.....												
Miscellaneous work:												
Men.....	26									8		

¹ The numbers of employees listed in the various classifications in this table vary somewhat from the numbers in similar groupings in the tables in the first section of this report. These variations are explained by the fact that while information as to the total number of persons employed was given to the agent by the manager in the office of each establishment visited, the number of persons in each occupation was given to the agent by the foremen in the different departments when the inspection was being made. Naturally the figures given by the foremen did not always tally with those given in the office, especially as the latter were quoted from memory rather than from pay-roll records.

For clearer occupational groupings the industrial classification in this table is slightly different from that used in former tables. The following are the chief alterations which have been made: (1) Furniture, which was classed as miscellaneous manufacturing in earlier tables, is here classed as a wood product, and with it are included three cigar box firms. The three paper box firms that were classed in other tables with three cigar box firms are here included with miscellaneous manufacturing, as are also two basket firms. (2) It seemed equally desirable, for the same purpose, to group with food manufacturing all bakeries manufacturing bread. This removes from restaurants three firms which served lunches as well as ran regular bakeries. (3) Similarly, candy shops and refectories have been separated from restaurants because candy is manufactured in these small establishments. This rearrangement distinguishes three important trades, woodworking, baking, and candy making, and leaves the restaurants in the occupational table as only those firms in which food was prepared, served and sold, without running special lines such as bread or candy manufacturing.

TABLE 8.—Number of employees in each industry and in the departments within the industry, by sex—Continued.

Department and sex.	Clothing manufacturing.					Button manufacturing.	Laundries.	Cigar manufacturing.	Wood products manufacturing.	Metal products manufacturing.	Printing and publishing.	Manufacture of proprietary articles.	Miscellaneous manufacturing.
	Overalls and work clothes.	Cotton garments.	Leather gloves.	Shoes.	Miscellaneous clothing.								
Number of firms visited (223).....	10	5	5	4	7	10	29	11	7	8	7	4	20
Number of employees: ¹													
Men.....	170	88	102	228	123	857	376	248	1,201	2,076	622	76	698
Women.....	755	192	155	225	381	1,428	384	658	305	186	568	185	486
Stock and supply:													
Men.....	2	1	10	.....	.....	31	10	.....	14	205	2	1	7
Women.....	.....	1	3	.....	.....	99	4	.....	.....	.....	.....	.....	.....
Manufacturing:													
Men.....	51	10	58	167	44	645	140	207	1,000	1,593	416	22	345
Women.....	687	157	118	199	349	458	160	548	254	93	382	.....	399
Container manufacturing:													
Men.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	5
Women.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	1
Packing:													
Men.....	5	.....	.....	3	3	21	3	2	20	.....	.....	27	2
Women.....	9	3	.....	3	.....	930	51	95	9	6	27	119	17
Shipping:													
Men.....	11	10	4	11	14	8	110	8	39	45	26	2	22
Women.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	1
Supervision:													
Men.....	20	10	15	20	9	68	58	25	31	80	18	5	38
Women.....	20	7	2	2	3	17	10	2	5	4	4	2	8
Office—Clerical:													
Men (not executive).....	22	11	10	6	10	10	4	4	67	84	74	11	56
Women (not executive).....	34	24	32	20	21	23	63	9	35	81	128	52	56
Sales:													
Men.....	47	29	.....	17	.....	44	4	.....	.....	3	45	2	6
Women.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	.....	.....
Operating, or heat, light, and power service:													
Men.....	1	3	.....	2	6	10	27	.....	18	20	21	2	4
Women.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maintenance and repair:													
Men.....	11	12	4	5	37	20	20	2	12	46	7	4	9
Women.....	4	.....	.....	.....	3	.....	1	.....	1	.....	.....	.....	.....
Employees' lunch room:													
Women.....	1	.....	.....	.....	3	.....	.....	.....	1	1	3	.....	4
Miscellaneous work:													
Men.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	11	.....	4

¹ See footnote on p. 55.

The workers who were employed in the 223 trade and industrial establishments surveyed were found in 11 departments of service, as shown in the foregoing table. Of the 23,247 men and women whose occupations were listed, 11,704 (50.3 per cent) were employed in manufacturing departments; 3,445 (14.8 per cent) were engaged in packing or putting up the product and by-products, including making the containers, for shipment; 2,860 (12.3 per cent) were engaged in sales departments; 1,572 (6.8 per cent) were in clerical or office occupations; 1,037 (4.5 per cent) were in supervisory positions; 3.6 per cent were in shipping departments; 3.4 per cent were in the stock and supply departments; while 3 per cent were in maintenance and

1 per cent in operating departments. In some of these occupational groups women were equally represented with men and in others they were not, but it is noticeable that women were employed in every department except operating, i. e., heat, light, and power service.

Manufacturing or production departments.

By all odds manufacturing occupations exceeded other departmental types of service in numerical importance, as one-half of all the workers were engaged in actual production processes. Forty-five per cent of the persons employed in these occupations were women. It is interesting to note that these women, instead of holding the traditional jobs of dressmaker, cook, waitress, matron, scrub-woman, nurse, and housekeeper, were holding such manufacturing occupations as mechanic, leather glove and shoe cutter, machine presser of woolen garments, saw operator, desk assembler, electric welder, assembler of metal products, printing compositor, dye cutter and stamper. Managers declared that women employees had made good in these unusual occupations and would be retained in them. In addition to these less common occupations there were more than 500 women power-machine stitchers and more than 500 machine feeders and tenders, besides an undetermined number of hand workers in manufacturing departments.

Packing and shipping departments.

Packing department occupations are very highly specialized, the majority being mechanical in nature and rarely requiring more than a day or a week to learn. More than 13 per cent of the employees were engaged in this work, which includes such monotonous occupations as filling boxes, bottles, and bags, covering, capping, corking, closing, wrapping, folding, bundling, labeling, banding, stamping, inspecting, sorting, checking, weighing, washing, sacking, stapling, and incasing. These packing processes are very closely connected with the departments that manufacture the containers for the products (in which 1.4 per cent of the workers were employed) and with those which ship out the products at wholesale (in which were 3.6 per cent of the workers).

Both men and women were employed in packing occupations, women far outnumbering the men. The latter, however, did all the heavier work, involving the lifting of heavy boxes or barrels. In the shipping department, where packing in outside cartons or boxes, crating, trucking, storing, loading, driving, and delivery are the services performed, chiefly men were employed, but women were keeping the clerical records and were assistants to shippers or shipping clerks.

Office, clerical, and sales departments.

The office and clerical departments included 29 different occupations in which there were practically twice as many women as men. The chief occupations listed in these departments were those of book-keeper, office-clerical, factory-clerical, telephone girl, timekeeper, recording-cashier, postal clerk, editorial clerk, cost clerk, and office manager.

Sales departments were found in all trades and industries and included 53 different occupations. In these departments there were more than three times as many women as men. The occupations were chiefly those of salesman and saleswoman, sales manager, advertising composer and clerk, and window trimmer. With these have been listed also the candy and soda clerks in lunch shops, together with waiters, waitresses, maids, cashiers, porters, and telephone girls in hotels and restaurants, all of whom were regarded as selling either food or personal service for their employers.

Supervision departments.

Departments of supervision in various plants included persons in the following occupations: Foreman, forewoman, subforeman, superintendent, manager, assistant manager, overseer, department manager, floorwalker, floor lady, chef, head waiter, head waitress, and hotel housekeeper. With these occupations, which are directly connected with supervision of the processes of production, are classified those positions that are sometimes defined as welfare supervision, such as employment manager, personnel director, matron, industrial nurse, welfare secretary, industrial instructor, and educational director. More than one-fifth of the supervisory positions in the 223 firms visited in Iowa were held by women, who numbered 87 forewomen (some in every industry of the survey), four assistant forewomen, 14 managers of restaurants, bakeries, and candy shops, 3 employment and personnel managers, 69 department managers, and 12 floor ladies in stores, six instructors and educational directors, 6 industrial nurses, 23 matrons, 9 hotel housekeepers, and 3 restaurant head waitresses—a total of 236 women. Eight hundred and one men were employed in the same or other supervisory occupations.

Stock and supply departments.

More than 18 per cent of the employees in stock and supply departments were women, who were chiefly in department and dry goods stores, in firms manufacturing clothing and cigars, and in laundries. The laundry occupations held chiefly by women were stock clerk, receiving clerk, weigh-out clerk, laundry marker, and lister. Other occupations in the stock and supply departments were those of stockman, stock keeper, steward, storeman, storageman, warehouseman, stock handler, and shell sorter.

Operating and maintenance and repair departments.

Operating departments in which no women were represented in the Iowa survey include such occupations as fireman, ashman, water tender, coal passer, electrician, engineer, oiler, crane operator, and cupola tender. All of these occupations, whether heavy or technical work, have to do with the heating, lighting, and power-machine operating in a plant.

Maintenance and repair departments, like operating departments, were chiefly a kingdom for men, with occupations for master mechanics, machinists, tanners, carpenters, painters, cabinet workers, millwrights, boiler repairers, plumbers, tool men, and repair men, all in the permanent employ of a firm, together with elevator operators, watchmen, janitors, porters, housemen, sweepers, and cleaners. The women in this department were cleaners, scrub women, janitresses, and elevator operators, and formed 11 per cent of the maintenance and repair group.

Systems of instruction in Iowa plants.

Whether or not any of the occupations described in the foregoing section are new to women as a sex, they are new to each individual woman entering them for the first time, and the system by which the worker is instructed in the duties and performance of her new job is of material importance to her success in the occupation.

In order to discover the facilities for instruction offered to this large group of women, employed in so many different occupations, each employer who was interviewed in the course of the survey was asked: "What is the system of instruction in your plant?" "What courses or schools of instruction do you know of that are an aid to your industry?" "Can the public schools render any service?" Constructive replies are here summarized.

Reports made by these employers indicate that in every trade and industry instruction was the responsibility of the person who directly supervised the room, the floor, or the department where groups of employees worked. Sometimes, however, this duty was not performed by the person directly supervising but was delegated to another who had more time or was more experienced.

Foremen and forewomen as instructors.

It was reported by 55 per cent of the firms that instruction to beginners was given by foremen and forewomen in factories, by floor ladies and department managers in stores, by chefs and first cooks in restaurant kitchens, and by housekeepers in hotels.

Restaurants, hotels, and light-lunch or candy shops and refectories reported less provision for instruction than did factories and stores, probably because the occupations in these establishments were domestic in character and were held by women who had had experience in housework.

One hotel reported that not any instruction was given and the manager claimed that his employees had been "too independent to be trained." In another establishment, a tent and awning factory, the manager had never considered the matter of instruction, and replied that he had no idea how his employees learned, although the firm had employed people without experience in operating power sewing machines. He hazarded the guess that "they just come in and go to it."

In some cases where foremen were unable to assume full responsibility or were occupied with duties relating to production, instruction was given to beginners by persons in higher supervisory positions than those of foreman and department manager. In these cases a factory superintendent or the manager of the plant himself instructed beginners.

Special instructors.

Only 5 per cent of the firms employed special people to devote their time to the instruction of workers and beginners. A department store had an "instructor" who taught two classes daily in English and expression, psychology, salesmanship, and business economics. One large dry goods store had an "educational director" giving academic work (arithmetic and penmanship) as needed, and short courses on such merchandise as textiles and glassware, as well as salesmanship and health talks. Still another dry goods store had a "personnel secretary" who instructed beginners in matters of general policy of the store but conducted no classes. One department store planned to have an "educational director" within a short time for regular salesmanship classes and grammar school work for those deficient in elementary education, and would allow from an hour to an hour and a half daily for instruction. The manager of a 5-to-50-cent store said he would be glad to have public schools offer in his establishment, for a half hour daily, instruction in business English, rudiments of courtesy, fundamentals of arithmetic and writing, cash register handling, and general salesmanship.

Among the industries other than mercantile one printing firm had a "personnel director" who gave new employees a book of instructions upon entrance and then followed them up periodically and held conferences with their supervisors. Another firm, producing a proprietary medicine, had a subsidiary department for printing labels. In this department was an instructor selected by his trade-union but paid by the company. A furniture shop had a short biweekly lecture course in "better letters" for office employees; also a foremanship course which was given at intervals. The manager of this furniture shop spoke with appreciation of a public school continuation class, in which four of his employees were enrolled, meeting from 1 to 5 o'clock daily and offering instruction in academic

work, computing, judging lumber, woodworking, and cabinet work. A shoe factory had a full-time instructor in the cutting room and foremen who instructed in the other departments.

Exceptional workers as instructors.

In 8 per cent of the firms there appeared to be individuals whose principal duty was to instruct others, though they were hired not as instructors but as operators. It may be remarked in passing that an "exceptional" worker may or may not be a good teacher and may be unwilling to teach a newcomer, so that this system does not guarantee satisfactory instruction to the beginner. One hosiery mill had a looper and a knitter who "work on machines when not teaching" and another had "certain workers who instruct part of the time, as needed;" a leather-glove factory had "an operator who does nothing but teach," and another had "one girl who is taken off regular work and paid as a time worker to train new girls, as needed;" one overall factory had "a woman who is detailed as an instructor" and another had several girl operators who also kept track of the exact work done by the workers on "instructor's record cards;" a cracker factory had "an instructor for each group of 6 to 10 girls, also a forelady who has supervision over all;" a cotton-glove factory had "certain workers in each department who act as instructors, and all processes are taught to each worker as the number of employees needed on any one operation varies;" a candy factory had "one girl who understands all lines of work and acts as instructor," another had "a woman who does practically nothing but train new girls, also two foreladies who instruct," and still another candy factory, when a number of new workers came in at one time, had "workers who know how to tell them what to do, and who thus assist the forelady."

One furniture firm employed a "helper" on many of the operations, and planned to have at any one time, for each operation, a helper, an operator, and a third worker who had progressed from the operation but was still available, thus establishing the "under-study" system.

Other instruction.

Four firms gave printed instructions to new employees. A store superintendent gave a leaflet to applicants, with the names of department managers and those who would instruct in store policies, check making, and merchandise selling. One 5-to-50-cent store had for its women employees a copyrighted book of instructions in store policies, and one printing and publishing firm also used a book of instructions for beginners. A cracker company put out a set of instructions on health, behavior, and duties of employees, which was revised periodically, framed, and hung on the wall in each department.

Regular group meetings of a whole or a part of the force, for talks on salesmanship and welfare, and occasionally special talks or lectures by some one from outside the firm, were reported by two dry goods stores and one laundry.

One of the hosiery mills was developing its own course of instruction for a future vestibule school, to be fitted up with at least a looping and a knitting machine, and every job in the plant was being analyzed as a basis for instruction. In this mill the "service director" sometimes conducted a number of workers through the entire plant, explaining the relation of the various operations in the order of production.

Foreman training courses were reported in two firms making wood products and beet sugar. One had a lecture course twice a week on "modern production;" the other had a course of study used by sugar schools and classes and a number of plants in the sugar industry in different parts of the country. This course was given by the manager to his foremen during the long slack season. "They can't know too much," said he. A dry goods firm said it was customary for department managers to meet every Wednesday morning to discuss anything of general interest to the store and thus get training for store management and the retail business.

Instruction neglected.

From this summary of the situation it is beyond question that in the majority of firms instruction was a definite responsibility of foremen, forewomen, department managers, special "instructors," or exceptional operators who devoted a major share of their time to this work. In one-fifth (45) of the firms, however, the report on the system of instruction was as follows: "The girls help each other," "They quickly learn by watching others," "New girls are assigned to departments or to workers who need help and they tell her what to do," "They observe and get suggestions from experienced workers."

At first one might infer that the work was too simple to need instruction, but these reports came from department, dry goods, and notion stores, the wood and metal trades, candy factories, and medicine and drug firms—the very types of industry previously quoted as making definite provision for instruction.

Public continuation schools.

Even though new employees in some firms are expected to go to work without instruction, there is at least one promising feature in this situation, which is that instruction is being given in public continuation schools to help untrained minors to make good on their jobs. The Iowa continuation-school law has been in effect since

1919.³ Continuation-school vocational courses were mentioned by several managers of establishments visited, especially in Des Moines and Clinton. Nearly 300 continuation-school children, 14 and 15 years of age, were found employed in the firms visited, chiefly in stores and clothing factories, but also in all other types of industry except restaurants, hotels, and the metal trades. Some of the schools are attempting only an extension and conservation of general education, but are thereby rendering a much needed service to juvenile employees who are deficient in fundamentals. Others are also attempting technical and related vocational instruction on a generous scale, as was reported by the employers of the pupils.

The 300 children listed in this survey, however, comprised less than 1.5 per cent of the total number of employees, and for nine-tenths of the workers the continuation schools as yet scarcely touch the problem of minor and adult instruction.

TRAINING SUGGESTED BY MANAGERS.

Trade and industrial training.

When managers were asked whether the public schools could be of any service to their industry a variety of suggestions were forthcoming. A department store manager said that a six-months business course would be of advantage; the manager of a metal firm which, because of the variety of the products manufactured, requires its workers to know many operations, would like a machinists' course; and in another metal firm in which there was much specialization it was thought that foreman training was possible. In furniture making certain firms agreed that some progress from simple to more skilled work was possible, and others said that a course might be given in hand carving, tool making, and sharpening. A printing firm said that courses in printing and ruling would be very desirable, and two other firms with subsidiary printing departments thought their compositors would be more efficient if they had school training. Training in operating power sewing machines was desired by an employer in a fur-garment factory. In two overall factories it was said that girls often wanted to learn the different operations, but could be taught new work only when there was a vacancy to be filled.

³ Acts of 1919, chapter 94, sections 1 and 3: Section 1. The board of directors of any organized school district may establish and maintain part-time schools, departments, or classes in aid of vocational and other education for minors between the ages of fourteen (14) and sixteen (16) years (1) holding work certificates, or (2) who have not completed the eighth grade and are employed in a "store or mercantile establishment" where eight (8) or a less number of persons are employed or in "establishments or occupations which are owned or operated by their own parents," or (3) who have completed the eighth grade, organize such a part-time school, department, or class whenever there are fifteen (15) minors as defined above, resident in the district. The courses of study of such part-time schools, departments, or classes may include "any subject given to enlarge the civic or vocational intelligence" of the pupils attending. Sec. 3. Such part-time school departments or classes for the attendance of children over fourteen (14) and under sixteen (16) years of age shall be organized in accordance with standards established by the State board for vocational education and shall provide for not less than eight (8) hours of instruction per week during the length of term for which public schools are established in the district. Such part-time schools, departments, or classes shall be held between the hours of eight (8) o'clock a. m. and six (6) o'clock p. m.

One clothing manufacturer thought any vocational course would be helpful, "as it would give dignity to factory work, since most girls prefer to work in stores for less money than in a factory because a factory girl is looked down upon."

Leather glove and shoe factories favored vocational classes for their industries "with comprehensive and detailed lessons, including a good course in machinery, since a good operator should know how to take apart and set up his own machine." Four pearl-button firms thought industrial chemistry and foremanship could be taught, even though none of the specialized operations in button making required more than a week to learn and instruction in these would not be worth while.

Laundries suggested courses in water analysis, "chemicals," filtering, textiles, safety, personal hygiene, dyeing, cleaning, and spotting, and one manager believed that every process in the laundry, not simply washing, should be taught. One laundryman was on the school board of his town, where intermediate or junior high schools had special laundry equipment and a course of laundry instruction in addition to the regular sewing course, as part of the study of "care of the clothing."⁴

One laundry manager said that he had paid one girl an initial wage of 50 cents a day higher than that of another employer in town (\$12 a week instead of \$9) because she had learned to do the laundry in her own home without assistance and demonstrated at her initial trial in the plant that she "used her brains" in sorting, marking, and listing clothes. This manager had previously tried to break in three girls, apparently capable, but who had failed, he said, because they had never done laundry work at home and were not quick to learn in the power laundry. Incidentally this suggests that home economics courses actually function in certain domestic industries.

Courses in foremanship were desired by several food factories, although they showed less interest in home economics courses as a preparation for the work to be done in their plants. The manager of a cracker factory said he would be glad to have classes in the plant if the material for foreman training could be worked up on such subjects as standards for industrial housing, principles of employment management, job analysis, safety instruction, and service-record keeping. Two other food manufacturing establishments

⁴ This intermediate course in laundering was offered in alternate weeks, alternate semesters, in the seventh, eighth, and ninth grades and covered the following subjects: Uniforms or proper dress for laundry work; household alkalis, borax, soda, lye, ammonia, Javelle water; removal of meat and fruit stains from cotton goods, and oil, rust, and beverage stains from linen goods; laundering table linen; removal of medicine and other stains from bed linen; laundering embroidered linens, white and colored; removal of stains and laundering of body linen; making of starch and soap; laundering lingerie; laundering colored clothes; studies and tests in bluing; laundering shirts, woolens, and silk garments. The details of this course called for practical work at every lesson in the laundry of a model suite. Here the laundry room was as large as either the cooking or the sewing room, and was as well equipped. (Syllabus prepared by Maud M. Firth, home economics supervisor, Frank L. Smart, superintendent, Davenport.)

thought that foreman training was possible, although the general work in cereals was so simple that it could be learned in a few days.

One hotel manager thought schools should teach home economics so that girls would know their jobs better, and a candy superintendent thought a technical course on the cooking and mixing of candy, if combined with practical experience, would be of value to young men who ordinarily require at least a year to learn the trade. Training for chocolate dipping was suggested by two firms, as it requires from two weeks to two months for girls to learn this occupation and a longer time for them to acquire speed in it.

Sources of training known to employers.

When asked if they knew of courses of vocational instruction which were being offered in Iowa or elsewhere, some employers mentioned Y. M. C. A. classes in salesmanship; courses for bakers at Iowa State College and at Dunwoody Institute, Minneapolis; courses in laundering at Ohio Mechanics' Institute, Cincinnati, and at Dunwoody; laundry research at Mellon Institute, Pittsburgh; a new course for oat millers at Dunwoody; and the proposed new schools of research and practical demonstration for laundering and for training hotel cooks in Chicago. A class in leather-glove making in a New York trade school was also mentioned as having been visited by an employer. Many of these courses have the moral and financial support of employers, who sometimes guarantee the institutions offering them against a deficit in funds and who send their exceptional employees to attend.

TRADE EXTENSION INSTRUCTION BY THE STATE.

Training of adult males.

In the vocational training of adults Iowa State College of Agriculture and Mechanic Arts (Ames) is playing an important part.⁵ This institution, entirely apart from the University of Iowa at Iowa City, is reaching directly at least three industrial groups, (1) unskilled or semiskilled operatives, (2) skilled operatives and supervisors, and (3) experts, managers, and superintendents. No fees are required in connection with any of these courses except those conducted by correspondence.

Training for experts, managers, and superintendents.

Experts, managers, and superintendents already established in business are being reached annually by means of industrial confer-

⁵ The following are the regular collegiate departments of instruction at Ames: Agriculture and agricultural economics, education, and journalism; animal husbandry; engineering—agricultural, architectural, business, ceramic, chemical, civil, electrical, mechanical, and mining; bacteriology and hygiene; botany, chemistry, dairying, economic science; English; farm crops and soils; farm management; forestry; genetics; geology; history; home economics; horticulture; industrial science; landscape architecture; library; mathematics; military science and tactics; modern language; music; physical education and training; physics; psychology; public speaking; rural structure design; trades and industry; veterinary anatomy, medicine, pathology, physiology, surgery, theory and practice; vocational education; zoology. (From General Catalogue, Iowa State College of Agriculture and Mechanic Arts, 1920-1921, p. 62.)

ences, conventions, and short four or five day courses at the college at Ames, while those who are unable to attend at Ames are being reached by short courses lasting from three to five days, technical institutes, and exhibits at various points throughout the State.

1. *The bakers' short course.*—Employers connected with the Iowa Master Bakers' Association reported that they had attended, at Ames, a course of lectures, demonstrations, and laboratory work, occupying four days of their annual convention. This bakers' course was first given in 1917 and it had 60 members enrolled in 1920. Its program for January, 1921, included two sessions devoted to the inspection of a flour mill, a mill laboratory, and a bakery. Other sessions were held in a hotel in Des Moines for the consideration of such subjects as the mechanical operation of a bake shop, with special reference to heat, heat control, and fuels; baking materials, sugar, sugar substitutes, baking powder, etc.; flour milling, testing, and experimental baking; bacteria, yeasts, and molds, and their relation to the baking industry; sweet goods demonstrations; and discussions.

2. *The bottlers' short course.*—In January 1921, a new course was given at Des Moines for the Iowa Bottlers' Association. This bottlers' course consisted of lectures and demonstrations by experts from Ames and elsewhere on bacteria, yeasts, and molds and their relation to the bottling industry; composition of natural waters and methods of purification for use in bottling; bottling plant efficiency; sanitation in the bottling plant; some chemical and bacteriological problems in the soda water industry; results of investigations made for the Nebraska Bottlers' Association; round-table discussion of water problems; scientific flavoring; round-table discussion of flavoring problems; specific gravity measurements for the bottler.

3. *The canners' short course.*—The canners' five-day course for superintendents and managers from Iowa and surrounding States with a recent attendance at Ames of 111 members, provided demonstration, discussion, and detailed individual instruction on the Continental closing machine; seaming head adjustment; seams and seam inspection; the corncutter, its construction, operation, care, and adjustments; husking and washing corn; husking corn by the piece-work plan; temperature controls, operation, and care; cooling and its importance in canning corn; tomato fertilizers; thermophilic bacteria; curing sweet-corn seed; problems of the corn grower; problems of the corn canner; criticisms and comparison of Iowa packs; production of tomatoes; bacteria in spoilage; inspection of the college machine shops and power plant; demonstration of oxyacetylene welding.

The Iowa-Nebraska Canners' Association and the inspection service of the National Canners' Association cooperated with Iowa College in presenting this program. While specially intended for superintendents and foremen it was open to anyone interested in the commercial canning of food products.

4. *The electric metermen's short course.*—A rather unusual four-day course for electric metermen has been conducted at Ames for the last three years with an attendance for the current year of 70. With possibilities for anyone to specialize according to his own needs and experience the following were the subjects covered: The fundamental principles upon which meters operate; the function of mechanical and electrical features used in the construction of meters; the installation, wiring, testing, and adjusting of meters for single phase and polyphase service; adjustments for light and full load; general assembling and repairs in connection with maintenance; special problems brought in by metermen. Experts and practical men gave lectures, demonstrations, and laboratory work and individual instruction for eight hours a day. Manufacturers displayed samples of the latest types of meters and meter equipment

Training for semiskilled and unskilled workers.

In addition to the groups of industrial experts, managers, and superintendents reached by these annual conventions and short courses, a second industrial group is being reached by evening classes which meet once or twice a week for a period of two to six months depending upon the length of the course.

1. *Evening classes.*—Unit courses in mechanical drawing, map drawing, builders' drawing, sheet-metal drawing, shop mathematics, strength of materials, the steam boiler, heating and ventilating, elements of mechanics, elements of structural engineering, and the gas engine are offered for semiskilled operatives. These classes are conducted in industrial centers of the State, wherever a sufficient number of persons are interested, and are usually run in cooperation with local boards of education.

2. *Correspondence courses.*—For those workers who are beyond the reach of the industrial centers in which the above evening courses are offered, Iowa State College provides correspondence courses of 10 to 20 lessons, general enrollment requirements being an eighth-grade education and an age of at least 17 years. The charge for correspondence, instruction, textbooks, and stationery is 50 cents a lesson, but upon completion of any course 25 per cent of the cost is refunded to the student.

Training for skilled operators and supervisors.

A third industrial group—consisting of exceptionally successful operators, foremen, and supervisors, and including also teachers of manual training in schools—is being reached by industrial teacher-training classes. The courses are offered by Iowa State College in evening classes in cities where a sufficient number of members can be enrolled. Some of the work is offered also by correspondence. The members may become teachers in the public vocational schools or special "instructors" in industrial establishments.

1. *Teacher training courses.*—There are 14 courses dealing with trade processes and related technical information. The following subjects are taught: English, technique of teaching trades; administration and organization of vocational education; trade analysis I and II; trade mathematics, trade drawing, trade science; technique of teaching related subjects; developing courses in related subjects; principles of industrial education and organization; methods of teaching trade science, mathematics, and drawing; supervised teaching courses I and II.

2. *Foreman training courses.*—A line of educational effort started only recently promises to be of as great importance as industrial teacher-training while reaching in part the same group of trade and industrial workers. This is the "managerial course for foremen" offered in Des Moines with an enrollment of 16 foremen from various types of industry. These courses attempt to develop the instructional material which the members most desire to receive after a preliminary conference over their problems and responsibilities.

Additional classes of this type are being carried in Mason City, where three groups are segregated according to industry—17 foremen from a meat-packing plant, 29 from the cement plants, and 17 from the brick, tile, sand, and gravel plants. At Marshalltown, 15 foremen from the locomotive repair shops are studying the problems of foremanship.

3. *Other courses for men.*—Short courses for engineers, automobile mechanics, firemen, and janitors have also been offered by the extension department of Iowa State College of Agriculture and Mechanic Arts, and new programs are being developed as rapidly as resources and technical information can be marshaled.

Training of adult females.

Short course in telephony.—Of special interest to this survey is the short course in telephony for women. This is the only course offered by the State college for training women supervisors in any industry in Iowa. The average annual attendance for the first five years has been 400 and the expected enrollment for 1921 is 600. Two and three day schools for telephone operators have been conducted for the past five years in 16 centers of the State and are planned for 17 centers in 1921.

The purpose of these schools is to teach standard methods of operating, both local and long-distance practice, and to afford an opportunity for operators of neighboring exchanges to become acquainted with each other. Demonstration switchboards and telephones are provided, and instruction has been given by the traveling chief operator of the Iowa Independent Telephone Association.

Correspondence course in telephony.—Similar to the evening classes and correspondence courses already listed as serving the needs of semiskilled men workers, a correspondence course is provided in

telephony "to meet the needs of women employees who are ambitious to occupy the positions of greater responsibility." The course comprises a thorough study of telephone material, plant construction, operation, and maintenance, only sufficient fundamental theory being introduced to insure an understanding of the reasons for existing practices and methods. Each of the nine subjects or units consists of 12 lessons and costs \$12, including textbooks. The subjects treated are: General science of telephony; applied mathematics; substation courses I and II; primary cable course; exchange aerial construction I and II; and central office equipment, courses I and II.

Women's limited share in industrial training.

Continuation schools, intermediate schools, senior high schools, and the State college constitute a four-link chain in education that holds the professional and industrial workers of the State together and State institutions whereby every trade and industrial worker may be reached are already provided.

Nevertheless the observer can not but be struck with the number of such opportunities offered to men in trade and industry and with the very limited share of attention that is being given to the vocational needs of women.

The excellent home-economics department of Iowa State College has fully 800 women students and graduate students enrolled, and it has been estimated that 70 per cent of the graduates become home economics teachers.

Extension work in home economics purposes to train people in home-making occupations, and the instruction offered in continuation and intermediate schools can function only incidentally for wage earning in laundry, food, and sewing trades where it reaches the group of girls who drop out of school and go to work. It can not be expected to serve the industrial needs of the increasingly large number of women employed in purely manufacturing occupations.

In view of the extensive utilization of women in the industries of Iowa it is apparent that very insufficient consideration has been given to the industrial training of the women workers of the State.

Only if vocational courses offered by the State College of Agriculture and Mechanic Arts are opened to women, only if new courses are developed to meet the needs of both men and women, in single and in mixed groups, and only if membership of women in these classes is actively recruited from places of employment, can this vocational instruction hope to be adequate to the needs of the women of the State—commendable as its present beginnings are. Larger appropriations for technical information service and a larger scheme for usefulness must be provided before the women in trade and industry in Iowa can come into their own in the field of industrial training.

APPENDIX.

TABLE I.—Number and per cent of employees working each specified number of weekly hours, by sex and industry.

NUMBER.

Industry.	Number of full-time employees reporting complete data. ¹		Employees whose weekly hours were—																			
			33 and under 44.		44 and under 46.		46 and under 48.		48 and under 50.		50 and under 52.		52 and under 54.		54 and under 56.		56 and under 58.		58 and under 60.		60 and over.	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Box and basket manufacturing.....	127	198	2	6	58	52	19	69	9	35	28	13	6	13	5	10	.....	.....	8	17	14	3
Button manufacturing.....	261	404	.....	.....	.....	.....	.....	.....	33	32	72	275	11	2	² 123	² 135	.....	.....	27	57	157	223
Candy manufacturing.....	567	945	3	7	.....	.....	11	12	102	183	160	286	70	171	16	6	21	.....	9	5	.....	.....
Cigar manufacturing.....	229	631	3	7	95	175	5	9	50	171	49	199	18	65	.....	.....	16	62	.....	.....	.....	.....
Clothing manufacturing.....	475	1,490	4	54	42	168	28	87	199	741	21	191	165	187	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous food manufacturing.....	1,547	1,184	4	8	296	306	22	5	81	165	48	67	151	154	345	226	116	205	.....	2	484	46
Miscellaneous manufacturing.....	4,968	1,267	284	45	³ 326	³ 178	142	121	355	277	⁴ 1,034	⁴ 314	6	10	2,744	313	.....	.....	.....	.....	.....	.....
General mercantile.....	819	2,246	1	36	.....	6	.....	4	619	1,477	146	519	32	103	.....	.....	12	101	1	.....	8	.....
5-and-10 cent stores.....	53	256	.....	1	.....	.....	.....	.....	11	146	4	30	26	73	12	6	.....	.....	.....	.....	.....	.....
Laundries.....	370	827	.....	.....	6	20	22	72	28	71	189	466	81	163	40	35	4	.....	.....	.....	.....	.....
Printing and publishing.....	558	561	.....	.....	82	262	.....	.....	476	299	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All industries ⁵	9,974	10,069	301	164	³ 905	³ 1,167	249	379	1,963	3,597	⁴ 1,751	⁴ 2,360	566	941	²³ 2,285	² 731	178	373	36	76	740	281

TABLE II.—Number and per cent of employees working each specified number of daily hours, by sex and industry.

NUMBER.

Industry.	Number of establishments and number of full-time employees reporting complete data. ¹			Establishments and employees whose daily hours were—																		
				6 and under 8.			8 and under 9.			9 and under 10.			10 and under 11.			11 and under 12.			12 and over.			
	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	Estab-lish-ments.	Male.	Fe-male.	
Box manufacturing.....	8	127	198	1	1	4	4	83	134	4	43	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Button manufacturing.....	10	261	464	.....	.....	.....	2	.....	16	8	116	295	5	145	153	.....	.....	.....	.....	.....	.....	.....
Candy manufacturing.....	18	567	939	3	3	7	6	70	93	13	300	560	5	194	279	.....	.....	.....	.....	.....	.....	.....
Cigar manufacturing.....	11	229	631	4	3	7	5	147	324	6	70	295	1	9	5	.....	.....	.....	.....	.....	.....	.....
Clothing manufacturing.....	24	425	1,402	3	5	28	17	137	566	14	283	808	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous food manufacturing.....	19	2,912	1,176	1	134	4	13	1,611	473	7	293	233	7	400	428	3	182	1	1	292	37	
Miscellaneous manufacturing.....	37	4,955	1,267	6	20	101	20	864	356	19	3,198	688	9	761	122	3	106	.....	.....	.....	.....	.....
General mercantile.....	19	813	2,235	3	1	36	14	791	2,096	5	13	101	3	6	.....	.....	.....	.....	.....	.....	.....	.....
5-and-10 cent stores.....	9	53	255	.....	.....	.....	9	42	255	1	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laundries.....	27	347	780	.....	.....	.....	13	182	425	15	161	355	1	4	.....	.....	.....	.....	.....	.....	.....	.....
Printing and publishing.....	7	558	561	1	.....	2	7	558	559	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All industries ²	189	11,247	9,906	22	167	189	110	4,485	5,297	92	4,488	3,395	31	1,519	987	6	288	1	3	300	37	

PER CENT.

Box and basket manufacturing.....	100.0	100.0	0.8	2.0	65.4	67.7	33.9	30.3										
Button manufacturing.....	100.0	100.0			12.3	3.4	44.4	68.6	55.6	33.0								
Candy manufacturing.....	100.0	100.0	.5	.7			52.9	59.6	34.2	29.7								
Cigar manufacturing.....	100.0	100.0	1.3	1.1	64.2	51.3	30.6	46.8	3.9	.8								
Clothing manufacturing.....	100.0	100.0	1.2	2.0	32.2	40.4	66.6	57.6										
Miscellaneous food manufacturing..	100.0	100.0	4.6	.3	55.3	40.2	10.1	19.8	13.7	36.4	6.2	0.1	10.0	3.1				
Miscellaneous manufacturing.....	100.0	100.0	.4	8.0	17.4	28.1	64.5	54.3	15.5	9.6	2.1							
General mercantile.....	100.0	100.0	.1	1.6	97.3	93.9	1.6	4.5	.7									
5-and-10 cent stores.....	100.0	100.0			79.2	100.0	20.8											
Laundries.....	100.0	100.0			52.4	54.5	46.4	45.5	1.2									
Printing and publishing.....	100.0	100.0		.4	100.0	99.6												
All industries ²	100.0	100.0	1.5	1.9	39.9	53.5	39.9	34.3	13.5	10.0	2.6	(³)	2.7	0.4				

¹ Persons working less than 6 hours a day are not considered full-time employees.

² Information not reported in four cases, and restaurants (30 in number) excluded because of irregularity of hours.

³ Less than 0.05 per cent.

NOTE.—This tabulation is based on actual number of employees reported as working specified hours. Establishments working their various departments different hours appear in this classification in more than one group.

TABLE III.—Number and per cent of employees in restaurants working each specified number of weekly hours, by sex.]

Hours worked.	Male.		Female.		Hours worked.	Male.		Female.		Hours worked.	Male.		Female.	
	Number.	Per cent.	Number.	Per cent.		Number.	Per cent.	Number.	Per cent.		Number.	Per cent.	Number.	Per cent.
33 and under 44.....	3	2.2	46	12.6	60 and under 62....	2	1.4	14	3.9	78 and under 80....			2	0.5
44 and under 46.....			44	12.0	62 and under 64....	10	7.2	11	3.0	80 and under 82....	2	1.4	2	.5
46 and under 48.....			26	7.1	64 and under 66....	1	.7	11	3.0	82 and under 84....				
48 and under 50.....	3	2.2	44	12.0	66 and under 68....	3	2.2	11	3.0	84 and under 86....	14	10.1	8	2.2
50 and under 52.....	12	8.6	11	3.0	68 and under 70....	1	.7	1	.3	86 and under 88....				
52 and under 54.....			2	.5	70 and under 72....	12	8.6	19	5.2	88 and under 90....				
54 and under 56.....	48	34.5	9	2.5	72 and under 74....	10	7.2	24	6.6	90 and under 92....	2	1.4	2	.5
56 and under 58.....	7	5.0	42	11.5	74 and under 76....			6	1.6					
58 and under 60.....	5	3.6	27	7.4	76 and under 78....	4	2.9	4	1.1	Total.....	139	100.0	366	100.0

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