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Committee on Thesis

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the Graduate School, have read the accompanying
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partial fulfillment of the requirements for the
degree of _____

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THE NINE-DOLLAR MINIMUM WAGE IN MINNESOTA

A THESIS

SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL

OF THE

UNIVERSITY OF MINNESOTA

BY

FREDERICK GALE TRYON

in partial fulfillment of the requirements

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P R E F A C E

In serving as statistician in the office of the Minnesota Minimum Wage Commission during the summer of 1914, the writer was impressed with the necessity of obtaining accurate information as to wages and the standard and cost of living before fixing a minimum wage. The statistical analysis included in the commission's report was incomplete. To present the analysis in greater detail, to resolve several questions which the printed report left unanswered, and to determine the margin of error in the statistics, the present study has been undertaken. With the consent of the Graduate Faculty, it is submitted as a thesis toward the degree of Master of Arts.

Several of the statistical tables are taken substantially unchanged from the First Biennial Report of the Minnesota Minimum Wage Commission, for which they were prepared by the writer. Nothing, however, has been included without the most careful revision. The writer has used his prerogative of student to transcend the limits of a statistical report and criticise the conclusions of the commission. A detailed account of the origin and operation of the Minnesota law is presented in Chapter II, made possible in part by the writer's personal observations as an employee of the commission. A new method of determining what constitutes a living wage is outlined, and in the final chapter an

endeavor is made to show the possible effects of enforcing the commission's proposed nine-dollar minimum.

No attempt is made to discuss the economic principles upon which the idea of a minimum wage rests. The writer's point of view throughout is that of a member of an administrative commission, called upon to carry into effect a law, the form of which he may disapprove, but of whose ultimate utility he is convinced.

If the Supreme Court upholds the constitutionality of the statute, the statistical analysis should be of value to the commission in its subsequent work of wage determination and enforcement. If the minimum wage be declared an abuse of even the police power, the present study may still be of utility in furnishing a measure of the wages and standards of living of women workers which prevailed in Minnesota in 1914.

The writer is deeply indebted to Miss Eliza P. Evans, secretary of the commission, for access to the original returns and for many helpful criticisms. To Dr. E. Dana Durand of the Bureau of Statistics, who generously suggested at the outset the methods to be used in tabulation, and to Dr. John H. Gray, in whose seminar it was written, the paper chiefly owes any merit it may have.

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CHAPTER I

THE SCOPE AND PURPOSE OF THE MINNESOTA MINIMUM WAGE LAW.

The year 1909 was marked by the first attempt in the United States at legislation regulating the minimum rate of wages. Minimum wage legislation has been in force in

(1)

Australasia since 1894, and in Great Britain

The minimum wage movement in the United States

(2)

since 1910. The first American minimum wage bill applying to private employments was

introduced into the legislature of Nebraska in 1909. At the time it provoked little discussion. The National Woman's Trade Union League at its second biennial convention in 1909 included

(3)

in its legislative program the demand for a minimum wage.

- (1) New Zealand: Industrial conciliation and arbitration act, August 31, 1894.
 Victoria: Factories and shops act, July 28, 1896.
 South Australia: Factories act, December 5, 1900.
 New South Wales: Industrial arbitration act, December 10, 1901.
 Western Australia: Conciliation and arbitration act, February 19, 1902.
 Commonwealth of Australia: Commonwealth conciliation and arbitration act, December 15, 1904.
 Queensland: Wages boards act, April 15, 1908.
 Tasmania: Wages boards act, January 13, 1911.
- (2) Great Britain: Trade Board act, October 20, 1909; in effect January 1, 1910.
- (3) National Women's Trade Union League. Proceedings, 1913, 2.

During the following year two important conferences took up the discussion of the idea: the National Consumers' League and the National Conference of Charities and Corrections. As a result of this agitation the General Court of Massachusetts in 1911 created a commission to investigate the project. The recommendations of this commission (4) were embodied by the (5) general court in the act of June 4, 1912, creating the Minimum Wage Commission of Massachusetts. During the following year eight other states - Oregon, Washington, California, Utah, Colorado, Nebraska, (6) Wisconsin and Minnesota enacted minimum wage legislation. This coincident appearance in nine states of so new an idea in legislation was less sudden than might at first thought appear, for even in the United States considerable agitation and investigation

- (4) Massachusetts, Report of the Commission on Minimum Wage Boards, January, 1912.
- (5) Massachusetts, Laws of 1912, Chap. 706
Approved June 4, 1912. In effect July 1, 1913.
- (6) The statutes in order of enactment were:
- . Oregon, Laws of 1913, chap. 62. Approved February 17, 1913.
In effect June 2, 1913.
 - Utah, Laws of 1913; chap. 63. Approved March 18, 1913.
In effect May 13, 1913.
 - Washington, Laws of 1913, chap. 174. Approved March 24, 1913. In effect June 13, 1913.
 - Nebraska, Laws of 1913, chap. 211. Approved April 21, 1913. In effect July 17, 1913.
 - Minnesota, Laws of 1913, chap. 547. Approved April 26, 1913. In effect June 26, 1913.
 - Colorado, Laws of 1913, chap. 110. Approved May 14, 1913.
In effect August 12, 1913.
 - California, Laws of 1913, chap. 324. Approved May 26, 1913.
In effect August 10, 1913.
 - Wisconsin, Laws of 1913, chap. 712. Approved July 31, 1913.
In effect August 1, 1913.

had preceded the experiment. In Minnesota for example, the state with which we are chiefly concerned, Father John Augustine Ryan, at that time Professor of Ethics and Economics in St. Paul Seminary, had been insisting for years on the right of the laborer to a wage sufficient to maintain him in a manner consistent with the dignity of a human being. In 1906 he had published "A Living Wage," in which he defended the principle of a minimum wage commensurate with the cost of living, as well on the ground of Catholic ecclesiastical authority as on that of economics.

In 1912 the State Federation of Women's Clubs indorsed the minimum wage and pledged themselves to work for its enactment. The measure had not, however, provoked general discussion as was indicated by its comparatively uneventful passage through the legislature of 1913.⁽⁷⁾ Father Ryan was largely instrumental in drafting the bill and in securing its passage.

In Australasia and later in Great Britain the principle of the minimum wage had been accepted as applying to men as well as to women. Recalling the decisions of the Supreme Court of the United States that statutory limitation of hours of labor of adult men is an interference with the freedom

Modification of the
Australasian system
in the United States

(7) The bill was introduced by Representative J. W. Wilson of Minneapolis and passed the House by a vote of 61 to 10. A motion to reconsider, warmly supported by A. L. Warner of Duluth and Kerry Conley of Rochester was lost. "Warner declared the aim of the bill to improve moral conditions of women workers cannot be accomplished. Wage increases, he said, will not improve morality with any class of women. The author of the bill said in debate that there are 3,107 girls working in Minneapolis for less than \$7 per week, which he contended was not a living wage." St. Paul Dispatch, March 25, 1913. In the Senate a bitter attack was made on the bill by G. B. Wilson of Minneapolis, but it failed to arouse interest.

of contract under the 14th amendment, and fearing that a minimum wage for male adults might be held unconstitutional, the advocates of minimum wage in the United States confined their initial effort in Massachusetts to the wages of women and minors.

The Massachusetts machinery of wage determination and enforcement was a modification of a system long in use

Industrial arbitration court and wages board systems

in Australia and essentially similar to that inaugurated in England three years before. In Australasia two distinct

methods of wage determination had been developed, the industrial arbitration-court system and the wages-board system. Under the industrial arbitration-court system, as in force in New Zealand and Western Australia, the minimum wage is fixed by decision of the state court of industrial arbitration, either reviewing an industry in which dispute between employers and employees has arisen, or else acting upon its own motion. It is to be noted that the regulation of wages is only one of the functions of the arbitration court. The original New Zealand act of 1894 was primarily a compulsory arbitration law and the power to fix minimum rates of wages was conferred upon the court as an incident to its function of preventing and settling strikes and lockouts. Under the wages-board system, as operative in Victoria and Tasmania, the minimum is fixed by a wages board, created by the state parliament for the industry in question, and is compulsory unless disapproved by the courts. Of these two methods, the wages board was the one adopted in Great Britain in 1909. In each of certain industries, a "trade board" was established, whose findings as to the minimum

rate of wages become obligatory by order of the British Board of Trade. Each trade board consists of equal numbers of representatives of employers and of employees in the industry, together with a lesser number of disinterested persons appointed by the Board of Trade.

In the United States also, the system adopted has been a modification of the wages-board system. That it should

Massachusetts
minimum wage act,
1912

have been preferred to the industrial arbitration-court system is not sur-

prising in a land where alarm at increasing judicial assumption of the legislative function has grown up alongside of the habit of administration by state commissions.

By the terms of the Massachusetts law of 1912 an appointive state commission may name for a specific industry a wage board whose duty it shall be to fix for that industry a minimum wage, based upon the cost of living with due regard to the financial condition of the occupation. Findings of this board, upon approval by the commission, and subject to review by the courts, become effective in the industry concerned. No penalty, however, attends failure to comply with the orders of the commission save that the commission may publish the name of the offending employer.

In this comparatively innocuous form did the minimum wage make its first appearance in America. The non-compulsory character of the commission's orders have thus far

Minimum wage legis-
lation in the West,
1913

kept the law out of the Massachusetts courts; altho an agitation is now afoot

for its repeal. Influenced by the ex-
ample of Massachusetts, during the year ¹⁹¹³ the legislatures of eight

western states enacted minimum wage laws, but of more drastic nature. Save in the case of Utah, where the legislature undertook to fix the minimum directly by statute, the wage is to be determined by an appointive commission. In all cases, the wage fixed is obligatory, the penalty for violation varying from publication of the offending employer's name, in Nebraska, (8) to fine or imprisonment, in California, with provision for recovery at civil law of the employee's unpaid wage. The minimum is in all cases to be determined by the cost of living. Colorado and Nebraska follow the example of Massachusetts in insisting that due regard shall be had for the "financial condition" of the business or occupation affected; but in California, Oregon, Washington, Wisconsin, and Minnesota, the commission is directed to determine a wage based solely upon the necessary cost of living.

(9)
The Minnesota minimum wage law was evidently, to judge from its wording, drafted by persons who had before them the texts of the Massachusetts law and of bills simultaneously introduced into other western legislatures. Before pressing its passage, the precaution was taken to secure an opinion from the attorney general on

- Composition of the
Minnesota Commission
- (8) In Massachusetts, the commission exercises its discretion as to whether or not the delinquent employer's name shall be published. Mass., Laws of 1912, chap. 706, sec. 6 (as amended by Laws of 1913, chap. 673.) The Nebraska commission is allowed no discretion, but must within 30 days after the offense publish the employer's name in at least one newspaper in every county of the state. Nebraska, Laws of 1913, chap. 211, sec. 6.
- (9) Minnesota, Laws of 1913, chap. 547. The text of the law is also to be found in Minnesota Minimum Wage Commission, First biennial report, 52-55, and in U. S. Bureau of Labor Statistics, Bul. 167, 195-198.

the constitutionality of the proposed law. This opinion, unqual-
 ifiedly favorable, was given to the legislature January 29, 1913. (10)

The law was approved April 26, 1913, to "take effect from and after
 its passage." It creates a commission of three persons "one of
 whom shall be the commissioner of labor who shall be the chairman
 of the commission." (11)

In this respect, it resembles the
 Nebraska and Washington laws, by the respective terms of which the
 deputy commissioner and the commissioner of labor are members of
 the minimum wage commission. In Utah, the enforcement of the wage
 fixed by the legislature is entrusted to the state "commissioner
 of immigration, labor and statistics" direct, there being no sep-
 arate minimum wage commission. In the five remaining states, the
 department of labor is not represented on the commission.

The commissioner of labor is in Minnesota
 appointed by the governor and is subject no more than elsewhere to
 the vicissitudes of party change. It is becoming the custom to
 name for this place a working man who has risen from the ranks.
 As commissioner of labor he is charged among other duties with the
 functions of mine and factory inspection, the investigation of
 wages and prices, and the enforcement of the child labor and
 employers' liability laws. The provision that the commissioner
 of labor should also act as chairman of the minimum wage commission
 is wise in that it brings to the commission a man thoroly acquainted
 with labor conditions in the state and insures cooperation between
 the commission and the bureau of labor. Multiplication of govern-

(10) The Minnesota minimum wage law-pamphlet issued by the wage
 commission- pp. 1 - 8.

(11) Minnesota, Laws of 1913, chap. 547, sec. 1.

mental agencies might have been avoided by directing the bureau itself to fix wages. This was the plan of Governor Eberhart's efficiency and economy commission which recommended that the minimum wage commission and its secretary be abolished and that its powers devolve upon the "board of labor."⁽¹²⁾ Without radical changes, however, such as the efficiency and economy commission contemplated, it may be doubted whether the present organization of the bureau of labor leaves the commissioner sufficient time to manage the affairs of the minimum wage commission.

The two remaining members of the commission are appointed by the governor. It is specified that one shall be "an employer of women."⁽¹³⁾ "The third shall be a woman, who shall act as secretary to the commission."⁽¹³⁾ Appointments are for two years. Vacancies created by death or resignation are to be filled "in like manner for the unexpired portion of the term."⁽¹³⁾

(12) Final report of the Minnesota Efficiency and Economy Commission, Title III, Subtitle vi, Art. II, sec. 4, page 30-31. The executive functions of the minimum wage commission were to devolve upon the "commissioner of labor." The function of wage determination was to devolve upon the "board of labor," to consist of 5 members, including at least one wage - earner and one employer. The proposed bill failed to pass the legislature of 1915.

(13) Minnesota, Laws of 1913, chap. 547 , sec. 1.

The duty of the commission is to fix and enforce legal minimum rates of wages, "sufficient for living wages. To do so it is empowered to investigate "at its discretion the wages paid to women and minors in any occupation in the state:"⁽¹⁴⁾ to inspect the pay rolls of all employers of women and minors:⁽¹⁵⁾ to "subpoena witnesses administer oaths, and to compel the production of books, papers, and other evidence,"⁽¹⁶⁾ to establish at its discretion in any occupation an advisory board:⁽¹⁷⁾ and to review the estimates of minimum wages recommended by the advisory board. The woman member of the commission receives eighteen hundred dollars a year as secretary. No compensation is allowed the other two members but provision is made for "traveling and other necessary expenses incurred in the performance of their duties."⁽¹⁸⁾ An annual appropriation of \$5,000 was made for the first biennium to cover the cost of the commission's investigation.

Employers of women and minors in the state are required to "keep a register of the names and addresses of and wages paid to all women and minors employed, together with

(14) Ibid, sec. 2.

(15) Ibid, sec. 3.

(16) Ibid, sec. 4.

(17) Ibid, sec. 7 .

(18) Ibid, sec. 17.

the number of hours that they are employed." (19) Employers may
 Obligations and rights of employers under the act. appear at the public hearings, which the commission is required to hold before fixing the minimum for any occupation, and give "testimony as to wages, profits or other pertinent conditions of the industry." (20) If dissatisfied with the rate fixed by the commission, one-fourth of the employers in an occupation may request a reconsideration, a request which the commission may not refuse. (21) Violation of the commission's orders or discrimination against an employee who testifies before the commission or before an advisory board is a misdemeanor punishable by a fine of from ten to fifty dollars or imprisonment for from ten to sixty days. (22)

The employees in any industry may initiate proceedings looking to the establishment of a minimum wage for that industry. The commission must investigate the wages paid to women and minors at the instance of "not less than one hundred persons engaged in any occupation in which women and minors are employed," as well as on its own motion. (23) If the commission can be con-

(19) Ibid, sec. 3.

(20) Ibid, sec. 4.

(21) Ibid, sec. 9.

(22) Ibid, secs. 12, 13 and 19.

(23) Ibid, sec. 2.

vinced that "the wages paid to one-sixth or more of the women or minors employed therein are less than living wages" it must "forthwith proceed to establish minimum rates of wages for said occupation."⁽²⁴⁾ In addition, "at the request of one-fourth of the employees in an occupation, the commission must reconsider the rates established, and may order new rates for said occupation."⁽²⁵⁾ Employees, like employers, may testify at the commission's public hearings and are protected against discharge or discrimination by the employer as previously mentioned. If an employer pays a worker less than the minimum ordered, he is liable in civil action for the unpaid balance "together with costs and attorney's fees to be fixed by the court,⁽²⁶⁾ notwithstanding any agreement to work for a lesser wage."

The advisory board which the commission may at its discretion establish in any occupation resembles closely corresponding boards provided for in Massachusetts and, later, in California, Nebraska, Oregon, Washington, and Wisconsin. Its function is to ascertain public opinion and provide a meeting place for the conflicting claims of employer and employees. Its recommendations have no force and may be adopted, modified, or rejected by the commission at will. The board serves without pay. In the language of the law it shall consist of "not less than three nor more than ten persons representing employers, and an equal number representing

(24) Ibid, sec. 5.

(25) Ibid, sec. 10.

(26) Ibid, sec. 14.

the workers in the occupation, and of one or more disinterested persons appointed by the commission to represent the public: but the number of representatives of the public shall not exceed the number of representatives of either of the other parties." (27)

One-fifth or more of the membership must be composed of women and one or more of the representatives of the public must be women. Appointments are nominally made by the commission but it is stipulated in the law that, so far as practicable, representatives of employers and employees shall be elected by their respective constituencies. (27)

The duty of the advisory board is to recommend to the commission minimum wage rates for the industry it represents. Like the commission it may subpoena and examine witnesses and compel the production of evidence. Recommendations of the board must be passed by majority vote of the entire membership. (28) The commission is empowered to prescribe the procedure of the board and exercises exclusive jurisdiction over the validity of its acts.

In some respects, the status of the Minnesota advisory board differs sharply from that of the corresponding bodies in other states. In Utah and Colorado no advisory bodies are provided for by the act. But in Massachusetts, Nebraska, Oregon, Washington, Wisconsin, and California no wage can be fixed without the establishment of a wage board for the

(27) Ibid, sec. 7.

(28) Ibid, sec. 8.

(29)

occupation in question. Moreover, in the case of the first four of these, the commission can fix no rate which has not

Relations of commission
and board in other
states

been recommended by the wage board:

while the commission may recommit

a recommendation for further re-

consideration or reject it entirely, it may not fix a rate until
(30)
the wage board has been induced to recommend it. In

Wisconsin, the wage promulgated is to be fixed by the joint
action of commission and board in a manner not made clear by the
statute. (31)

Radically different is the relation of board
and commission in California and Minnesota. In these two states,
the commission may at its discretion reject or adopt or amend the
recommendation of the board. (32)

The commission remains free
to set up its own rates of wages independent of the action of the
board. Indeed, in Minnesota the commission may fix a wage
without creating an advisory board at all. (33)

(29) Massachusetts, Laws of 1912, chap. 706, sec. 4.
Nebraska, Laws of 1913, chap. 211, sec. 4.
Oregon, Laws of 1913, chap. 62, sec. 8.
Washington, Laws of 1913, chap. 174, sec. 10.
Wisconsin, Laws of 1913, chap. 712, sec. 1729 s-6
California, Laws of 1913, chap. 324, sec. 5

(30) Massachusetts, Laws of 1912, chap. 706, sec. 6, amended
by Laws of 1913, chap. 673.
Nebraska, Laws of 1913, chap. 211, sec. 6.
Oregon, Laws of 1913, chap. 62, sec. 9.
Washington, Laws of 1913, chap. 174, sec. 11.

(31) Wisconsin, Laws of 1913, chap. 712, sec. 1729s-6

(32) California, Laws of 1913, chap. 324, sec. 5 and 6.
Minnesota, Laws of 1913, chap. 547, sec. 9.

(33) Minnesota, Laws of 1913, chap. 547, sec. 7.

We have discussed the machinery of wage determination and enforcement. It remains to consider the basis upon

which the law contemplates the minimum rate of wages shall be fixed. There can be no question but that the intention of the

Minnesota statute is that the minimum wage shall be based solely upon the cost of living without consideration of what the employer may be able to pay. The language of the act itself is unequivocal; the attorney general has interpreted it; and were added evidence needed we have the writings of Father Ryan, who was instrumental in drafting the bill and whose ideas it embodies. Without qualification, the act of 1913 directs that the wage fixed shall be a living wage, "sufficient to maintain the worker in health and supply him with the necessary comforts and conditions of reasonable life."⁽³⁴⁾

No loophole is left the commission to consider the ability of the industry affected to pay the minimum. While the Massachusetts, Nebraska, and Colorado laws direct the wage board to take into consideration "the financial condition of the occupation and the probable effect thereon of any increase in the minimum wages paid" as well as "the needs of the employees,"⁽³⁵⁾ and provide for relief by the courts if the wage fixed by the commission would render it impossible to conduct the business "at a reasonable profit,"⁽³⁶⁾

(34) Ibid., sec. 20, clause (1)

(35) Massachusetts, Laws of 1912, chap. 706, sec. 5.
Nebraska, Laws of 1913, chap. 211, sec. 5.
Colorado, Laws of 1913, chap. 110, sec. 2.

(36) Massachusetts, Laws of 1912, chap. 706, sec. 6.
Nebraska, Laws of 1913, chap. 211, sec. 6.
Colorado, Laws of 1913, chap. 110, sec. 6.

the Minnesota statute takes account of nothing but the cost of living to the workers in the industry. The only means by which the employees in an occupation can avert a wage determination for their occupation is to demonstrate to the satisfaction of the commission that less than one-sixth of the total number of women and minors they employ receive less than "living wages."⁽³⁷⁾

Obviously, the very industries which could demonstrate compliance with this qualification would be those least likely to suffer financial loss from enforcement of the minimum.

To reinforce their own interpretation of the law with expert legal opinion, the advisory board appointed for mercantile industries in the Twin Cities Opinion of attorney general asked the attorney general, "Can the minimum wage be varied or fixed having in mind the ability of the employer to pay the wage?" The attorney general in reply concluded that "the commission had nothing to do with this matter."⁽³⁸⁾

Further confirmation of the commission's contention that it was directed by the law to consider only the cost of living in fixing the wage rate may be found Father Ryan's dictum in the published writings of Father Ryan, the sponsor of the bill. In his "Living Wage," which appeared seven years before the passage of the Minnesota statute, he had

(37) Minnesota, Laws of 1913, chap. 547, sec. 5. The attorney general ruled that the phrase "one-sixth.... of the women and minors employed" means, "one-sixth of the aggregate number of women and minors." Cf. United States Bureau of Labor Statistics, Bul. 167, 56.

(38) Rulings of the attorney general, Question 4. In U.S. Bureau of Labor Statistics, Bul. 167, 56.

defined the minimum wage as one "sufficiently high to enable the laborer to live in a manner consistent with the dignity of a human being,"⁽³⁹⁾ and while admitting that the employer had himself the right to get a living on reasonable terms, held that the claim of the worker to a decent wage took precedence over the claim of the capital invested to interest. "The obligation to pay a Living Wage," he wrote, "falls upon the employer as a reasonable consequence of his position in the economic organism.....

Inability to perform the obligation suspends it, but inability must not be so interpreted as to favor the superfluous needs of the employer at the expense of the essential needs of the laborer. The employer's right to obtain interest on the capital that he has invested in his business, the real, is subordinate to the laborer's right to a Living Wage."⁽⁴⁰⁾ Father Ryan reaches his conclusion from the point of view of ethics rather than of economics, but the doctrine is of value in throwing light upon the indubitable intent of the law; the economic justification for ignoring the effect of the minimum rate upon a particular business establishment would rest, as Sidney Webb and others have shown,⁽⁴¹⁾ rather upon the doubtful social value of an industry so parasitic that it could not maintain itself and its workers unaided.

The duty imposed upon the commission by the law is therefore plain,- to take heed that in no occupation in the

(39) Ryan, John A., A Living Wage, vii.

(40) Ibid., 261

(41) Webb, Sidney, "The economic theory of a legal minimum wage," in Journal of Political Economy, 20, 986-988.

state more than one-sixth of the women and minors employed shall receive less than a "living wage". What, then, is a living wage? The content of this term we shall have subsequent occasion to study with great care (Chapter V). For the present, suffice it to recall the language of the statute: "The term 'Living wage' shall mean wages sufficient to maintain the worker in health and supply him with the necessary comforts and conditions of reasonable life: or, says the attorney general, the minimum wage is "the minimum cost of living."⁽⁴³⁾

By this criterion, the commission is directed to establish in all underpaid occupations "minimum wages for women and minors of ordinary ability, and minimum wages for learners and apprentices."⁽⁴⁴⁾ The phrase "women and minors" leaves some doubt as to whether the rate fixed must be identical for both. The attorney general ruled on this point that the minimum fixed for minors may differ from that fixed for women in the same occupation if there appear a difference in the respective cost of living for the two classes.⁽⁴⁵⁾ A ruling in

(42) Minnesota, Laws of 1913, chap. 547, sec. 20, clause (1).

(43) Ruling of Attorney General Smith, Question 4, in U.S. Bureau of Labor Statistics, Bul. 167, 56.

(44) Minnesota, Laws of 1913, chap. 547, secs. 6 and 8.

(45) Ruling of Attorney General Smith, Question 2, in U.S. Bureau of Labor Statistics, Bul. 167, 56.

the same connection that no difference can be made in the minimum for "male and female minors in the same occupation," seems inconsistent. ⁽⁴⁵⁾ Here again the spirit of the law would appear ^{that} to be/a difference in the cost of living for boy and girl workers would justify a different rate for the two. Learners and ⁽⁴⁶⁾ apprentices, including women as well as minors, are especially mentioned by the law as a class for whom a minimum shall be fixed. As in the case of experienced workers, their minimum wages shall be "sufficient for living wages," ⁽⁴⁷⁾ and the only justification recognized by the law for fixing a different minimum for experienced and inexperienced employees is a possible difference in the cost of living. The wisdom of this provision we shall have occasion to challenge in Chapter IX; but there can be no question as to the wording of the law. Thus the attorney general was of the opinion that an apprentice must be paid a living wage probably without allowing any reduction "because of the advantages educational or otherwise, which the employee gets from the particular employment." ⁽⁴⁸⁾

Different minima for different occupations may be fixed wherever differences in the cost of living warrant; in all cases the test to be applied is the cost of the "necessary conditions of reason-

Definition of
"occupation"

(46) Minnesota, Laws of 1913, chap. 547, sec. 20, clause 6.

(47) Ibid., secs. 6 and 8.

(48) Ruling of Attorney General Smith, Questions 3 and 4. In U.S. Bureau of Labor Statistics, Bul. 167, 56.

able life." Great latitude is allowed the commission in determining what constitutes a separate occupation: in the language of the statute, "the term 'occupation' shall mean any business, industry, trade, or branch of a trade in which women and minors are employed."⁽⁴⁹⁾ Apparently the wage ordered might be made applicable to all the employees of firms engaged in a given business whatever the character of their work, or to all employees performing a certain kind of work in however diverse industries employed. For example, a minimum might be set for all women workers in knitting mills, whether machine operators or stenographers; or instead, be set for all stenographers whether employed in knitting mills or law offices. The choice of one of these two methods or of a combination of them, is left to the discretion of the commission. Obviously, where the cost of living is the sole criterion, the second method is more frequently expedient.

In practice, the occupational classification attempted by the Minnesota commission has been very broad. Throughout their investigation, and in the orders of October, 1914, they grouped women into (1) mercantile occupations (with which were included office, waitress, and hairdressing occupations) and (2) manufacturing occupations (including mechanical, telephone, telegraph, laundry, dyeing, dry-cleaning, lunch room, restaurant, or hotel occupations)⁽⁵⁰⁾ in striking contrast with the 200 odd occupations

(49) Minnesota, Laws of 1913, chap. 547, sec. 20, clause (8).

(50) Orders of October 23, 1914. Reprinted in Minnesota Minimum Wage Commission, First Biennial Report, 46-49.

for which wage boards are now in existence in New South Wales (51).

The task of the commission is further complicated by the mandate of the legislature that regard shall be had to differences in the cost of living in different parts of the state.

Different minima
for different
localities

If no such difference exists, the wage fixed for any occupation must be effective throughout the state; and effective at the

same time. Upon this point the attorney general was emphatic: "Must not the commission fix a minimum wage in the 'occupation' for the entire state at one time?" he was asked..... "Can the commission investigate the minimum wage in any 'occupation' and act upon it within a district less in extent than the entire state?" In reply to which the unanimous opinion of the attorney general and his six assistants was, "the acts of the commission must be state-wide and it must be all done at the same time." (52) To promulgate a wage order, therefore, the commission must finally satisfy itself as to differences in the cost of reasonable living in different parts of the state.

Authority to fix minimum piece rates in occupations in which the piece system prevails is conveyed by the general terms of the act and specifically mentioned in section 8. In this section the act declares: "Each advisory board shall recommend to the commission...

Minimum time and
piece rates

in section 8. In this section the act

(51) U.S. Bureau of Labor Statistics, Bull 167, Minimum Wage Legislation in the United States and Foreign countries, 116.

(52) Ruling of Attorney General Smith, Question 1, in U.S. Bureau of Labor Statistics, Bul. 167, 55-56.

minimum wages, whether by time or by piece rate, sufficient for living wages." ⁽⁵³⁾ Whether the minimum piece rate shall be such as to yield to a worker of ordinary ability during an average day's work the sum fixed as the minimum time rate for that occupation, or whether, as recommended by the Massachusetts brush-makers' wages board ⁽⁵⁴⁾ the time rate fixed as the minimum must be paid where piece rates yield less than time rates, has not yet been satisfactorily determined. A further discussion of the point is reserved for Chapter IX.

One additional provision of the law deserves attention. No provision is made for a person unable to earn the minimum, except in the case of a woman "physically defective," to whom a special license may be issued by the commission authorizing her employment at a wage less than the minimum for the occupation. The license may, however, be issued only in occupations for which no minimum piece rate has been fixed, and the number of licensed persons may not exceed one-tenth of the whole number of workers ⁽⁵⁵⁾ in any one establishment.

(53) Minnesota, Laws of 1913, chap. 547, sec. 8. Confer also section 11, which reads: "For any occupation in which a minimum time rate of wages only has been ordered, the commission may, etc."

(54) U. S. Bureau of Labor Statistics, Bul. 167, 49.

(55) Minnesota, Laws of 1913, chap. 547, sec. 11.

The questions to be determined by the commission in fixing the minimum wage are summarized in the accompanying diagram.

Prescribed procedure of the Minnesota Wage Commission in determining minimum rates of wages.

Investigation of wages paid women and minors, classifying occupations into:

Occupations where less than 1/6 of total number of women and minors are employed at less than living wages

Underpaid occupations - minimum rates for each occupation in which cost of living warrants a difference

Occupation #1 with or without assistance of advisory board, fix the following minimum rates:

Occupation #2 (same as occupation #1)

Occupation #3 (same as occupation #1)

Living wage for experienced workers

Living wage for learners and apprentices in districts of state, etc.

Special licenses for defective women

For women etc. (same as under minors)

For minors

In districts of state where cost of living differs, as:

1st class cities

2nd, 3rd, and 4th class cities

Remainder of state

The present chapter has been devoted to an analysis of the Minnesota statute. As the purpose of this thesis is to criticise the statistical conclusions upon which the commission based its determination of a \$9 wage, the foregoing analysis furnishes a convenient outline for the present undertaking:

Outline of subsequent chapters

Chapter II gives a brief resume of the commission's activities from August 1, 1913, the day on which it came into active existence, down to the present.

Chapter III discusses the first step in the problem of wage determination,- the available data upon women's wages in Minnesota.

Chapter IV deals with the age and family connections of working women in the Twin Cities and Duluth.

Chapter V takes up the problem of measuring the cost of living. The content of the term "standard of living" is discussed and principles deduced by which the "minimum standard of reasonable living" may be determined. Methods of measuring the standard of living and the cost of living are criticised.

Chapter VI. The minimum allowance for room, board, and laundry.

Chapter VII. The minimum allowance for clothing.

Chapter VIII. The minimum allowance for miscellaneous expenses, including carfare; doctor's, dentist's, and oculist's bills; church gifts; lodge and club dues, and insurance; amusements; vacation; reading matter; and

miscellaneous expenditures.

Chapter IX reviews the conclusions of the commission in the light of the intent of the law, the present level of wages, the cost of living in Minnesota, and wage determinations made in other states.

CHAPTER II

ACTIVITIES OF THE MINNESOTA COMMISSION

The Minnesota Minimum Wage Commission came into active existence on August 1, 1913. As state commissioner of labor W. F. Houk was by the terms of the act ex-officio chairman of the commission. Mr. Houk had been head of the department of labor since 1911, when he was appointed by Governor Eberhart. By trade he had been a printer and had become favorably known as a labor leader. As the second member of the commission, whom the law required to be an employer of women, Governor Eberhart named Albert H. Lindeke, of the St. Paul firm of Lindeke, Warner and Sons, wholesale drygoods merchants and manufacturers of overalls. As secretary and woman member of the commission, the Governor appointed Miss Eliza P. Evans, of Minneapolis, a graduate of the University of Minnesota, a suffragist, and a practicing lawyer.

The commission immediately entered upon its task of investigating wages and the cost of living. The appointments had been announced on May 8, but funds were not available until August 1, the opening of the fiscal year. In the interim the commission met in Mr. Lindeke's office, May 24.

Plans were formulated and Miss Evans began a preliminary investigation at once. It was planned to send notices to all employers of girls advising them to keep a record of the number of girls employed, the hours of employment and the

(1) wages." On August 20, and again on September 11, 1913, public hearings were held in pursuance of the suggestion of the law, in order to give opportunity for employees, employers, and other interested persons to present suggestions as to the work of the commission. At the first of these hearings there were present Miss Gratia Countryman, librarian of the Minneapolis public library, Dr. R. V. Phelan of the University Department of Economics, Don D. Lescohier, statistician of the bureau of labor, and social workers of the Twin

(2) Cities. "The consensus of opinion was that the first work to be done was to answer the question: 'What does it cost the average working woman to live?'"
(3)

For the prosecution of this inquiry there was available the sum of \$5000 a year for two years. Eighteen hundred a year out of this went to pay the salary of the secretary who devoted her entire time to the commission's work. The remainder was available for the statistical investigation which the commission now undertook. An inquiry into the living expenses of women workers throughout the state was begun, to be conducted by self-enumeration. The schedule used appears in Appendix IV... Five thousand copies were mailed to club women and others interested in social problems with the request that they be distributed to intelligent working women and returned to the commission. Miss Evans estimated that about one-fifth of the cards would be re-

- Investigating
the cost of
living
- (1) St. Paul Daily News, May 26, 1913.
- (2) St. Paul Pioneer Press, Aug. 21, 1913.
- (3) Minnesota Minimum Wage Commission, First biennial report, 4.

turned; but after some weeks of waiting, during which almost no results were obtained, the commission voted to appoint two enumerators for a period of one month to canvass working women in the Twin Cities. Schedules were distributed, and filled out by the employees with the assistance of these field agents. About 600 women and girls were thus enumerated. The work, however, was not done systematically. The replies were usually incomplete. No attempt was made to cover completely any industry. No particular precautions were taken to insure the representative character of the limited number of women examined. The attitude of the working women was at first apathetic. The results were therefore of dubious value, and have never been tabulated by the commission.

While this information was being collected, in the fall of 1913, Miss Evans with other field assistants was investigating room rents and the cost of table board. The cost of room and board in Winona, Albert Lea, Red Wing, Mankato, St. Cloud, Fergus Falls,

Moorhead, Crookston, and Virginia was personally investigated by Miss Evans. In the three large cities, Minneapolis, St. Paul and Duluth, a more thorough inquiry was made. Hundreds of rooms, both double and single, in quarters frequented by working women were inspected and priced. The cost of room and board combined and of board alone was also carefully investigated. As a result of these studies and with the idea of stimulating public discussion, Miss Evans released to the newspapers the following estimate of the minimum weekly cost of living for a self-supporting woman.

(4) St. Paul Pioneer Press, Friday, April 3, 1914.

Room and board	\$ 5.00
Clothes	2.00
Laundry .....	.50
Church .....	.10
Carfare .....	.70
Amusements .....	.25
Insurance .....	.25
Books, etc.	<u>.30</u>
 Total	 9.00

Father Ryan was quoted as in substantial agreement with the estimate.

In the meantime, the commission began to organize advisory boards in accordance with the suggestion of the law. Altho, as already noted, not required to create these subordinate bodies before fixing a wage, the commissioners felt that by giving both employers and employees an opportunity to be heard

Organization
of the advis-
ory boards

in advance, the wage when promulgated could be less easily attacked. With this object in view an ad-

visory board for all mercantile business within the Twin Cities was appointed in January, 1914, and a similar board for manufacturing industries came into being the following month. In due time two corresponding boards for the city of Duluth were created. (5)

The reason for thus duplicating the boards appears to have been a supposed difference in the cost of living in the Twin Cities and Duluth; among Twin City people at least, an idea prevails that prices are higher throughout northeastern Minnesota than in the south and central portions of the state. If such a difference

(5) Minnesota Minimum Wage Commission, First biennial report, 4.

were proved to exist, the law required the commission to vary the minima accordingly. The Duluth boards soon combined on their own motion into a single body, feeling that the difference in the cost of living for mercantile and manufacturing employments could hardly be of great significance.

The personnel of the three boards as originally constituted is shown in the Appendix, (p.547). The names of the members were also published in the statistical schedules distributed to the employers. At the outset the mercantile board consisted of twenty-seven members including Commissioner Houk who acted as Chairman, while the manufacturing board had seventeen members and the Duluth board thirty-three. Miss Evans acted as secretary to both of the Twin City boards.

Under the terms of the act employers and employees were to be represented on each board in equal numbers, with one or more disinterested persons to represent the public. No difficulty was experienced in obtaining the desired number of employers, but the employees displayed a general reluctance to serve and it was found necessary to appoint additional disinterested men and women to represent their interests.

Of the original membership of the three boards about half were women.

The determination, item by item, of the minimum allowance for reasonable living was of necessity a matter of compromise. A wide divergence of opinion as to what constituted "reasonable living" was early disclosed, and led, particularly in the case of the mercantile board, to a division into two parties, one of which sought to interpret the

Opposing interests on the boards.

law liberally and secure the adoption of a high minimum, while the other worked for a lower minimum. A third and smaller group sought to effect a compromise. The first party rallied round the average expenditures of self-supporting women as their minimum standard, the other contended that by the nature of things the minimum must be considerably below the average actually prevailing. In the first group were found most of the women and many of the men representing the public. The second included almost all of the employers.

The variant points of view which underlay this division of opinion are quite comprehensible. The employers' representatives were experienced business men with the conservatism characteristic of their class. They realized vividly the practical difficulties in the enforcement of the law which were unknown to many of the women members of the board or, if known, of impersonal interest. The employers dreaded the economic readjustment which they foresaw must follow the enforcement of a high minimum, the burden of which would fall on their employees as well as on themselves.

Doubtless the appeal of self-interest and the fear of financial loss weighed strongly with the most of them; they would not have been human had it not.

It is probable that before accepting the appointment few⁽⁶⁾ of the employers had given much study to the idea of minimum wage. Whatever their initial attitude, the majority seem to have concluded their service on the boards with pronounced opinions against

(6) D. Draper Dayton, of the Dayton Co., Minneapolis, had written a paper on minimum wage.

the wisdom of minimum wage legislation. Mr. E. J. Couper, of the manufacturing board, chief executive officer of the Northwestern Knitting Co., than whom few more public-spirited citizens were to be found in the Twin Cities, declared at the final meeting that the law was a mistake. While many of the employers' representatives did not commit themselves as to the wisdom of the idea itself, it is significant that the firms which they represented almost without exception subsequently permitted the use of their names endorsing an appeal for funds to fight the orders of the commission in the courts. (7) Thus it was natural that the representatives of the employers, finding themselves the unwilling administrators of a law to which their constituents were opposed, should attempt to lessen its effects by securing the adoption of a low minimum.

The women and many of the men who represented the public, on the other hand, were inclined to construe the phrase "reasonable living" liberally. Their attention was centered upon the struggle of the uneducated working woman to obtain the bare necessities of life. The financial burden placed upon industry which bulked so large in the minds of the employers seemed to them of very little moment. A disposition was at times manifested to regard the efforts of the employers to keep down the minimum as actuated solely by greed.

In addition to these two opposing interests there were on each of the boards a smaller number who sought to effect a compromise. The employees seldom took a decided stand in the deliberations.

Attitude of the representatives of the public.

(7) Infra, p. 30 .

A considerable difference was apparent in the manner in which the three boards approached their task. From the outset the Duluth board tho by far the largest was the most united in its action, perhaps because of the exuberant prosperity of Duluth and the relative unimportance there of the industries employing women.

Of the two Twin City boards, that for manufacturing was the more harmonious. Altho representing industries which by reason of their direct competition with New York and New England would be likely to suffer more than retail mercantile establishments from the enforcement of a high minimum wage, the employers on the manufacturing board displayed a commendable public spirit. In the mercantile board lines of cleavage were distinct. Nearly all the large department stores of the Twin Cities were represented. These men were already accustomed to cooperating with one another thru their employer's associations, which embrace not merely the Twin Cities but are affiliated with other associations as far west as Seattle. Toward the close of the board's deliberations the employers voted as a unit, contesting every point and working consistently to keep the minimum down. An equally determined tho less unified group pulled in the opposite direction. A third and smaller group sought to effect a compromise, but the two interests were so divergent that neither would modify its position. Feeling at times was intense. In the last meeting but one of this board, when Mr. Draper Dayton of Dayton's department store had moved the recommendation of a minimum of \$7.50, Father Ryan faced the employers and cried, "You who say that a girl can live on less than \$8.50 a week are acting a lie. You know that it cannot be done and there

(8)

is no use pretending it can."

The part played by the employees who were members of the board was insignificant. It was found, in spite of the punishment to be dealt by the law upon employers discharging or discriminating against girls testifying in wage investigations, that it was difficult to get employees to serve upon the advisory boards. Only one employee approached could be induced to serve on the Twin City manufacturing board and "she attended only the first meetings and altho especially urged to attend the final meeting, she refused."⁽⁹⁾ Of the representatives of employees on the Twin City mercantile board as first appointed, five were working girls;⁽¹⁰⁾ at the stormy final meeting only one was present, while two of the four others had resigned earlier. In Duluth the board for some reason acted much more harmoniously and the eight employees were present at a majority of the meetings, four of them voting on the final recommendation of \$8.50 as a living wage.

The reason for this reluctance of the employees to serve on the advisory boards, tho not definitely known, may be surmised. A minor cause at the outset appears to have been dread of publicity; for in the press the idea of a wage investigation had come to be subtly but persistently linked with inquiry into occupational immorality. A more important reason was the time required of advisory board members. The meetings were frequently held in the afternoon, when employees could not conveniently absent themselves

(8) St. Paul Dispatch, Thursday, July 9, 1914.

(9) Minnesota Minimum Wage Commission, First biennial report, 4.

(10) U.S. Bureau of Labor Statistics, Bul. 167, 55.

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from work. The time exacted by faithful service on the sub-committees was considerable. Moreover there was no strong and disciplined constituency behind to encourage the employees on the board. Women workers are even less organized in Minnesota than in the East; the agitation for the minimum wage had come rather from persons interested in social reform than from the women themselves; undisciplined in collective bargaining, backed by no strong organization and not realizing that the responsibility for the determination of a just minimum rested upon them as well as employers and public, they shrank from publicity and controversy. To pit a clerk at a ribbon counter earning ten dollars a week against the manager of a department store down the street, employing a thousand girls and familiar with every aspect of a highly difficult business, is hardly an even match. To diffidence must be added the powerful motive of fear. Whether or not improper means were used by the employers to influence the employees on the boards, the writer has no knowledge. Assuming that no pressure was brought to bear by the employers, there can be little doubt that a fear alone of possible discharge or discrimination was a contributing cause of the resignations of several employees and the absence of others from critical meetings. Indeed evidence is not lacking that in many cases the representatives of the employees were in the first instance named by the employers. (11)

(11) The St. Paul Daily News reported, Jan. 22, 1914: "It has developed that the ten employees selected to serve were recommended by employers, according to Miss Eliza Evans, secretary to the commission.

"It has been difficult to select just the kind of women employees to serve on the board that was wanted, and I know that in most of the cases the employers knew who the employees were that were selected," said Miss Evans."

The most effective champions of the interests of the working women were persons from other ranks of life appointed to represent the interests of the employees or of the public. On the Twin City mercantile board, a Catholic priest, the 'womens welfare director' of the largest department store in the Twin Cities, a statistician from the state labor bureau, and a teacher in the St. Paul public schools, worked consistently to raise the minimum to as high a point as possible. Their attitude was hardly dispassionate. On the other hand the action of some of the employers on the same board could be called neither dispassionate nor disinterested.

The procedure and conclusions of the boards were throughout their investigation significantly affected by the example of the industrial welfare commissions of Oregon and Washington and by

Influence of other minimum wage determinations. The Massachusetts minimum wage studies. The Massachusetts Commission on Minimum Wage Boards (12) had reported on "What is a Living Wage?"; the Consumer's League of Oregon and the Industrial Welfare Commission (13) of Washington (14) had published studies in the cost and standards of living of working women on the Pacific Coast. Most significant of

(12) Massachusetts, Report of the Commission on Minimum Wage Boards, 1913. Appendix D, 209-238.

(13) Oregon, Report of the Social Survey Committee of the Consumers' League on wages, hours and conditions of work, and costs and standards of living of women wage earners in Oregon, January, 1913.

(14) Washington, Report of the Industrial Welfare Commission of the State of Washington on the wages, conditions of work, and cost and standards of living of women wage-earners in Washington March, 1914.

all were the five orders of the Oregon Industrial Welfare Commission already in force. ⁽¹⁵⁾ The weekly minima of \$8.64 and \$9.25 set for women in Portland manufacturing and mercantile establishments respectively undoubtedly gave the advisory board a precedent which, in so untrodden a path, was more easily followed than departed from.

The advisory boards met twice a month from the time of their appointment until July. At their instance several new lines of investigation were undertaken. The attorney general had rendered an opinion to the legislature of 1913 on the constitutionality ⁽¹⁶⁾ of the law; he was now requested by the mercantile Procedure of the boards board, on the motion of C. S. Cook, a representative of the employers, to rule upon certain ques- ⁽¹⁷⁾ tions in regard to the meaning and application of the law. The action was well taken, altho at the time interpreted as a piece of obstruction, intended by the employers to delay the proceedings of the board. The attorney general's replies have been thoroly discussed in the analysis of the act presented in Chapter I, and need not detain us here. At the time they clarified the meaning of the law and limited the activities of each advisory board to investigating the cost of reasonable living to the women and minors within its industry. Under the attorney general's ruling no loop-hole was left the board in fixing the minimum wage to consider the

(15) Oregon, First biennial report of the Industrial Welfare Commission, 1913-1914, 6-11. Also in U.S. Bureau of Labor Statistics, Bul. 167, 60-64.

(16) The Minnesota Minimum Wage Law, pamphlet issued by the commission, pp. 1-8.

(17) Ibid., 9-13; also in U.S. Bureau of Labor Statistics, Bul. 167, 55-57.

financial condition of the industry, as the representatives of the employers gladly would have done.

The meager results obtained by the commission's field agents investigating the living expenses of working women did not suffice, in the judgment of the boards, as a basis for a wage order. Accordingly the problem was attacked on a larger scale.

Two methods of investigation were pursued. Each board drew up a list of what it considered the necessities of "reasonable living" and then proceeded to price these necessities. This work was largely done by sub-committees, the method of procedure adopted by the three boards being substantially the same. Thus the Twin City manufacturing board appointed a sub-committee to investigate the cost of room, board, and clothing, another to report upon miscellaneous items of expenditure, and a third to study the question of the relative wage to be paid learners and apprentices. In the matter of room and board, the sub-committees found that the commission's studies left little to be desired. Efforts were made, however, to check the work of the field investigators by visits of inspection to rooming houses frequented by working women. The item of clothing had received little attention from the commission. A list of the articles of clothing indispensable to a factory worker was made by the sub-committee and priced at representative stores. The second sub-committee proceeded in similar fashion, adopting the following classification of miscellaneous expenses: (1) laundry, (2) doctor's bills (including dentist and oculist), (3) car fare (4) recreation (including vacation), (5) church, lodge and club

Determining
the cost of
living, first
method.

dues, (6) insurance, (7) education and reading (including books, magazines, etc.). The cost of each item was estimated, much heed being paid to conclusions reached in other states.

The results obtained by this method of investigation depended very largely upon the point of view of the person compiling the list of necessities, and provoked protracted and sometimes bitter discussion. The employers, interested in keeping down the minimum to as low a figure as possible, regarded many of the estimates of the women representatives of the public as extravagant. The charge was often justified, as when a distinguished university woman insisted that inartistic wall paper rendered a room unsuitable for a working girl, or an estimable elderly lady refused to consent to an allowance for board and room less than \$6 per week, when classmates of her own daughters at the university had undoubtedly lived decently on less. To demonstrate that many women in the Twin Cities were living independently on low wages, the employers succeeded in carrying a proposal for a statistical

Determining the cost of living, second method.

investigation into the actual expenditures of women and minors employed in mercantile and manufacturing industry throughout the state. A

schedule was drafted by the two Twin City boards and subsequently adopted by the Duluth board, to be distributed by the commission through labor unions and employers, if possible to every employee in the state affected by the minimum wage law. (18) At the same time the employers were asked to fill out a questionnaire as to the wages paid by them to females of all ages, to male minors, and to

(18) Appendix, 576.

learners and apprentices of both sexes. Additional questions as to the length of time required to pass the stages of learner and apprentice were also included in the employer's schedules, and opportunity was given for an expression of opinion as to what the minima for apprentices and for learners should be. (19)

The secretary of the commission was instructed to care for the printing, distribution, and collection of the schedules. The method relied upon was self-enumeration: little pressure could be brought to bear to compel the filling out of the schedules by either employers or employees. Indeed the completeness of the returns from the employees in any establishment depended largely upon the attitude taken by the employer, to whom the commission delegated the task of distributing the employees' schedules. In most cases also the employers were relied upon to collect and forward to the commission the expense schedules of their employees.

The schedules were mailed in April and May, 1914. By the end of May the replies were coming in, and about ten thousand were ultimately received. At this time the writer was engaged as statistician to make a preliminary report on the cost of living returns furnished by the employees themselves. Selected cases only were used, every fifth one for the Duluth returns and every tenth for the Twin City returns. This preliminary count was limited to women living away from home - ostensibly supporting themselves - and earning less than \$12.50 per week. The results of the count, presented in frequency tables for each item of expense, with derivative percentages and averages, were transmitted to the advisory

boards early in June.

Great difference of opinion prevailed as to the value to be attached to these returns from the employees. It was urged that the replies to many of the questions, notably "How much did you spend for clothing during the past year?" and "How much do you spend for amusements per week?" must be highly inaccurate. Many of the women representatives of the public felt that the question of what ought to be spent by a working woman depended very little on what actually was spent by the same woman, and were inclined to brush aside the averages disclosed by the statistical inquiry in favor of the priced lists of necessities compiled by the sub-committees. The employers, on the other hand, pointed to the fact that the schedules showed a number of women living, apparently without outside help, on a scale much less expensive than that represented by the priced lists. They were insistent that even the average expenditure reported for each item was far too high an allowance, for by the very nature of things the minimum, as intended by the legislature, must be less than the present average. The discussion was frequently heated, but at length the opposing forces tended to reach equilibrium about the statistical averages, not completely satisfactory to either side but at least conveniently concrete figures for which a definite stand could be made. Particularly was this true of the reports of the three sub-committees on miscellaneous expenditures, for which a priori estimates were peculiarly difficult to make. The statistician's preliminary report on the employees' answers as to their living expenses thus formed the basis of the boards' minimum allowances for carfare, laundry, doctor's

Value of the
two methods

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fees, dentist's and oculist's fees, church gifts, insurance, lodge and club dues, amusements, vacation, and reading matter, as well as largely influencing their conclusions as to the cost of room, board and clothing.

In the case of one sub-committee, so sharp was the divergence of the opposing interests that it was found impossible to agree upon a report. The Twin City mercantile sub-committee on room and board consisted of Messrs. Draper Dayton and Schlick, Father Ryan, Mrs. Evans, and Miss Powell. The data collected by the field survey of rooming and boarding places was tabulated for presentation to this committee. Substantially all the data contained in Chapter V was submitted to them, but no compromise could be effected. At the last meeting, Miss Powell, the employee on the committee, was absent. The committee finally reported that it was unable to agree; that two voted for an allowance of \$4.00, one for \$4.80, and one for \$6.00 per week. The advocates of a high minimum then forced through Father Ryan's motion that the board as a whole adopt \$4.80 as the weekly allowance for room and board.

The three boards concluded their deliberations in July, 1914. On June 27, shortly before balloting on the wage was to take place, the hands of those who were working for a high minimum were strengthened by the example of the Industrial Welfare Commission of Washington, which in its first award fixed the minimum wage for women in mercantile establishments at \$10.00 per week. (30) By the terms of the law a majority of the entire membership of an

(30) Washington, I.W.C. Order No. 1, in U.S. Bureau of Labor Statistics, Bul. 167, 85.

(21)

advisory board is required to recommend a wage. Absence of a member at the time of balloting on the wage thus in effect was equivalent to a vote against the wage. The absence of two employees from the final meeting of the Twin City mercantile board

Recommendations
of the mercantile board.

made it impossible for the friends of the \$8.50 minimum to muster the necessary legal majority, altho they had a majority of those present.

The employers on the board held out for a minimum of \$7.50. They had been unable, however, to block the acceptance of the report of the sub-committee on miscellaneous expenditures (\$1.85 per week), and the motions to allow \$2.00 for clothing, and \$4.80 for room and food, all of which could be carried by a simple majority of a quorum. The total of these allowances (\$8.65) may be accepted as the minimum estimate of the majority of the mercantile board. The mercantile board may thus be considered to have made a majority recommendation of \$8.65 and a minority recommendation of \$7.50.

The employers on the Twin City manufacturing board did not all concur in the figure of \$8.75 proposed by the opposite interest as the minimum living wage, but were unable to prevent its formal adoption. The manufacturing sub-committee on learners

(21) Cf. Chapter I, p. 13.

(22) Miss Carrie Erickson, and Miss E. M. Bartz.

(23) Minnesota Minimum Wage Commission, First biennial report, 4. The figure of \$8.50 was the lowest that the supporters of a high minimum would consent to. Their recommendation of \$8.65 per week was moved by Father Ryan and received 11 yeas to 9 nays. Minneapolis Journal, July 13, 1916.

(24) E.J. Couper and Theodore Schulze declined to vote, Minneapolis papers, July 22, 1914.

(25) Two of the employers' representatives - Stanley Miller and Theodore Griggs - and the one employee, Miss Emma Maag, - were absent.

and apprentices, under the chairmanship of Dr. J. S. Young, Professor of Political Science at the University of Minnesota, secure the adoption of its report fixing twelve months as the approximate time required to pass the learner's stage and setting the minimum for the first six months at \$6 and for the second six months at \$7.⁽²⁶⁾ This report the board forwarded to the commission without amendment as its recommendation on the wage of learners and apprentices.

The Duluth board adopted \$8.50 as the cost of living by a vote of sixteen to two. All the employers present at the final meeting concurred. The dissenting votes were cast by members who insisted upon a higher minimum. Like the Twin City manufacturing board, the Duluth body made a formal recommendation of a minimum for learners and apprentices. The rate for learners was \$5.00 per week and for apprentices \$6.00. This applied only to mercantile establishments.

The commission did not act upon the recommendations of the advisory boards immediately. Notice was given in the newspapers early in August of public hearings to be held in September. Miss Evans stated that the minimum would probably be fixed at \$9.00. Further field trips were made to smaller cities in the state to collect additional data on board and lodging facilities and on retail prices. The office force was employed in tabulating the statistics of wages and cost of living which had been collected in the spring. Public discussion of the measure was stimulated by

(26) Minnesota Minimum Wage Commission, First biennial report, 46.

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frequently releasing information to the newspapers. Wage determinations made in other states about this time attracted much attention in the papers. On August 1 the Industrial Welfare Commission of Washington fixed a minimum of \$8.90 for experienced factory operatives, and later in the month a minimum of \$9.00 for laundry and dye works employees. ⁽²⁷⁾ On August 15 the papers reported the award of the Massachusetts commission in the brush industry, \$8.37, for weeks of fifty-four hours. This action from so conservative a state as Massachusetts, where the cost of living, it was claimed, was lower than in the Middle West, was hailed as a vindication of the recommendations of the advisory boards. The Labor Review, a trades organ of Minneapolis, kept the attention of its readers upon the impending wage determination in Minnesota. Another labor paper, the St. Paul Union Advocate, described the operation of the law in ⁽²⁹⁾ Utah. The Minnesota State Federation of Labor indorsed a \$10 minimum in a resolution calling upon its officials to use every possible endeavor to influence the commission's decision. The local labor leaders themselves made the preparations for presenting the case for the women workers at the public hearings.

The first of the two hearings was held in the Old State Capitol, St. Paul, during state fair week. Commissioner Houk presided. About fifty persons were present. Stenographic record of the testimony was taken, and tho never printed, is on file at the commission's office. Altho ample notice had been given, no employer appeared.

Public hearings of the Commission

(27) Washington, I.W.C. Orders Nos. 3 and 5. U.S. Bureau of Labor Statistics, Bul. 167, 86, 88.

(28) Massachusetts Minimum Wage Commission, Decree of August 15, 1914. U.S. Bureau of Labor Statistics, Bul. 167, 55.

(29) Issue of Oct. 2, 1914.

Apparently it had been decided to make the next stand in the courts as soon as the commission should act upon the recommendation of the boards and promulgate an order. The only evidence presented to show that the minima of \$8.50 and \$8.75 recommended were too high was offered by Mr. Martin Pfaff, superintendent of the garment factory of Lindeke, Warner and Sons. The witness, having been duly sworn, was examined by Commissioner Lindeke, himself head of the firm of Lindeke, Warner and Sons, in a series of leading questions. The burden of the evidence was that the recommendations of the advisory boards were unduly high; that while the principle of the minimum wage was a good one, the policy could be safely embarked upon only by the federal government; for a single state to inaugurate it was to load manufacturers with a prohibitive handicap in competition with those of other states. Girls in the Lindeke-Warner factory, the witness stated, declared that they existed comfortably on \$6.00 a week.

The employees, however, were represented in force. Some thirty young women were produced by the union leaders as willing to testify as to the cost of living, provided their names should not be demanded. When four of them had been heard anonymously, J. C. Netheway, assistant attorney general, who was present by request, advised the commission that unless their names were of record, the testimony might be set aside by a court on review. Louis Harthill, of the Trades and Labor assembly, protested that "fear that their employers would learn they had testified would keep them off the witness stand." The chairman then ruled that the witnesses might whisper their names to Miss Evans, and Mr. Lindeke, as the employer on the commission, assured the women that

he would not divulge their identity to other employers. Only two of the twenty-five or more women remaining, - and of these one was a labor organizer, - were willing to testify after this ruling. The evidence added little to that already obtained by the commission through its employees' schedules. The general opinion of the witnesses was that the minima proposed by the advisory boards were too low. Their own estimates varied from \$10 to \$12.50 per week.

A week later, the second hearing was held in the mayor's reception room in the Minneapolis City Hall. Again no one appeared on behalf of the employers. Additional testimony on the cost of living was given under oath by women brought forward by the union leaders. Mr. Hartill, who had appeared the week before, sought in a lengthy argument to show that the cost of decent living for a working woman in the Twin Cities could not be less than \$10.00, the sum fixed as a minimum by the Industrial Welfare Commission of Washington.

(30)

Having continued its investigations for fifteen months and having, through the advisory boards and the hearings, given opportunity to both employers and employees to make known their opinions, the commission now felt itself in a position to act.

Resignation
of Mr. Lin-
deke.

The chairman called the commission together on October 15, 1914, for the purpose of determining the minimum wage. Mr. Lindeke attended the meeting but refused to take action. Apparently the pressure, open and concealed, brought upon the commission by the employers, was

(30) The \$10 minimum, as fixed by I.W.C. orders Nos. 1 and 10 applied only to adult experienced workers in department stores, and in general office occupations. U.S. Bureau of Labor Statistics, Bul. 167, 85, 90.

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more than he cared to face. Miss Evans was quoted in the St. Paul Dispatch of October 16, as saying, "Mr. Lindeke resigned to block efforts of the commission to establish minimum wage orders. He does it at the request of employers who want to stave off action by the commission until after the legislature meets." Whatever Mr. Lindeke's motive, he tendered his resignation immediately, assigning as his reason ill health and lack of time. (31)

The two remaining members obtained an opinion from the attorney general that two members could fix wage rates, and meeting again on October 23, promulgated "minimum wages for women and minors or ordinary ability to become effective through- out the state on November 23, 1914." The six orders are condensed herewith: (32)

Orders of
October
1914

(31) "I herewith tender my resignation," said the letter to Governor Eberhart, "same to take immediate effect.

"As you know, when you notified me of your desire to appoint me on this commission, you told me that if the duties became too burdensome that I could resign at any time. I find that the work in connection with the commission is taking up a great deal more time than I can consistently devote thereto. I intend going away in the near future to be gone some time." St. Paul Dispatch, Oct. 16, 1914.

(32) Minnesota Minimum Wage Commission, First biennial report, 3.

(33) Ibid, 46-49.

Table 1.

	Wage per week			
	Mercantile		Manufacturing	
	Order		Order	
Cities of 1st class	No 1.	\$9.00	No 4.	\$8.75
Cities of 2nd, 3rd and 4th class	No 3.	\$8.50	No 5.	\$8.25
Remainder of state	No 3.	\$8.00	No 6.	\$8.00

The rates did not apply to learners and apprentices, but only to women and to minors, male and female, "of ordinary ability," i.e. of experience sufficient to have passed the state of learner or apprentice. Distinct wages were fixed for only two occupational classifications: with "mercantile" were grouped "office, waitress, and hairdressing occupations;" with "manufacturing" occupations, "mechanical, telephone, telegraph, laundry, dyeing, dry cleaning, lunch room, restaurant, and hotel occupations," were included. The wage scale applicable in a given community depended upon its population, a variation required by the statute if differences should be demonstrated in the cost of living in country, town, and metropolitan city. In cities of the first class -- including Minneapolis, St. Paul, and Duluth -- the wage scale was to be 25¢ higher than in Winona, Mankato, St. Cloud, Stillwater, Virginia, Bemidji, New Ulm, Brainerd, Albert Lea, Red Wing, Little Falls, Austin, Rochester, Fergus Falls, Faribault, Hibbing, Owatonna,

(34) Apparently exclusive of waitresses who were to be paid the minimum for mercantile employees, on the theory that their clothing expenses must be higher.

and sixty-one other cities of the second, third and fourth classes. Outside of these eighty-one communities, a flat rate of \$8 per week was to apply to both mercantile and manufacturing employees. The order directed each employer to post a copy in a conspicuous place in each room of his establishment where affected workers were employed.

The commissioners thus issued their initial orders without committing themselves on the vexed question of the wages of learners and apprentices. They planned to apply to the legislature, about to convene, for amendment of the unworkable provisions of the law in regard to the minima for learners and apprentices, and hoped in the meantime that it might prove possible to enforce the order as to experienced workers. Their hope was short-lived. The determinations were issued October 23, to become effective thirty days later, as required by law. On October 28, E. W. Williams, a Winona shoe manufacturer, applied in the Ramsey County District Court for a temporary injunction against the commission and the state auditor, asking as a taxpayer that the commission be restrained from spending public funds. On November 10, an action was commenced by A.M. Ramer, a candy manufacturer, also of Winona, asking as an employer to have the law declared unconstitutional.

The protracted silence of the employers, from whom hardly a syllable had been heard since the adjournment of the advisory boards in July, was now explained. The Ramer suit, says the commission, "is a test case brought by employers opposed to minimum wage legislation, and an appeal for funds to aid in the prosecution

Organized opposition by the employers.

of the case has been mailed to most employers of the state." The writer has seen a copy of this letter. It is signed by Herbert Bigelow, of Brown and Bigelow, St. Paul manufacturers of advertising novelties, the commission's most uncompromising opponent, who had refused to permit the circulation of expense schedules among his employees. It bears the letter head "Advisory Committee on Minimum Wage of the Merchants and Manufacturers of Minnesota," supported by the names of a hundred or more firms, including most of the large stores and manufacturing plants of the state. The firm of practically every employer on the commission's three advisory boards stands in that list. The combined capital it represents is measured in tens of millions. The letter recites the recent orders of the wage commission and the commencement of injunction proceedings; states that Messrs. Brown, Abbott, and Somsen, and O'Brien, Young and Stone, have been retained to handle the case; exhorts the recipient to disregard the commission's order and in order to defray the cost of litigation asks him for a contribution of 50 cents for every female and male minor in his employ. How large a fund was raised by the letter the writer does not know. If opposition were limited only to the firms named in the letter-head it would be most formidable.

The application for temporary injunction in both cases was brought in the court of District Judge Frederick M. Catlin. The two cases were argued November 14, Messrs. Brown, Abbott, and Somsen of Winona and Messrs. O'Brien, Young, and Stone of St. Paul appearing in behalf of the plaintiffs and Hon J.C. Netheway,

(35) Minnesota Minimum Wage Commission, First biennial report, 3.

assistant attorney general, for the commission. On November 23, the day when the commission's orders were to have become effective,

Decision of District Court Judge Catlin declared the law unconstitutional, and ordered that a temporary injunction be issued, restraining the commission from enforcing its wage orders or performing any official acts and restraining the State Auditor from auditing any of its claims for expenditures. (36)

The temporary injunction was more readily granted because of the pending decision in the United States Supreme Court of the cases of Stettler vs. O'Hara and Simpson vs. O'Hara, appealed from the Supreme Court of Oregon. The first of these cases was brought by a Portland paper box manufacturer to test the validity of the Oregon minimum wage statute. The second case, Elmira Simpson vs. O'Hara, was brought by an employee against the commission on the ground that its rulings would deprive her of the right to work. In both cases, the Supreme Court of Oregon upheld the constitutionality of the law. The plaintiffs then appealed. As the decision of the United States Supreme Court would undoubtedly dispose of the Minnesota case, Judge Catlin was the more ready to grant the temporary injunction. This was not, however, the only reason for Judge Catlin's decision. In his memorandum he declared (37) the Minnesota statute unconstitutional because (1) it delegated legislative power to an appointive commission, and (2) interfered

(36) A.M. Ramer Co. vs. Eliza P. Evans, et al., and E. W. Williams vs. Eliza P. Evans, et al. Judge Catlin's decision and memorandum, with the temporary injunction, are given in full in First biennial report of the Minnesota Wage Commission, pp. 49-53.

(37) Minnesota Minimum Wage Commission, First biennial report, 51-52.

with the individual's freedom of contract. Admitting that it would be constitutional if a legitimate exercise of the police power of the state, he held "there is no reasonable foundation for holding this act to be necessary to protect the safety, health, or morals of working women On the contrary, it is quite as likely in actual results to increase both distress and immorality. Hence it is not a valid police regulation, and therefore the temporary injunction is granted."⁽³⁸⁾

On the following day the attorney general served notice of appeal and the case was argued before the Supreme Court January 21, 1915. In the meantime, on December 17, the Oregon cases were⁽³⁹⁾ heard before the United States Supreme Court.

Trial before
State Supreme
Court

Attorney General Crawford of Oregon and Mr. Louis

D. Brandeis appeared for the Oregon Industrial Welfare Commission, and Rome G. Brown of Minneapolis for the employers. The decision of the court has not yet been rendered. Upon this decision the fate of the Minnesota law depends, for the State Supreme Court displayed a not unnatural reluctance to decide upon the constitutionality of the Minnesota statute until the highest tribunal in the land had rendered its verdict.

The Minnesota Minimum Wage Commission survives therefore in a state of suspended animation. Governor Eberhart on November 23, 1914, appointed Charles W. Gordon, president of the St. Paul

(38) Ibid., 52. Cf. Attorney General Smith's opinion in Minnesota Minimum Wage Law, a pamphlet published by the commission.

(39) Brandeis, L.D., Frank C. Stettler, plaintiff in error, vs. Edwin V. O'Hara, constituting the Industrial Welfare Commission, defendants in error. Brief for defendants.

Brown, R.G. Minimum wage cases. Frank C. Stettler vs. Edwin V. O'Hara. Brief and arguments for plaintiffs in error.

house of Gordon-Ferguson Co., manufacturers of hats and furs, to fill the vacancy caused by the resignation of Mr. Lindeke. The commission had intended to ask the legislature to amend the provisions of the statute relating to apprentices

Present status of the commission

and learners, but in the uncertainty pending the decision as to the constitutionality of the

law, it was not deemed wise to press the matter in the stormy session of 1915. A systematic effort to kill the wage commission by defeating its appropriation was made by certain employers; letters and telegrams were sent to members of both houses urging them to vote against it. The legislature did, however, make the necessary appropriation for the commission's support during the biennium 1915-1917.

Under the restraining hand of the injunction the commission is unable to draw upon its appropriation for further investigations. Its activities are suspended until such time as the Supreme Court of the United States shall render its decision.

CHAPTER 111

WAGES OF WOMEN AND MINORS IN MINNESOTA.

1. Sources of statistical information on women's wages in Minnesota.

The first step in the determination of the minimum as prescribed by the Minnesota law is to ascertain the wages actually paid in the industry under question; for unless (1) of the opinion that one-sixth of the women and minors employed in an occupation are paid less than living wages the commission can issue no wage order. The existent information upon women's wages in the state, while amply demonstrating that the prevailing rates failed to comply with the minimum requirement of the statute, was either incomplete or becoming out of date, and the advisory boards wisely decided to make a fresh investigation, in order that the proportion of employees to be affected by any minimum recommended might be accurately known. Two schedules were prepared, one by the advisory board for mercantile industry and one by the manufacturing board. Copies were mailed by the secretary of the commission to employers thruout the state. Information was sought as to the wages of adult and minor employees of both sexes, both for experienced workers and for learners and apprentices. Both schedules also asked for an expression of opinion as to the minimum which ought to be paid learners and apprentices and the time required to pass the stages of learner and of apprentice.

(1) cf. Chapter 1, and diagram, p.22.

A portion of the results of this investigation was published in the commission's report with, however, no discussion of the accuracy of the returns. ⁽²⁾ Unfortunately, the

Purpose of the present chapter

figures are affected by grave sources of error. The purpose of the present chapter is to present in detail the complete results, including wages of male minors in Minnesota, hitherto unpublished, and also to discuss the sufficiency and accuracy of the returns.

The subject of wage statistics is one of the most difficult with which quantitative economics has to deal. To study adequately geographical, occupational, or chronological

Difficulties in collecting wage statistics

variations - the chief aim of all statistics - requires in the case of wages a measurement of the labor units purchased by the wage. Just as statistics of prices of clothing are of small value unless the nature of the materials and quality of the workmanship are carefully specified, so statistics of wages, i. e. the price of labor, are of small value for comparison unless the nature of the service, i. e. the economic utility supplied by the laborer in exchange for the wage, is specified. To measure the wage adequately thus requires that the industry and the particular occupation of the worker within the industry be noted; that the number of hours he works per day and per week be ascertained, and, particularly important for minimum wage determinations, that the permanency of the employment and the experience and age of the worker be investigated. To obtain information on all these points for every wage earner is a colossal

(2) Minnesota Minimum Wage Commission, First biennial report, 5-21.

task, hitherto considered beyond the capacity of the federal census bureau itself, to say nothing of the statistical offices of the states. The wage statistics, therefore, for the country and for Minnesota, as well, are far from complete. In general they may be characterized as limited in detail, or if detailed as limited in occupational and geographical scope.

In view of the acknowledged limitations of wage statistics it becomes important to examine all existing sources of information concerning the wages of women and minors in the state. The sources are many but far from satisfactory. They may for convenience in discussion be divided into (1) statistics of wages within the state, and (2) comparable statistics of wages outside of the state.

(1) Statistics of women's wages within Minnesota.

The subject of wages within the geographical limits of Minnesota has been studied by three important agencies besides the Minimum Wage Commission: (1) the State Bureau of Labor, (2) the United States Bureau of Labor, and (3) the United States Census.

Agencies collecting wage statistics in Minnesota

The Minnesota Bureau of Labor has published statistics of wages of females in the state for 1888, 1889, 1900, 1902, 1904, and 1910.

(3)

The investigation of 1888 covered about one thousand women employed in laundries, domestic service, restaurants, telephone and telegraph exchanges, book-keeping, copying and stenography; clerking, and seventeen manufacturing occupations. Enumeration was made by field

State Bureau of Labor, 1888

(3) Minnesota, Bureau of Labor Statistics, First biennial report, 1887-8, 131-196.

agents. Hours, working conditions, and living expenses were investigated in some detail. The information published on wages, however, was confined to the average weekly wage paid in each occupation, a method of presentation which conveys little information as to the prevailing wage, and is often highly inaccurate. (4)

For "clerking", i. e. retail store clerking, this average was reported as \$7.04, and for all occupations, \$6.67. (5) As no attempt was made to present frequency tables of wage rates, the isolated averages were of small value and uncertain accuracy.

The next wage investigation undertaken by the state labor department covered the years 1899 and 1900. The enumeration was carried on simultaneously with the work of factory State Bureau of Labor, 1899, 1900. inspection; in the case of large establishments the wages paid were transcribed direct from the pay-rolls. Statistics of the wages of male and female employees for ninety-seven different forms of business, including department and other retail stores and wholesale establishments, as well as manufacturing and mechanical industries. Separate occupations within the industry were not distinguished. The data are presented in frequency tables of weekly wage rates covering, in 1900, 9,851 females, employed in 2,846 establishments. Tho confessedly incomplete, the work appears to have been accurately done, both

(4) The method employed by the federal census in computing the average wage was to divide the total wages paid by the estimated average number of wage earners during the year. Because of seasonal employment, "so great are the uncertainties attending the computation of the average number of wage earners that an average wage per wage earner computed on this basis is misleading." The practice has therefore been abandoned. Bureau of the Census, Bul. 93, p. 9; Census of Manufactures, 1905, Part 1, page lxxxix; Twelfth Census, Employees and Wages, page xiii.

(5) In the same year the U.S. Bureau of Labor gave the average weekly earnings of 333 women employed in St. Paul as \$6.02. U.S. Commissioner of Labor, Fourth annual report, 1898, 68, 514-517.

as to enumeration and tabulation. The present able statistician of the bureau, Mr. Lescohier, who has had ample opportunity to test the returns of the 1900 inquiry, considers them sufficiently accurate to base conclusions upon as to subsequent changes in wage rates.

The succeeding biennial report (1901-1902) also contained wage statistics. (5) The number of women employees covered was 9,455, about the same as in 1900. Altho the number of indus-

tries distinguished was less, an attempt was made State Bureau of Labor, 1902. to differentiate occupations within each industry, establishing a precedent which has been wisely followed in the bureau's subsequent investigations. In one important respect the returns were less reliable than those for 1900. Instead of being transcribed direct from the pay-rolls by the bureau's factory inspection service, the information was compiled from reports furnished by employers, of which, says the commissioner, a "large portion....could not be used." (6) That the returns accepted were not as accurate as could be wished is indicated by the improbable advance of 13.2 per cent which they show over the returns for 1900. (7) So great an increase of wages in two years is highly im-

probable; during the same period, according to the U. S. Bureau of Labor, the general level of wages advanced only 5 per cent. (8)

(5). Minnesota, Bureau of Labor, Eighth biennial report, 230-268.

(6). Ibid., 231.

(7). Cf. Table 18. Median wage of mercantile and manufacturing employees in 1902 was \$6.88, an advance of \$.80 or 13.2 per cent over \$6.00, that in 1900.

(8). Cf. Appendix II, Table 1, p. 554. Quoted from 61st Cong. 2 sess., Senate Documents, 349, 9. The general wage index for 1902 is there given as 107.9 (1899-100.0) a percentage increase of 4.9 over 102.9, for 1900.

In studying the advance of wages from 1900 to 1914 we shall have subsequent occasion to point out that the principal error in the 1902 statistics seems to lie in the figures for mercantile industry. The manufacturing returns are not demonstrably improbable. A second cause tending to raise the level of wages as reported in 1902 was the method pursued in tabulation of multiplying the hourly or daily wage, where reported, by the number of working hours or days in the week. (10) The results obtained by this method are full-time earnings while that employed frequently - exclusively by the census of manufactures two years later - of transcribing the amounts paid in a representative week gives actual earnings, a lower figure. On the whole the wage statistics in this report (1902) are less liable than those of 1900.

The bureau's report on wages for the year 1904 (11) gave unusually complete statistics for four industries employing women, viz., baking, garment and clothing manufacturing, steam laundering, and printing, but no attempt was made to cover other industries. As in 1902, the data were obtained from employers. (12) Statistics were presented separately for each of the three large cities, Minneapolis, St. Paul, and Duluth, and for other cities and towns in the state. The tables are badly in need of editing and through lack of totals for the state are cumbersome to use.

- (9). Infra., 123.
- (10). Minnesota, Bureau of Labor, Eighth biennial report, 231.
- (11). Minnesota, Bureau of Labor, Ninth biennial report, 1903-04, Vol. 1, 385-622.
- (12). Ibid., 387.

For five years after 1904 the state labor bureau did nothing with the subject of women's wages. In 1910 the services of Mr. Don D. Lescohier were secured as statistician, and under his

careful scientific direction an admirable study was State Bureau of Labor, made of wage rates in all important industries through- 1910.

out the state. (13) While the bureau relied upon the employers to fill out correctly the wage schedules sent them, instead of instructing the factory inspectors to transcribe the wage rates direct from the pay-rolls, the work was supervised with such care that Mr. Lescohier regards the information elicited as "fairly exact". (14) The returns represent wages paid during the month of March, 1910. Fifty-nine industries and 94,435 wage earners (male and female) were investigated. The number of females (exclusive of railroad employees) for whom accurate information was available was 7,739. (15) Hours of labor were recorded and occupations within the industry carefully distinguished. The data are presented in the form of frequency tables. In addition to the study of 1910 wage rates, Mr. Lescohier made an admirable study of comparative wages paid in 1900 and 1910. (16)

A second agency which has studied wage rates in Minnesota is the United States Census. At the Tenth Census (1880) and again at the Twelfth (1900) special reports on wages were prepared, and in connection with the Census of Manufactures of 1890 and 1905, questions as to wages paid were included in the schedule of the regular enumeration.

(13) Minnesota, Bureau of Labor, Twelfth biennial report, 327-537.

(14) Ibid., 328.

(15) Ibid., 611.

(16) Minnesota Bureau of Labor, Twelfth biennial report, 498-537.

The Census of Manufactures of 1880 made the first systematic attempt known to me to measure the rate of wages in this country. (17)

Six hundred twenty-seven manufacturing establishments in the United States - most of them mentioned by name - reported the rates paid by them for specific kinds of labor in 1880 and the years preceding. The hours worked per day and the number of persons employed at each rate were not reported.

Census of 1880. no mention is made of woman and child workers. Only three establishments in Minnesota reported, (18) and none of these mentions women wage earners. The information on wages presented by the Census of 1880 is, therefore, for our purposes valueless.

The Eleventh Census (1890) marked a great advance in the statistical study of wages. In connection with statistics of manufactures the aggregate wages paid to each sex and experience class of employees were presented, and from

Census of 1890. these averages were computed. These averages were of small value but in the volume on selected manufacturing industries, frequency tables of weekly and monthly wage rates were presented for lumber and timber, iron and steel, clay products, ship-building, textiles, and chemicals. For certain divisions of textiles only, a significant number of female employees in Minnesota were covered.

(17) As a source-book for the economic historian this work should be of value, since some of its wage reports reach back to the year 1801.

(18) The Mazeppa Mill Co., Mazeppa, Minn., and two other flour and grist mills in "Minnesota." Census of 1880, Vol. XX, 66-7.

From the census of 1890, therefore, the student may draw a reliable measure of the rate of wages prevailing in the woolen and knit goods industries of Minnesota. (19) It is needless to add that this information, confined to one hundred seventy females (over 15 years), concentrated in two industries, is wholly insufficient as a basis for generalizations as to the general level of wages in the state at the time.

The Twelfth Census (1900) collected no wage statistics in Minnesota. (20) However, at the quinquennial Census of Manufactures of 1905 an inquiry concerning wages was added to the regular schedule. The enumerators were instructed to transcribe from the pay-rolls of the establishment, not the rate of wages, but the actual wages paid each employee during the busiest week of the year. Three hundred thirty-three industries were covered. No attempt was made to distinguish occupations within the establishment. By no means all the establishments were satisfactorily reported, but when the defective returns had been excluded, there still remained 62.9 per cent of the whole number of establishments which reported that they employed wage earners. It is estimated that about 47 per cent of all wage earners employed in the manufacturing industries were thus covered. (21) The data are presented in the form of frequency tables of weekly earnings, by industries and by geographical divisions and states. For Minnesota, the statistics include

(19) Appendix III, p. 563.

(20) An extended report on "Employees and Wages" covering selected industries was, however, published. See p 67.

(21) Bureau of the Census, Bul. 93, 10. For Minnesota 4,079 women out of 8,430 were covered - 48.5 per cent of the total.

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the wages paid to men, to women over 16 years, and to children under 16, for all important manufacturing industries. The results are therefore comparable with the wage studies of the Minnesota Bureau of Labor and Minimum Wage Commission, tho applying only to manufacturing employees. It must be remembered, however, that the Census of Manufactures reported actual earnings in a single week which may differ from full-time or average wages. The figures are now out of date: they present conditions in the year 1904, since when a notable advance has occurred in the general level of wages. (22) For the year they represent they are accurate, probably more accurate than any other wage investigation yet conducted within the state.

The statistics on wages of females in Minnesota published by the United States Bureau of Labor are of minor importance. In 1888 the Bureau published frequency tables of annual earnings of 333 women employed in 36 stores and factories in St. Paul. (23) The distribution, shown graphically in Plate 8, is almost identical with that reported in 1900 for the state by the Minnesota Bureau of Labor. The average weekly earnings of these 333 women were reported as \$6.02. (24) The returns, tho reasonably accurate for St. Paul, could not safely be assumed as representative of the general level of women's wages in the state. They are interesting, however, as being the earliest record of any significance on the subject.

(22) The writer finds the median wage of females employed in manufacturing in Minnesota advanced from \$6.33 in 1904 to 8.22 in 1914, an increase of 29.8 per cent. See p. 129.

(23) U. S. Bureau of Labor, Fourth annual report, Working Women in large cities, 514-517.

(24) Ibid., 68.

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The federal labor bureau again made an incidental investigation of women's wages within Minnesota in 1910. The congressional inquiry of that year into the condition of woman and child wage earners produced a nineteen-volume report, of which the fifth volume was devoted to wage-earning women in the stores and factories of Boston, Chicago, New York, Philadelphia, St. Louis, and Minneapolis and St. Paul. (25) The weekly earnings of 375 females in the Twin Cities are here recorded. (26) A none too successful effort was made to choose the cases at random. (27) The wage data were merely a by-product of the study of age, family connection, and living expenses which was the chief purpose of the bureau's investigation. As a measure of the prevailing rates of wages in Minnesota in 1910, the numbers covered are insufficient. The results are not in harmony with Mr. Lescohier's careful study of the same year covering 5,780 females, and to the latter report they must yield precedence.

(25) Report on condition of woman and child wage earners in the United States, 61 Cong. 2 sess., Sen. Doc., No. 645. Volume V, Wage-earning women in stores and factories.

(26) Report on condition of woman and child wage earners in the United States, 61 Cong., 2 sess., Sen. Doc. No. 645. Vol. V, Wage-earning women in stores and factories, 258-267.

(27) Ibid., 12-14. To insure the representative character of the returns the bureau's field agents took names at random from the pay-rolls open to their inspection. When, however, permission to secure data direct from pay-rolls was refused, the names and addresses were secured through canvassing companies, who sometimes "secured from employers lists of names which were used 'as leaders' to wage-earning districts where other names were collected." I doubt whether this method renders the selection sufficiently at random, as workers inhabiting a given locality are likely to be more or less homogeneous.

(28) The average wage for the 375 women covered by the U.S. Bureau of Labor's report is considerably lower than that indicated by the state labor bureau's returns. The two reports are summarized in the following table. For details of the federal statistics cf. Appendix III, 564.

Females employed in mercantile and manu- facturing establishments (exclusive of laundries and telephone exchanges).	Weekly wages									Total all wages
	Under \$3.00	\$3.00 and under \$5.00	\$5.00 and under \$6.00	\$6.00 and under \$7.00	\$7.00 and under \$9.00	\$9.00 and under \$12.00	\$12.00 and under \$15.00	\$15.00 and under \$18.00	\$18.00 and over	
Number										
State Labor Bureau, 1910	7	891	373	1296	1289	1236	383	202	103	5780
U.S. Labor Bureau, 1910	2	56	55	83	113	51	7	6	2	375
Cumulative per cent of total,										
State Labor Bureau, 1910	.1	15.5	22.0	44.4	66.7	88.1	94.7	98.2	100.0	
U.S. Labor Bureau, 1910	.6	15.5	30.2	52.4	82.6	96.2	98.1	99.7	100.0	

The median wage according to the state department's statistics is \$7.50. The same computed from the federal bureau's work is \$6.90. The discrepancy may be confidently attributed to the scanty number of instances covered by the federal bureau and their doubtfully representative character as explained in the preceding note. An equally glaring discrepancy will be found by comparing the federal bureau's wage returns for Boston with the statistics collected by the Massachusetts investigation of 1911. Report of the Massachusetts Commission on Minimum Wage Boards, 275.

(2) Comparable statistics of women's wages outside of Minnesota.

a. For the country as a whole.

One of the purposes of this thesis is to compare the minimum wage determinations of the other state wage boards with the orders of the Minnesota commission. To do so requires a comparative study of women's wages in Minnesota and elsewhere. Statistics of the present level of wages in Minnesota comparable with corresponding data for the rest of the country are not abundant. It therefore becomes important to examine in some detail such sources of comparable data as exist. Women's wages in the country as a whole have been investigated with varying degrees of intensiveness by three federal agencies: (1) the United States Immigration Commission, (2) the federal census bureau and (3) the United States Bureau of Labor Statistics.

The investigation of the federal immigration commission in 1910 was confined to industries in which immigrants were largely employed. Wage statistics for 72,515 females, of whom 57,712 were over eighteen years of age, were presented in the form of frequency tables of weekly rates. The lack of definite information as to the industries covered by the Immigration commission's data makes it of small value for compar-

(29) Abstracts of reports of the immigration commission, 61 Cong. 3 sess., Senate, Doc. No. 747. Wage statistics summarized in Vol. I, 376, 378.

ison.

In discussing statistical sources on women's wages within the State of Minnesota we have already mentioned the wage

investigations of the federal census of
Wage studies of (30) (31) (32)
the federal census 1880, 1890, and 1905, conducted
not covering Minnesota by the federal census bureau. Whenever
the census has collected statistics in Minnesota it has present-
ed comparable statistics for other states. In addition it pub-
lished in 1900 the admirable special report on "Employees and
Wages," (33) confined almost exclusively to manufacturing establish-
ments in the East and South. Except for a few industries on the
Pacific Coast no western establishments were covered. The
enumeration was conducted with great care. Comparable statistics
for 1900 and 1890 are presented by industries and occupations
within the industry. For our present purpose -- the measurement
of prevailing wage rates in establishments covered by the Minn-
esota commission's orders - the report is of value only to check
other statistics for 1900 covering the state. Another special
report of the census office, entitled "Women at Work," contains
much information concerning the race, nativity, parentage, age,
and marital relationship of female employees in 1900, but gives
no additional data on wages. (34) The last work of the federal

(30) Supra., 61.

(31) Supra., 61.

(32) Supra., 62. .

(33) Employees and Wages. Special report of the U.S. Census Office, 1900. By Davis R. Dewey, expert special agent.

(34) U.S. Census Office Special Reports, 1907. Women at Work Based on unpublished information derived from the schedules of the 12th Census; 1900.

census on wages was thus the Census of Manufactures for 1905, covering wages paid in manufacturing industries during the previous year, 1904. More recent information must be sought elsewhere.

The publications of the United States Bureau of Labor are the chief source of information concerning wages and working conditions of women in industry.

Women's wages in the U.S. as reported by the U.S. Bureau of Labor.

It is to them for example we must turn for a comparison of wage rates in the United States and abroad. (35) The general subject

of women in industry was one of the first to occupy the attention of the Commissioner of Labor after his office was created. It was the subject of the bureau's fourth annual report, (36) and received additional attention in the eleventh annual report. (37)

Since the creation of the separate Department of Labor and the reorganization of the old Bureau of Labor as the Bureau of Labor Statistics, a special series of bulletins bearing the title "Women in Industry" has appeared.

The most comprehensive survey of the working conditions of wage-earning women yet attempted in the United States is the Bureau of Labor's special report of 1910, prepared at the direction of Congress. (38) While wage rates were

Report on condition of women and child wage earners, 1910.

- (35) U.S. Bureau of Labor, 15th annual report, 1900. A compilation of wages in commercial countries from official sources.
- (36) U.S. Bureau of Labor, 4th annual report, 1888. Working women in large cities. The data presented for Minnesota are referred to above. See p
- (37) U.S. Bureau of Labor, 11th annual report, 1896. Work and wages of men, women, and children.
- (38) U.S. Bureau of Labor, Report on condition of women and child-wage earners in the U.S., 19 volumes. 61 Cong. 2 sess. Sen. Doc.

only one of the objects of the bureau's inquiry, frequency tables of wages were presented for some 100,000 women over sixteen years of age employed in the cotton, (39) men's clothing, (40) glass, (41) (42) and silk industries: in factories, and in various selected industries. (43) Altho collected with the bureau's well-known thoroughness these statistics are rarely of value for our purposes because the industries covered are unimportant in Minnesota. In addition the wages paid by twenty-six of the largest department stores of New York, Chicago, and Philadelphia, employing in all 35,772 (44) females, were tabulated. These are strictly comparable to the statistics of wages in Minnesota department stores collected by the state labor department and wage commission.

It is to the Bureau of Labor Statistics also that we must turn for authoritative measurements of changes in wage rates. The method of index numbers, long familiar as applied by the bureau to retail and wholesale prices from 1890 to the present, has also been extended to wages in selected industries. By securing

Historical changes in wage rates

- (39) Ibid., Vol. I, 305.
- (40) Ibid., Vol. II, 129.
- (41) Ibid., Vol. III, 411.
- (42) Ibid., Vol. IV, 155
- (43) Ibid., Vol. XVIII, 23.
- (44) Ibid., Vol. V, 45.

annual reports from the same plants geographically distributed so as fairly to represent conditions prevailing in the industry, satisfactory indices of wages per hour, and hours per week have been developed. Records are available as far back as 1890 for the hosiery and knit goods, boot and shoe, cotton goods, lumber, millwork, furniture, and car-building industries; and as far back as 1910 for cigars, men's clothing, and iron and steel manufacture. While the bureau does not in most cases present indices of women's wages separately from men's, the statistics are invaluable as practically the only accurate indicator of the general trend of wages. The number of industries covered by the Bureau of Labor's wage studies does not yet suffice as a basis for a weighted index of all wages ⁽⁴⁵⁾ such as has long been calculated for retail prices. It would be rash to assume that the trend of wages in a single industry or the weighted trend in an important group of industries accurately represented that in all industries. Nevertheless the close parallelism of the indices for the industries covered creates a strong probability that the general level of wages has moved concurrently and by an approximately equal ratio of variation.

(45) Such an index was formerly computed for all manufacturing industries but is now discontinued. The latest year for which it was attempted was 1907. See U.S. Bureau of Labor, Bul. 77, July 1908, Wages and hours of labor in manufacturing industries, 1890.

b. For single states or cities.

Many of the state labor departments periodically collect statistics of wages, the mass of which are too incomplete in geographical or occupational scope, of too dubious accuracy, or too great age to be used to check the returns made to the Minnesota wage commission. A more fruitful source for comparison is to be found in the published results of commissions appointed to report upon the advisability of minimum wage legislation and of the various minimum wage boards subsequently created. The methods employed by these bodies have been markedly similar; their investigations were made at about the same time; and at least for mercantile employments, upon which public attention has been chiefly focussed, they are generally comparable. Where industries have been carefully distinguished in tabulation, returns for identical manufacturing industries should also be comparable, but the multiplicity of industries and the difficulties of obtaining an accurate record of piece-rate earnings, even where transcribed direct from the pay-rolls, tend to impair the comparability of the returns. For wages of females in mercantile establishments

Publications of state labor bureaus

there are available the following comparable sources; 1910, New York, (46) Chicago, and Philadelphia;

Comparable statistics for mercantile employees

(46) U. S. Bureau of Labor, 1910. In report on condition of woman and child wage-earners in the United States. vol. V, Wage-earning women in stores and factories, 40 and 45. Data collected from pay-rolls of 26 of the largest department stores in New York, Chicago, and Philadelphia, by agents of the Bureau of Labor. Table, p.45.

	(47)	(48)	(49)	
1911, Massachusetts,	Kentucky;	1912, Oregon,	and the	
	(50)	(51)	(52)	
District of Columbia;	1913, Ohio;	1913-14, Connecticut,		

- (47) Massachusetts. Report of Commission on Minimum Wage Boards. Collected in 1911. Returns "based upon pay-rolls and first-hand inquiries by trained investigators,"-p.9. Table, pp. 113-114.
- (48) Kentucky, 1911. Report of the Commission to Investigate the Conditions of Working Women in Kentucky. "The data on wages were, for the most part, copied from the books and pay-rolls of the employers; where such records were inaccessible, for whatever reasons, careful estimates of employers were accepted, or in the case of some firms, the data was sent in through the mails,"-p.15. Tables on pp. 48-49.
- (49) Oregon. Report of the Social Survey Committee of the Consumers' League of Oregon on the wages, hours and conditions of work and cost and standard of living of women wage earners in Oregon with special reference to Portland. January 1913. Wages supplied by employers on solicitation, p. 19. Table, p. 25.
- (50) District of Columbia, Dec. 1, 1912. U. S. Bureau of Labor Statistics, Bul. 116, Hours, earnings and duration of employment of wage-earning women in selected industries. Data transcribed from pay-rolls, p. 21. Table, p. 20-21.
- (51) Ohio, Industrial Commission, Dept. of Investigation and Statistics, Report No. 1. Wages and hours of labor of women and girls employed in mercantile establishments in Ohio in 1913. Returns by mail by self-enumeration of employers. Compliance obligatory by statute, p. 6. Table, p. 9.
- (52) Connecticut. Report of Bureau of Labor on the conditions of wage-earning women and girls. 1913-14. "Figures taken directly from the merchants' pay-roll and substantiated by the personal statements of the employees," by Miss Holloway, industrial investigator, -p. 96. Table, p. 100.

(53) Indiana, (54) Minnesota, (55) Washington; (56) 1912, Colorado. Similar studies were made in Pittsburgh (1908) (57) and Baltimore(1909) (58)

- (53) U.S. Bureau of Labor Statistics, Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. Wage rates transcribed from pay-rolls by agents of the bureau, p. 7. Table, p. 33.
- (54) Minnesota Minimum Wage Commission. First biennial report, 1914, pp. 5-19, and the present thesis, pp. 260-278. Wage statistics for date of April 1 by self-enumeration from employers on blanks distributed by the commission, and from employees to whom schedules were furnished by the employer at the commission's request. Returns were for April 1, 1916, or nearest pay-day.
- (55) Washington, Report of the Industrial Welfare Commission on the wages, conditions of work and cost and standards of living of women wage-earners in Washington. Wage returns supplied by employer on blanks furnished by the commission. "The blank called for a certificate of correctness, to be signed by an official of the firm," p. 11. Table, p. 18.
- (56) Colorado, 1914, First report of the State Wage Board of Colorado. Data transcribed from copies of pay-rolls furnished by employers, p. 10. Table, p. 11.
- (57) Butler, Elizabeth Beardsley, Women and the trades. Pittsburgh, 1907-1908, The Pittsburgh survey, edited by Paul U. Kellogg. The statistics presented of wages of females employed in mercantile enterprises are as follows (p. 338) :

WAGE PER WEEK

	<u>\$3 to \$6.99</u>	<u>\$7 to \$7.99</u>	<u>\$8 or over</u>	<u>Total</u>
Number of employees	5,510	1,555	475	7540
Percent of total cumulative*	73.1%	93.7%	100.0%	

*The percentages are mine.

The figures are of doubtful value. Exact wage rates were not collected. The question asked was 'in which of these three wage classes do you fall?' It seems incredible that none earned less than \$3.00, as would be indicated by Miss Butler's table. The general level of wages is very much lower than that obtained by the much more careful investigations of about the same time in Massachusetts.

Even if thorely accurate, the figures are too old to be comparable with the minimum wage investigations, since they purport to represent conditions in Pittsburgh in 1908.

(58) Butler, Elizabeth Beardsley. Saleswomen in mercantile stores, Baltimore, 1909. Russell Sage foundation in co-operation with the consumer's League of Maryland. A frequency diagram, p. 114, for which no table is published, gives from inspection the following results.

Wage per week

	Total	Under \$2	\$2 to \$2.99	\$3 to \$3.99	\$4 to \$4.99	\$5 to \$5.99	\$6 to \$6.99	\$7 to \$7.99	\$8 to \$8.99
Number	*4164	60	343	744	480	618	1118	320	182
Percent	100	1.4	8.2	17.9	11.5	14.8	26.8	7.7	4.4
Cumulative percent		1.4	9.6	27.5	39.0	53.8	80.6	88.4	92.8

Wage per week

	\$9 to \$9.99	\$11 to \$11.99	\$12 to \$13.99	\$14 to \$14.99	\$15 to \$17.99	\$18 and over
Number	55	95	20	48	20	22
Percent	1.3	2.3	.5	1.1	1.0	.5
Cumulative Percent	94.1	96.4	96.9	98.0	98.5	100.0

*The sum of the values read from the graph is here used rather than Miss Butler's own total of 4048. (cf. p. 113)

A comparison of these unofficial returns with the U. S. Bureau of Labor's work only a year later in the department stores of New York, Chicago, and Philadelphia, (see p. 154.) which gives the proportion of females earning under \$10 as 76 percent as against Miss Butler's conclusion for Baltimore of 94 percent, casts doubt upon the reliability of her results. In the absence of a complete explanation of the method of enumeration and the numbers upon which her graph is based we cannot accept it as comparable with the wage commission's studies in Minnespta.

Aside from the Pittsburgh and Baltimore wage studies, which the supposedly authoritative, are unofficial, the investigations of the several wage boards and special commissions seem to be reasonably reliable. The principal question which may be raised against them is the completeness of the returns. In the case of mercantile establishments, the returns appear sufficiently representative, and therefore comparable.

Greater care should be exercised in drawing conclusions in regard to geographical variations in wage rates in other industries. Comparable statistics

For other employees (59) for steam laundresses are available from
 Massachusetts, (60) Kentucky, (61) Oregon, (62) Colorado, and
 (63) Washington; and for telephone girls, from Kentucky, (64)

- (59) Massachusetts, Minimum Wage Commission, Bul. No. 5, Wages of women in the laundries of Massachusetts, 1914.
- (60) Kentucky, Report of the Commission to Investigate the Conditions of Working Women in Kentucky, 1911. Table, p.51.
- (61) Oregon, 1912, Social Survey Committee of the Consumers' League, Report on the wages of women-wage-earners... 35.
- (62) Colorado, First report of the State Wage Board, 1914, 11.
- (63) Washington, Industrial Welfare Commission, Report on Wages of women in Washington, 1913-14, p. 30. In addition Bul. 122, U. S. Bureau of Labor Statistics, Employment of women in power laundries in Milwaukee, 82-92, gives unclassified wages of 550 females by occupation within the industry.
- (64) Kentucky, Report of the Commission to Investigate the Conditions of Working Women....., 1911, 50.

(65) Oregon, and Colorado. (66) In the case of manufacturing employees, comparison of earnings in one locality with those in another may lead to false conclusions because of the varying degrees of skill required or the seasonal character of employment, and the greatest care is required, in drawing such comparisons, to take into account these extraneous factors.

- (65) Oregon, Social Survey Committee of the Consumers' League, Op. cit., 41.
- (66) Colorado, First report of the State Wage Board, 1914, 11.

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II. Method, scope and accuracy of the Minimum Wage
Commission's report on wages in Minnesota.

(1) Method.

From the preceding review of sources of information on earnings of women workers in Minnesota, it is evident that the wage commission's investigation of wage rates was warranted by the lack of existing data at once accurate and up-to-date. The method employed was self-enumeration by employers on schedules supplied by the commission rather than the more satisfactory method of enumeration by field agents.

The two great desiderata of statistics are adequacy and accuracy. Self-enumeration secures the first of these only when a complete count of all individuals is unnecessary, unless indeed the initial canvass is so checked by further letters or visits of inspection as to make the method virtually enumeration by an agent. However, in the case of many kinds of statistics, notably price and wage statistics, a complete enumeration is unnecessary provided the cases selected are sufficiently numerous to typify the whole. Adequacy cannot be determined by any rule of thumb; in all cases it is a question of fact. In discussing the margin of error therefore in the commission's wage studies in Minnesota, we must answer the question; Was the number of employers reporting sufficient to assure the adequacy of the statistics?

Accuracy, the second desideratum of statistics, depends in the case of self-enumeration on the clearness of the schedule and the intelligence and honesty of the persons enumerated. The accuracy of the commission's wage statistics will be discussed in section 3 of this chapter. For the present, let us consider their adequacy.

(2) Adequacy of the wage returns.

While conscious of the limitations of self-enumeration, the commission lacked funds sufficient for the more satisfactory method of enumeration by a field agent. Two schedules were prepared, one by the Twin City Mercantile Advisory Board to be circulated among mercantile employers; the other by the corresponding board for manufacturing establishments designed to cover the factories of the state. These schedules, bearing the name of the commission and the boards as well, were distributed by mail. No complete list of employers of women and minors in Minnesota had ever been prepared. Schedules were therefore sent to all firms listed in the city directories of Minneapolis, St. Paul, and Duluth, or in Polk's Gazetteer, which seemed by the brief description given of their business likely to employ women or minors. Undoubtedly many establishments coming under the scope of the act were never reached, but the proportion of the total cannot have been large, and of those overlooked few can have been important. The schedule was accompanied by a circular letter (67) explaining the purpose of the investigation,

Adequacy of the employer's returns

(67) A copy of the letter is included in Appendix IV, p. 565.

calling attention to the clause in the statute which confers upon (68) the commission the authority to compel the production of evidence, and directing the return of the schedule, duly filled out, within two weeks of its receipt. Time and funds did not permit any systematic endeavor to follow up the initial letter with a second request to insure returns from delinquent employers. As no complete record was kept of the addressees it is impossible to state what proportion of the schedules sent out were ultimately returned. The fact that a very large number of employers failed to reply raises question as to the sufficiency and hence as to the representative character of the returns.

Table 2.

Establishments reporting wages of employees to Minnesota
Minimum Wage Commission, April 1, 1914.

Industry	Estab- lish- ments Report- ing	Total Employees	Males		Females	
			Total	21 years & over	Under 21	Total
Twin Cities, total						
Manufacturing & mercantile	442	30,281	16,919	14,600	2,319	13,362
Mercantile, total	162	10,603	5,304	4,466	838	5,299
Retail mercantile	112	7,807	3,140	2,611	529	4,667
Wholesale mercantile	50	2,796	2,164	1,855	309	632
Total Manufacturing	280	19,678	11,615	10,134	1,481	8,063
Duluth, total	75	3,081	2,126	1,790	336	955
Mercantile, total	32	1,364	723	590	133	641
Retail mercantile	25	873	334	273	61	529
Wholesale mercantile	7	491	389	317	72	102
Total Manufacturing	43	1,717	1,403	1,200	203	314

(68) Minnesota, Laws of 1913, chap. 547, sec. 4.

The Commission's published statistics of wages cover only the three cities of the first class, Minneapolis, St. Paul, and Duluth. (69) The wages of 14,317 females employed in "mercantile" and "manufacturing" establishments are presented. This total does not include women engaged in agriculture, extraction of minerals, transportation (in which telephone and telegraph employees are most numerous), public service, professional service, domestic and personal service, and clerical occupations. Women in all of these additional occupations fall under the protection of the minimum wage act, (70) and in the case of certain of them (71) the commission fixed minimum rates in its orders, but wage statistics were published only for the two classes, "mercantile" and "manufacturing." Similar statistics of wages of 2655 male minors are published for the first time in this paper. The sufficiency of these returns can be checked by comparison with the federal census of occupations and of manufactures.

The census of occupations of 1910 reported 145,605 females in Minnesota engaged in gainful occupations, or 19.5 per cent of the total female population of the state ten years of age and over. The proportion is lower than that for the country as a whole (23.4) tho the highest for the west

Females in gainful occupations in Minnesota

(69) Ninety-three females from Winona are however included in Table 50, p. 238, which gives wages as reported by employees.
 (70) Minnesota, Laws of 1913, chap. 547, sec. 2.
 (71) "Office, waitress, or hairdressing occupations," and "mechanical, telephone, telegraph, laundry, dyeing, dry-cleaning, lunch room, restaurant or hotel occupations." Minnesota Minimum Wage Commission, First biennial report, 46-49.

north central states. The percentage of women engaged in gainful occupations is much higher in the three large cities than in the state as a whole; for Minneapolis it was in 1910 28.8 percent, for St. Paul, 30.4 percent, and for Duluth, 25.4 percent. The following table shows the distribution of female workers among the principal branches of industry:

Table 3

	The State		Duluth		Twin Cities	
	Number	Per cent	Number	Per cent	Number	Per cent
All occupations	145,605	100.0	6,746	100.0	60,709	100.0
Agriculture, forestry & Animal husbandry	12,671	8.7	12	.2	84	.1
Extraction of minerals	6	(1)			1	(1)
Manufacturing & mechanical industries	25,859	17.8	1,193	17.7	14,372	23.6
Transportation	2,847	2.0	152	2.2	1,365	2.2
Trade	11,263	7.7	666	9.9	6,487	10.7
Public service (not elsewhere classified)	340	.2	8	.1	37	.1
Professional service	23,179	15.9	876	13.0	6,556	10.8
Domestic & personal service	54,643	37.6	2,693	39.8	21,204	34.9
Clerical occupations	14,797	10.1	1,146	17.0	10,603	17.5

(1) less than .1%

(72) Compiled from Thirteenth Census of the U.S., 1910, Vol. IV., Occupation Statistics.

The first two occupational classes are self-explanatory. Under manufacturing and mechanical industries are included earners, skilled and unskilled, engaged in the operative as distinct from the distributive branch of manufactures. In the Twin Cities these industries employ nearly one-fourth of all women workers. In the transportation group the chief occupations for women are telephone and telegraph operation. Trade embraces employees engaged in the selling departments of mercantile business as distinguished from office forces, and provides work for one-tenth of the female employees of the Twin Cities. Of women engaged in professional service more than half are school teachers. The important occupations of musician and of nurse also fall here. The largest group of all, domestic and personal service, constituting between one-third and two-fifths of the whole, includes servants, housekeepers, waitresses, boarding-house keepers, nurses (not trained), and laundresses employed in homes and in laundries. In clerical occupations, constituting seventeen percent of all women earners in the three large cities, are included book-keepers, cashiers, clerks (other than in stores), stenographers, and typewriters.

The comparability of these figures with the results of the minimum wage commission's wage investigation of 1914 is affected by several causes. The increase in population between the two enumerations, amounting to 7.4 per cent if the rate of increase 1900 to 1910 were maintained, was doubtless

Comparability of number of females reported by census of occupations and by commission

(73) Increase 1900-1910, 18.5 per cent.

reflected in an increase in the numbers of female employees. Moreover, the returns of the occupation census include all women engaged in the specified occupation for any period of time sufficiently long to acquire the character of earners whether employed at the time or not. The wage commission's figures on the other hand embrace females employed in the establishment on April 1, or the date of nearest available pay roll. In addition, the great occupational groups devised by the federal index of occupations have somewhat different content from the terms mercantile and manufacturing as employed by the commission. Thus the total of 25,859 "manufacturing and mechanical industries" by the census of occupation includes 11,468 dressmakers and seamstresses employed outside of factories, chiefly by day work in private homes. These could not be reached through employers and hence are not represented in the wage commission's statistics. Finally, the classification of the census is occupational, while that of the wage commission is industrial. The commission asked each manufacturer for the wages of all women in his establishment whether in office or shop, and it was impossible in tabulating the returns to distinguish occupations within the industry. The census classed the office employees of factory, store, or law firm as in "clerical occupations." To estimate from the occupation returns the total number of women employed in mercantile and manufacturing establishments, these clerical employees must be apportioned between factory and store.

The following table attempts such an apportionment for mercantile employments, assuming that the "clerical occupations", book-keepers, cashiers, clerks, stenographers and typewriters are

distributed between the groups manufacturing, transportation, trade, public service, and professional service on the basis of (74) the number of all persons engaged therein.

(74) The apportionment was determined as follows:

Industry	All persons engaged in industry	Per cent of total
Manufacturing and mechanical industry	190,927	47.0
Transportation	76,230	18.8
Trade	86,761	21.3
Public Service	9,843	2.4
Professional Service	42,637	10.5
	<u>406,398</u>	<u>100.0</u>

Table 4.

Estimated total number of females in mercantile employments,
based upon census of occupations, 1910.

	Duluth	Twin Cities
"Trade" employees, (*) Does not include office help.	606	6,025
Additional mercantile employees apportioned from "clerical occupations":		
Bundle and cash girls	30	269
Book-keepers, cashiers and accountants (†)	66	578
Clerks, (except in stores) (†)	27	446
Stenographers and typewriters (†)	<u>143</u>	<u>1,160</u>
Estimated total mercantile employees, 1910	872	8,478
Estimated total mercantile employees, April 1, 1914	1,018 (‡)	9,700 (¶)
Reported by employers to Minimum Wage Commission, April 1, 1914		
Number	641	5,299
Per cent of estimated total reported	63%	55%

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- (*) Includes clerks in stores, saleswomen, and all other mercantile earners except "retail dealers."
 - (†) Apportioned as explained in note (1), page 116.
 - (‡) Duluth increased in population 48.1 per cent from 1900-1910. A proportionate increase from 1910 to 1913-14 would be 16.8 per cent. This figure is here assumed as the rate of increase in number of mercantile employees.
 - (¶) The metropolitan district Minneapolis - St. Paul increased in population 41.5 per cent from 1900 to 1910, a proportionate increase from 1910 to 1913-14 would be 14.5 per cent, which is here assumed as the rate of increase in the number of mercantile employees.

The total number of mercantile employees given in the accompanying table (9,700 in the Twin Cities) is purely an estimate, and small reliance should be placed upon it. Since it represents the total number of females employed in mercantile establishments at any time during the year the chances are that it is higher than the number at work on April 1 whatever that number may have been. As they stand, the figures indicate that the wages of 55 per cent of all the mercantile employees in the Twin Cities and 63 per cent of those in Duluth were reported to the commission.

That 60 per cent is an approximate measure of the completeness of the commission's mercantile returns may be demonstrated by another method. The ratio of mercantile to manufacturing employees appears to be about 60 to 100 for the Twin Cities. On the basis of the census of occupations it is 63.3; on that of the commission's employees' schedules, 60.2; and according to the employers' returns, 65.6.

(75)	Mercantile	Manufacturing	Ratio, mercantile to 100 manufacturing.
Female employees exclusive of office help as reported by census of occupations.	6,025	9,525	63.3
Total females reporting on employees' schedules.	2,189	3,639	60.2
Total females reported by employers.	5,299	8,063	65.6

Assuming that the number of female employees in mercantile industry is 63 per cent of those engaged in manufacturing, there were about 8,210 women and girls engaged in mercantile pursuits in the spring of 1914. (76) Of this number 5,299 females reported by the employers to the wage commission constitute 64.5 per cent. By a similar calculation the Duluth mercantile returns are estimated to cover 83 per cent of the women actually employed in mercantile business at the time.

It appears therefore not a rash conclusion that the wage commission's figures cover at least three-fifths of the females employed in mercantile establishments in cities of the first class.

In the case of manufacturing employees, it is possible to determine the completeness of the wage returns made to the commission with some degree of precision. From the census of manufactures the number of females employed in each branch of manufacturing may be computed for the state; and for Minneapolis, St. Paul, and Duluth, the number in the more important industries.

With the statistics of the number of employees presented for manufacturing industries by the census of 1910, the numbers reported to the minimum wage commission are comparable, if allowance is made for the difference in the date they represent. The following table shows the number of manufacturing

For manufacturing employees
Establishments and employees in 1910

(76) Supra, 90. The estimated number of all female manufacturing employees in April, 1914 is 13,010 of which 63 per cent is 8,210.

establishments and female employees, first as reported in 1910 by the census, and then as estimated for the spring of 1914, three and one-half years later. In estimating the values for 1914, a per cent of increase proportional to that from 1905 to 1910 has been assumed.

Table 5.

Estimated number of manufacturing establishments in Minnesota and of the females employed therein on April 1, 1914.

Based upon the federal census of manufactures, 1910.

	Number of establishments			Female employees, average number						
	Census of 1910	Estimated per cent of increase. 1910 to April, 1914 *	Estimated number in April 1914	Census of 1910			Estimated per cent of increase 1910 to April, 1914*	Estimated number in April, 1914		
				Total	Clerks	Wage earners		Total	Clerks	Wage earners
State	5,561	11.8	6,230	Not given	Not given	Not given				
Duluth	194	13.3	220	536	92	444	43.8	772	134	638
Twin Cities	1,821	15.5	2,107	10,843	2,027	8,816	20.0	13,010	2,443	10,567
Minneapolis	1,102	18.0	1,302	5,376	1,302	4,074	19.1	6,408	1,553	4,855
St. Paul	719	12.0	805	5,467	725	4,742	20.7	6,602	890	5,712

* Assuming an increase proportionate to that reported for 5 yr. period, 1905-1910.

The total number of female wage earners in the Twin Cities as reported by the census of manufactures was thus 8,816, while the census of occupations gave the number of female manufacturing employees (excluding dressmakers and seamstresses not in factory) as 9,525. The difference is attributable to differences in definition and to the fact, already noted, that the occupation returns include all earners in the occupation whether employed at the time or not and hence exceed the average number of earners. A comparison of the numbers reported by the census of manufactures and the wage commission follows:

Table 6. Comparative number of establishments and female employees, as reported by the census of manufactures and the minimum wage commission.

	<u>Duluth</u>	<u>Twin Cities</u>
<u>Number of establishments.</u>		
According to census of manufactures, 1910	194	1,821
Estimated number, April, 1914	220	2,107
Reporting to minimum wage commission, April, 1914.		
Number	43	280
Per cent of estimated total reported	19	13
<u>Female employees.</u>		
Average number reported by census of manufactures, 1910	536	10,843
Estimated average number, April 1, 1914	772	13,010
Reported to minimum wage commission by employers, April 1, 1914		
Number	314	8,063
Per cent of estimated total reported	41	62

The above figures, which may be relied upon as approximating the truth, indicate

that about one-eighth of all the manufacturing firms in the Twin Cities reported to the commission, embracing 62 per cent of the females actually employed in the industry. For Duluth Sufficiency of wages for all manufacturing establishments, embracing in all about two-fifth of the females employed in manufacturing reported the wages paid by them.

In the case of individual manufacturing industries it has been deemed unwise to estimate the increase in establishments and wage earners from the census of 1910 to the wage commission's investigation. The trend of manufacturing industry in general may be projected into the immediate future with some assurance, but minor causes of variation may greatly retard or increase the rate of growth in the manufacture of a single line of goods. Some idea of the sufficiency of the commission's statistics of wages in particular manufacturing industries may, however, be gained from a reference to the accompanying tables, which compare the numbers reported to the commission in 1914 with those given by the census, three and a half years before. The returns in the manufacture of confectionary and crackers, electrotyping, lithographing, and engraving, and clothing factories are very complete; in the drug industry they are scanty; for the remainder, they range from one-fifth to four-fifths of the numbers reported by the census. For other manufacturing industries not included in these tables the federal census presented no statistics by cities; in these industries no means of checking the sufficiency of the returns is known to me. Where the numbers of employees are in excess of a hundred the law of chance would indicate that they may be accepted as a measure of the level of wages in that industry. At any rate the detailed

Table 7.

Sufficiency of the wage returns, Twin Cities.

Manufacturing industries for which comparable figures for the Twin Cities are available from the Census of Manufactures, 1910.

Industry	Number of establishments			Number of female employees		
	Listed by census, 1910	Reporting to commission Apr.1,1914	Per cent reporting	According to census 1910	Reported by employers 1914	Per cent Reported
All manufactures	1821	280	15.4	10,843	8,063	74.4
Drugs, pharmaceuticals and patent medicines	77	5	6.5	388	31	8.0
Bakeries *	169	16	9.5	451	86	19.0
Confectionery and crackers	21	7	33.3	334	476	142.2
Flour and cereals	13	5	38.4	282	155	55.0
Brewing and bottling	7	2	28.6	77	19	24.7
Cigars and tobacco	109	10	9.2	312	263	84.4
Leather goods other than shoes and gloves	23	9	39.1	70	19	27.2
Furniture factories	42	9	21.4	42	22	52.4
Wagons and carriages	34	2	5.9	14	4	28.6
Printing, book binding and publishing	329	38	11.5	1,609	573	35.6
Electrotyping, lithographing and engraving	8	7	87.5	15	24	160.0
Clothing factories	30	23	76.7	1,526	1,530	100.2
Fur making	31	7	22.6	570	168	29.4

* The classification used by the census is "bread and other bakery products."

Table 8.

Sufficiency of the wage returns, Duluth.

Manufacturing industries for which comparable figures for Duluth are available from the census of manufactures, 1910.

Industry	Number of establishments			Number of female employees		
	Listed by Census, 1910	Reporting to commission Apr.1,1914	Per cent reporting	According to census 1910	Reported by employers 1914	Per cent reported
All manufactures	194	43	22.2	536	314	58.6
Bakeries*	13	3	23.1	19	13	68.4
Cigars and tobacco	15	2	13.3	20	5	25
Leather goods other than shoes and gloves	6	2	33.3	6	0	
Lumber and timber products	14	7	50.0	3	4	133.3
Foundry and machine shops	13	1	7.7	6	5	83.3
Printing, book binding and publishing	35	5	14.3	61	27	44.4
Clothing, men's, including shirts	4	1	25	147	56	38.1

* The classification used by the census is "bread and other bakery products."

figures even if scanty are worth tabulating in the absence of reliable information from other sources.

There is no means of checking the completeness of the returns of wages of male minors. The census of manufactures makes

Sufficiency of the returns of male minors

no age classification of male wage earners except under and over sixteen years of age. Of the latter the numbers are insignificant. While the census of occupations recognizes age classes, it gives no totals for broad groups of industry and hence comparison with the minimum wage data is impossible. In the Twin Cities a total of 19,685 male minors engaged in all branches of industry was reported in 1910. (77) The

commission's data of 1914 embrace 2,319 male minors of whom 838 were employed in mercantile and 1,481 in manufacturing pursuits. The proportion of the total number of male minors at work in the Twin Cities who were covered by the wage commission's statistics (78) was thus 11.1 per cent as compared with 20.7 per cent for females.

It is wholly impossible to determine what proportion of all the male minors employed in any particular industry were reported to the commission. The fact that the wages of male minors were reported by the same establishments which supplied the data on women's wages seems to indicate that the sufficiency of the former in any particular industry would be a number of the same order as that of the latter. In the case of clothing factories, for example, where the

(77) Age statistics were not published by the occupation census for Duluth.

(78) Assuming an increase in the years from 1910 to April, 1914 in proportion to the general increase during the preceding decade, or 6.5 per cent

	1910	April, 1914 (estimated)
Females	60,709	64,655
Male minors	19,685	20,966

returns of female employees are estimated to be nearly complete, it seems not unlikely that the returns for male minors are also highly adequate. (79) Such a conclusion could not, however, be drawn for manufacturing industry as a whole, in which the returns for female workers appear to cover about 60 per cent of all women actually employed in the industry, for there is strong reason for believing that a number of firms employing almost exclusively males, - many foundries and machine shops for instance, - paid little attention to the inquiry because its chief emphasis was laid on females.

To summarize, the commission's wage statistics embrace 14,317 females and 2,655 male minors employed in 517 mercantile and manufacturing establishments, of which 442 are located in the Twin Cities and 75 in Duluth. No estimate of the proportion of mercantile establishments reporting can be made. Of manufacturing establishments in the Twin Cities there reported only about one-eighth, and of Duluth establishments only one-fifth. However those not reporting are chiefly small plants employing few women, for the number of females reported as employed in manufacturing in the Twin Cities is 62 per cent of the estimated total; and in Duluth, 41 per cent. The proportion in particular industries varies greatly. In the case of mercantile employees the proportion of the total covered by the wage commission's returns is about three-fifths in the Twin Cities and five-sixths in Duluth. In general it appears that the commission's data on wages cover about 60 per cent of the women employed in mercantile and manufacturing industry in the three cities of the first

Adequacy of the wage statistics, - summary

(79) Cf. Table 7, Supra 92.

class, a proportion high enough to guarantee the sufficiency of the returns. Concerning wages of male minors, no conclusion is reached as to the sufficiency of the returns for the broad group manufacturing taken as a whole. For specific manufacturing industries the proportion of male minors covered by the wage commission's data approximates that for females. For mercantile business as a whole no conclusion may be reached tho the writer ventures an opinion that the proportion covered is over one-half. The returns for male minors seem sufficiently inclusive to measure wages in the particular industries which they represent.

(3) Accuracy of the wage returns.

Accuracy, the second desideratum of statistics, is affected in the case of self-enumeration by three sources of error: errors due to ignorance, errors of misinterpretation, and errors of deception.

Accuracy of self-enumeration

Errors of ignorance may arise when the inquiries included in the schedule are beyond the memory, intelligence, -- and be it added the patience -- of the person interrogated. The most frequent effect of errors of ignorance is failure to answer an interrogatory. Errors of misinterpretation arise when the schedule is ambiguous, poorly drafted, or unduly complicated. Errors of this type may invalidate a large proportion of the returns, but they can usually by careful editing be detected, and discarded. Errors of deception, the third type, are more subtle. They arise where a motive for concealment or falsification exists in the mind of the person interrogated. They can not be eliminated by editing. About all that the conscientious statistician can do is to re-enumerate through agents, after he has demonstrated by comparative studies the probability of an error. To test the accuracy of the commission's wage studies we must ask therefore: Were the inquiries propounded such that they could be answered by an employer of ordinary understanding, whose books were reasonably well kept? Was each question so phrased that it admitted of but one interpretation? Was a motive for deception present in the minds of the employers, and if so to what extent did it influence their replies?

Copies of the two employers' schedules used for mercantile and manufacturing industry are included in Appendix .

Inquiries included in the schedule Both schedules asked for the name, address, and business of the employer; and the number of his employees, male and female, minors and adults. Blank tables of wage rates were to be filled in with the number of employees earning each wage rate. One of these was to be made out for all females, another for "female apprentices and learners," a third for all males under twenty-one, and a fourth for male "apprentices and learners" under twenty-one. Wages were to be given as "per week of full time," a provision which was sometimes overlooked by the person filling out the schedule. Two additional questions were included. The first of these (number 11 on the manufacturing schedule) read, "What educational opportunities do you provide for apprentices and learners in addition to shop training?" The question was answered in the majority of cases but the information elicited was not susceptible of statistical presentation. The last question on the schedule asked for an expression of opinion as to the length of time required to pass the stage of learner and of apprentice in the industry, and as to the proper minimum wages for male and female learners and apprentices. The replies to this question were tabulated for the sub-committee on apprenticeship of the Twin City Manufacturing Board.

(80) See p. 537 Infra.

They are, of course, expressions of opinion only, and in most cases not considered with great care. There appeared to be a marked tendency for the employer to recommend as a minimum wage the rate at which he was accustomed to start his employees.

In addition to the questions given in the manufacturing schedule, the mercantile employer was asked (question 6) to give the number of persons in his employ on the middle of each month during the year preceding. ⁽⁸¹⁾ The purpose of this question was to ascertain the seasonal ebb and flow of employment, but through lack of necessary records of age of employees and because of ambiguities in phrasing the question, the returns were utterly unreliable.

Question 7 of the mercantile schedule asks for the number of employees who earn specified wage rates in certain occupations within the store, cash girl, inspector, saleswoman, alterations and millinery employees, and office employees. The question was applicable to few establishments other than department stores and by them it was in some cases not filled out. The few returns which were received for this question were of little value, because no room was provided in the schedule for employees earning over \$12 per week, and it was impossible to tell what proportion of the employees in any occupation earned over this amount. The returns to this question have, therefore, not been deemed worth tabulating.

(81) Question 6, mercantile employer's schedule.
Appendix, p. 566.

Questions 8, 9, and 10 of the mercantile schedule sought to elicit information on the extent of the custom of allowing commissions or bonuses. The replies were fragmentary and have not been tabulated by the commission.

Lack of adequate records was a leading cause of the failure of many mercantile employers to reply to inquiry 6, concerning seasonal fluctuations of employment.

Errors of
ignorance in
the wage returns

To answer it required age records kept in conjunction with the pay-roll, which at that time at least few large employers could furnish. Question 10 of the mercantile schedule (see Appendix, 568) was too involved to be successfully answered by self-enumeration. Lack of records also was frequently the reason for the failure to answer 9, "What amount of commissions was paid to women and minors earning \$12 or less per week for the year ending April 1, 1914?" Information of this character can be successfully elicited only through an enumerator.

Upon one rock employers, manufacturing as well as mercantile, and commission alike suffered shipwreck. The replies to the questions as to rates of apprentices and learners (9 and 10 of the manufacturing schedule, 13 and 14 of the mercantile) were utterly worthless because of the difficulty of distinguishing a learner or apprentice from an experienced worker. The term "learner" has in the business world no definite connotation at all, and "apprentice" is fast losing any significance in modern industry with its high degree of specialization. "A 'learner',"

(82)
 reads the schedule, "is one engaged in any occupation, not learning a definite trade, but simply becoming proficient through experience in one line of work. An 'apprentice' is one learning a definite trade or craft." The line of demarcation was not sharp enough. The employers interpreted the question as best they could, in perhaps the majority of cases wisely refraining from an attempt to answer. As a result the replies to these questions are entirely misleading. The writer is convinced that no reliance whatever can be placed upon them.

The only questions on the employers' schedules for which replies at once fairly accurate and complete were received were those relating to the total numbers of male and female employees, and the wages paid all females and all male minors.

Errors of mis-
 interpretation
 in the wage
 returns

(83) (84)
 male and female employees, and the wages
 (85) (86)
 paid all females and all male minors.

These were indeed the principal object of the whole inquiry, yet even these are subject to errors of misinterpretation. Enough has already been said to indicate that the two schedules were marvels of inefficiency. (87) An incredible printer's error in

- (82) First page on both manufacturing and mercantile schedules.
- (83) Manufacturing schedule, question 5; mercantile, question 4.
- (84) Manufacturing schedule, question 6; mercantile, question 5.
- (85) Manufacturing schedule, question 7; mercantile, question 11.
- (86) Manufacturing schedule, question 8; mercantile, question 12.
- (87) The writer is glad to say that he was not concerned in drafting these schedules; he was not engaged as statistician until they had been distributed.

transposing the words male and female in questions 7 and 10 of the manufacturing schedule, which was not detected until many copies had been circulated, introduced great confusion. By careful editing, however, the replies could be satisfactorily interpreted, comparing the numbers with the reported totals on the first page.

The most troublesome blunder was the failure to provide in the blank wage tables a space for women earning over \$12 per week. (See schedule Appendix IV). The listed wage rates ran from less than \$2.00 to \$12.00 per week at intervals of 25 cents. No directions were given, indicating the number of employees earning over \$12.00. Without that information the absolute numbers earning less than \$12.00 per week meant little. No derivative measures of wage rates except the mode could be based upon them and the mode is peculiarly unsatisfactory as a measure of wage rates. (88) Average, median, quartile, and percentages of distribution, whether absolute or cumulative, all depend upon the total at all wages. Many employers corrected the faulty schedule by specifically stating the number of employees earning "over \$12.00." In the case of others, in editing, it was assumed that the difference between the total number of female employees given on the first page minus those mentioned as earning specific rates represented the number earning over \$12.00. This

(88). Because, in the case of women's wages at least, it is almost constant while average and median vary widely.

appears at first glance to be a rash assumption, since an error made by a single large establishment in either the total number of employees or the number earning less than \$12.00 might give a wholly erroneous impression as to the number earning over \$12.00. To determine the amount of the probable error introduced from this source, I have carefully rechecked each schedule and find that with a few important exceptions, chiefly department stores, the number of employees thus assumed to earn over \$12.00 is a wholly insignificant fraction of the total specifically reported as earning more than \$12.00. The chances of error, it should be noted, are as great in the direction of a deficiency as an excess and should therefore compensate. In addition I have re-enumerated with the employers a number of cases, largely department stores, in which the schedule did not specifically state the number earning over \$12.00, without discovering a single instance of appreciable error. After thoro investigation my conclusion is that the margin of error introduced into the returns by this failure to provide spaces for reporting women earning over \$12.00 is negligible. The commission's assumption that the difference between the total employees reported and the number reported as earning less than \$12.00 gave the number earning \$12.00 or over was, in all but a few insignificant exceptions, the assumption made by the employers in filling out the schedule.

Far more difficult to detect and eliminate than errors arising from ignorance or from misinterpretation of a faulty schedule are errors introduced by conscious deception. The temptation to

Errors of
deception in the
wage returns

deceive must be present in the mind of the employer who is conscious that he pays low wages. Even where the returns are obtained under a pledge not to publish names, the knowledge that they will be inspected by an advisory board of disinterested citizens, employees, or even brother employers cannot but react upon the individual employer as an inducement to make the wages he pays appear unduly high. He need not actually report rates which no employees in his business receive. He can raise the level by failing to report some of his lowest paid help, or, in the case of employees on piece work, he can report the earnings of an exceptional week as representative. That many employers are not above creating a false impression with the public is attested by the practice of the U. S. Steel Corporation of including in its published "average wage," the salaries of Judge Gary and its other officials.

(89)

How much this motive to exaggerate the rate may have affected the employers who reported to the Minnesota Minimum Wage Commission is a problem for our serious consideration. Their statements were not attested nor signed by any persons in particular. The fear of public criticism was undoubtedly present in their minds. Miss Evans had stated in the press that prevailing wage rates were low and the investigation of the advisory boards were even then

(89) United States Steel Corporation, Fourteenth annual report for fiscal year ended Dec. 31, 1915, p. 29. The "average salary or wage per employee per day" is given as \$3.01 for 1915.

attracting public attention. Had the employers reasoned collectively they might have foreseen that any systematic effort to exaggerate wage rates would recoil upon its instigators, since it would justify the commission in determining a higher minimum. However, upon the employer who paid low wages rested the individual temptation to avoid hostile criticism in the semi-publicity of the advisory board sessions by a favorable tho strained interpretation of his pay-rolls. The employer who paid high wages had nothing to fear by a common publicity to which his competitors also were subject. It is perhaps unjust to the employers of Minnesota to question their good faith; scientific thoroughness demands, however, that where, in conjunction with the opportunity to deceive through self-enumeration the existence of a motive to deceive is suspected, its probable influence be studied.

The accuracy of the employers' wage returns may be checked in four ways: first, by comparison with the testimony of their own employees who reported their wages in the cost of living schedules which many of them returned to the commission; second, by comparison with the results of other wage studies in Minnesota, particularly those made by the state bureau of labor; third, by comparison with the general level of women's wages in the country as reported by the United States Bureau of Labor and Immigration Commission; and fourth, by comparison with the results obtained by the minimum wage boards and other state commissions who were simultaneously investigating the subject in other states. These four methods of checking will be discussed in order.

Available means
of checking the
accuracy of the
wage data

(a) Checking the Accuracy of the Wage Returns, - first method. (90)

Inquiry number 3 of the employee's schedule read "Wages per week?" and no schedules were tabulated which failed to answer this fundamental question. The employees' returns should represent virtually the same establishments as those furnished by the employers, since in all cases the commission relied upon the employer to distribute the blanks to his employees and collect them when filled out. An employer who neglected to fill out his own schedule would not be likely to take much trouble to circulate the employees' blanks among his working force and conversely a public spirited employer who took the trouble to furnish the information required from himself would encourage his employees also to comply with the commission's request. There were of course many exceptions; employees' schedules were received from establishments where the management failed to reply; for many small stores and factories, from whom employers' returns were received, no employees reported; indeed in at least one important (91) case the management, tho furnishing the information asked of it, refused to permit the circulation of cost of living blanks among its women employees, alleging a fear that its working force

(90) Appendix, p 576.

(91) Brown and Bigelow, advertising novelty manufacturers, St. Paul.

would be demoralized. Making allowances for all these exceptions, it still appears that the returns of employers and employees cover substantially the same group of individuals and are in a high degree comparable.

Table 9 gives in parallel columns the wages of females in the three cities of the first class as reported by employers and employees. The mode is the same in the two cases, \$6 and under \$7 per week. According to the employers 82.7 per cent of the total earned less than \$12 per week; according to the employees, a slightly greater proportion, 84.4 per cent. The frequency histogram (Plate 1) presents the same information graphically. The dotted line, representing employer's returns, stops at \$11 to \$12 for lack of data as to its further course. It is to be noted that the graph for employers' returns is smoother than the employees', a difference which is in part attributable to the fact that it is based upon about twice as many instances. The modes appear as coincident and sharply defined. On the whole the parallelism of the graphs is striking. The average of wages reported by the employers can not be computed with certainty because of lack of information as to the distribution of those earning over \$12. The median wage can however be determined. As reported by the employees it is \$8.34; according to the employers' returns it is \$8.53. The discrepancy, nineteen cents, amounts to only two per cent of the higher figure.

For manufacturing and mercantile combined

Table 9.

Wages of females employed in mercantile and manufacturing establishments
in the Twin Cities and Duluth as reported by
employers and employees.

Wage per week	Employer's returns			Employee's returns		
	Number	Per cent	Cumulative Per cent	Number	Per cent	Cumulative Per cent
Total, all wages	6,449	100.0		14,317	100.0	
Earning under \$3.00				11	.1	.1
\$3.00 and under 4.00	29	.4	.4	82	.6	.6
4.00 " " 5.00	203	3.2	3.6	448	3.1	3.7
5.00 " " 6.00	602	9.3	12.9	1,341	9.4	13.4
6.00 " " 7.00	1,051	16.3	29.2	2,198	15.4	28.5
7.00 " " 8.00	1,024	15.9	45.1	2,090	14.6	43.1
8.00 " " 9.00	927	14.4	59.4	1,856	13.0	56.1
9.00 " " 10.00	688	10.7	70.1	1,616	11.3	67.4
10.00 " " 11.00	704	10.9	81.0	1,506	10.5	77.9
11.00 " " 12.00	219	3.4	84.4	685	4.8	82.7
12.00 " " 13.00	384	6.0	90.4			
13.00 " " 14.00	101	1.6	92.0			
14.00 " " 15.00	81	1.3	93.3			
15.00 " " 16.00	104	2.9	96.2			
16.00 " " 17.00	44	.7	96.9			
17.00 " " 18.00	39	.6	97.5			
18.00 " " 19.00	54	.8	98.3			
19.00 " " 20.00	9	.1	98.4			
20.00 " " 21.00	39	.6	99.0			
21.00 " " 22.00	8	.1	99.1			
22.00 " " 23.00	8	.1	99.2			
23.00 " " 24.00	4	.1	99.3			
24.00 " " 25.00	4	.1	99.4			
25.00 " " 26.00	22	.3	99.7			
26.00 and over	21	.3	100.0			
				2,484*	17.4	100.0

*Wage rates above \$12.00 not distinguished.

Plate 1 Comparison of wage rates reported by employers with rates reported by employees.

Total females employed in merchantile and manufacturing establishments in the Twin Cities and Duluth.

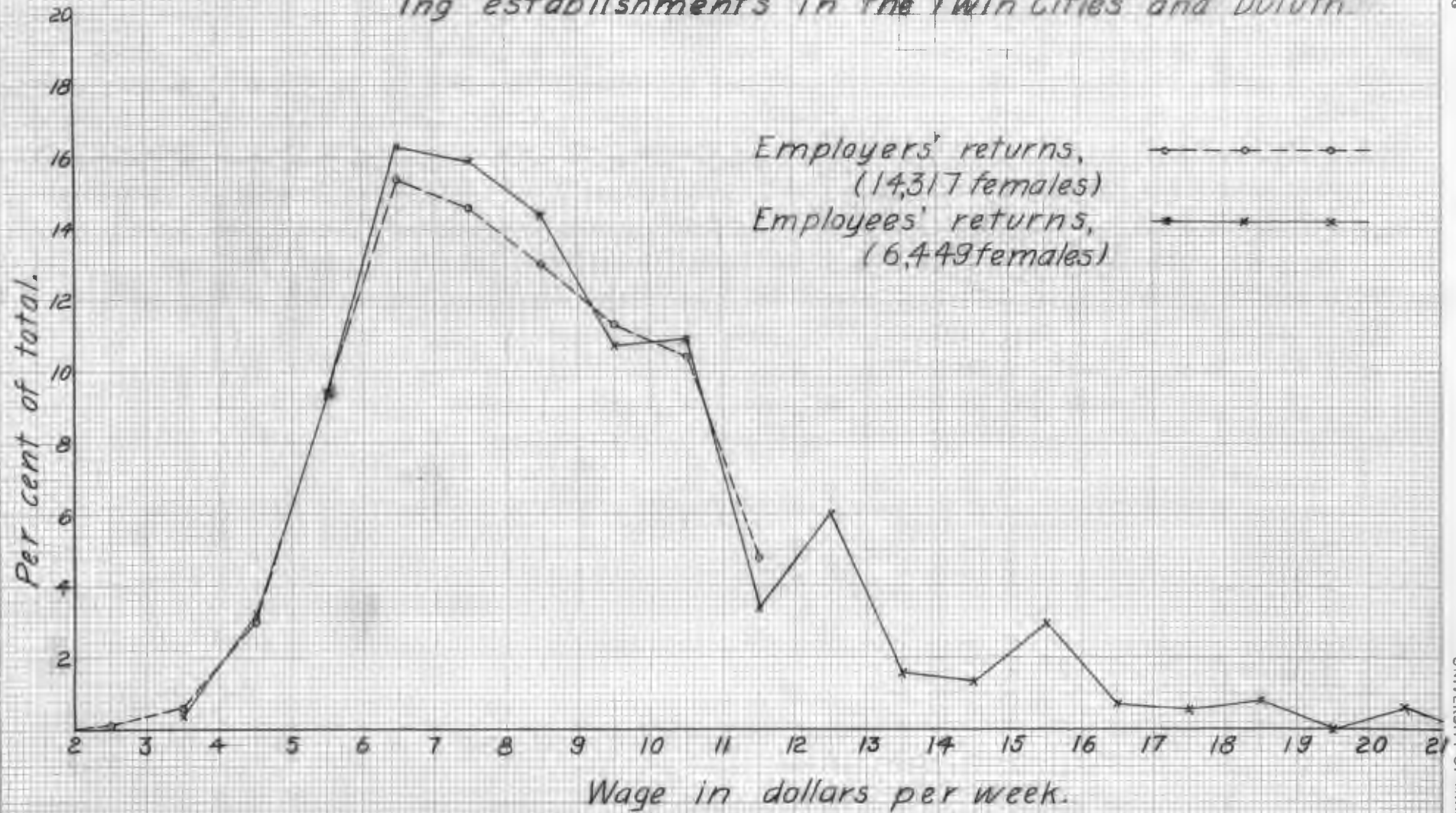
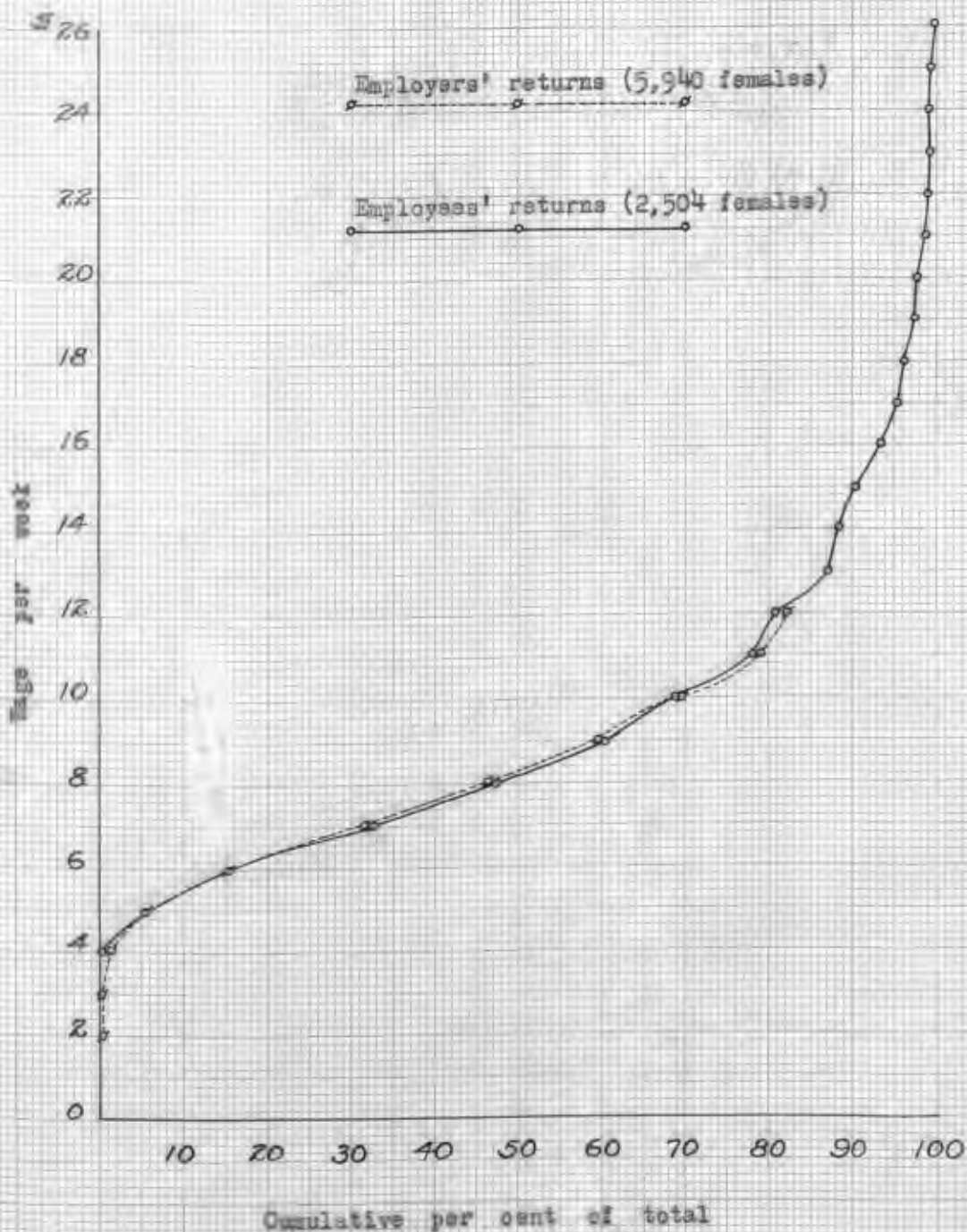


PLATE 2

Comparison of wage rates reported by employers with rates reported by employees

Females employed in mercantile establishments in the Twin Cities and Duluth



More striking is the parallelism exhibited by the wages of mercantile employees as reported by the two sources (92)

(Plate 2). Ogive curves are used here instead of the frequency histogram because the proportion earning over \$12 according to the employers' returns can by this method be represented. The two curves are as nearly identical as they well could be. By the employers' returns the proportion of the total earning less than \$12 is eighty-two and one-tenth per cent; by the employees' returns it is eighty and nine-tenths. The median wages are \$8.16 and \$8.20 per week respectively. It is noteworthy that the employees' returns are slightly the higher.

So far as mercantile employees are concerned, the two sets of returns could hardly corroborate each other more

Sources of in-accuracy in the employees' returns emphatically. It should be noted, however, that the fact of their coincidence does not of itself disprove the possibility of exaggeration in the employers' returns.

Two factors were active which may well have tended to raise the level of wages as reported by the employees also above that generally prevailing. In the first place, since the filling-out of the blanks was purely voluntary, it is probable that a larger proportion of the higher paid women would return schedules than of the extremely low paid women, because the former were more intelligent. Mitigating against this was the reluctance of the higher paid employees,

(92) Data for employers' returns (5940 females) in Table 29; for employees' returns (2504) in Table 51.

with whom concealment of identity was more difficult on account of their fewer numbers, to reveal their habits of expenditure as required by the schedule. A second cause tending to elevate the wages reported seems to have been the tendency of the majority of human beings to exaggerate their incomes. Mr. Hoffman, assistant statistician to the state labor bureau, a keen observer and a man of wide experience in labor statistics, told the writer that working people are very likely to make false statements about their earnings out of pride and a desire to appear well. How far this cause was active in the case of the wage commission's unsigned employee reports is not determinable. It seems possible that it was effective to the extent of inducing the worker to set down as typical the wage received in an exceptionally profitable week. However, even in view of these causes tending to impair the trustworthiness of the employees' reports, the remarkable correspondence between the two sets of returns creates a presumption in favor of the accuracy of the mercantile employers' returns.

The parallelism of the two sources in the case of manufacturing employees is less striking. A glance at Plate 3, (93) shows that the curve for the employers' returns runs consistently higher. Eighty-seven per cent of the total are earning under \$12 per week as reported by the employees;

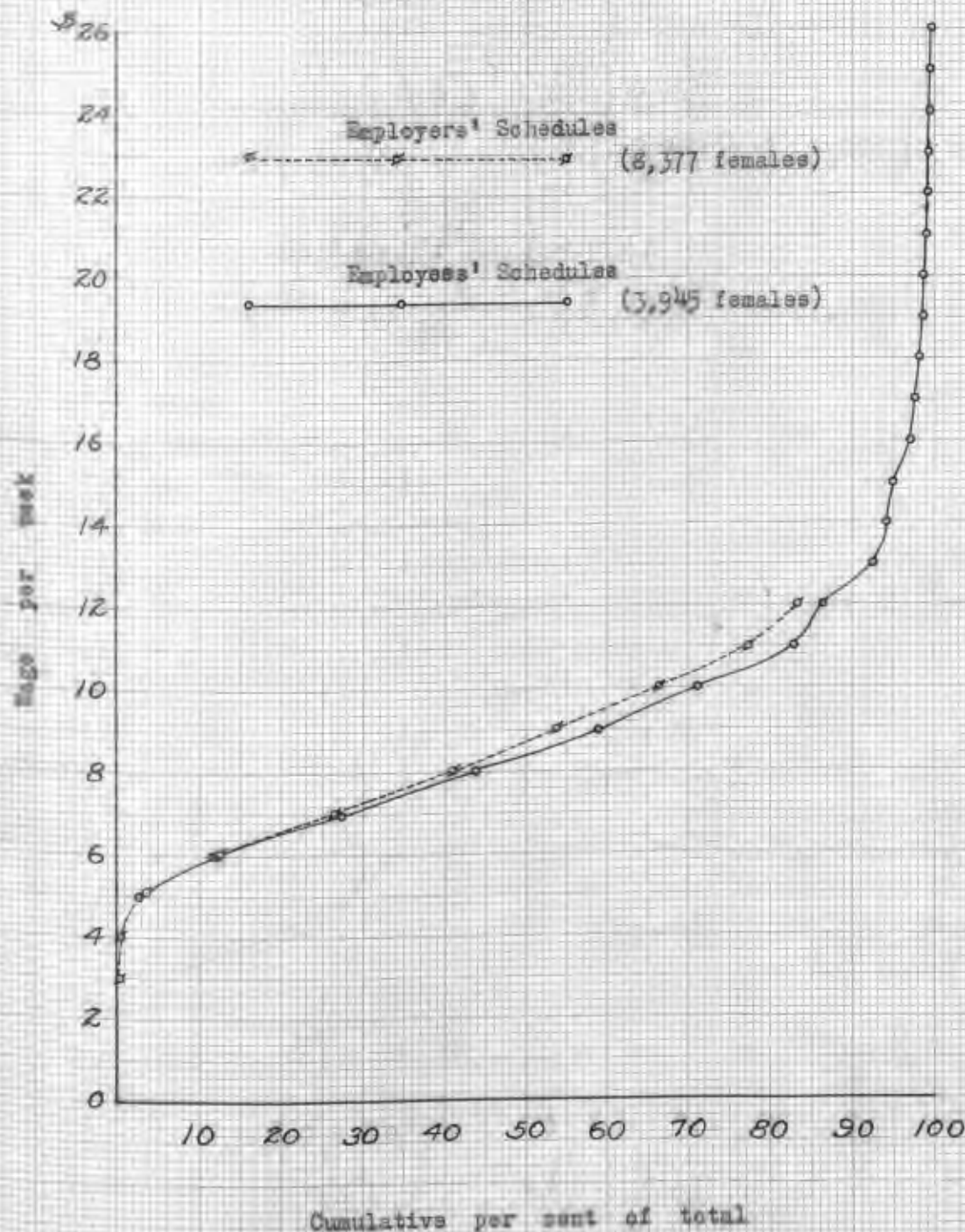
Comparison of employers' and employees' wage returns for manufacturing

(93) Data for employers' returns (8,377 females) from Table 39; for employees' returns (3,945 females) from Table 51.

Plate 3

Comparison of wage rates reported by employers with rates reported by employees

(Females employed in manufacturing in the Twin Cities and Duluth)



according to the employers only 83.1 per cent. The median wage based upon the employees' returns is \$8.41; upon the employers' replies it is \$8.71. The difference, thirty cents, amounts to 3.4 per cent of the higher figure.

The disparity between the two sets of returns at first sight lends support to the idea that the employers were guilty of exaggeration. If that were so, however, how came it that the mercantile employers reported wage rates slightly lower if anything than those returned by their employees? The motive for falsifying the returns was surely as strong with them as with the manufacturers; indeed we have already noted (Chapter I, p.32.) that the employers on the manufacturing advisory board were rather more public-spirited than their mercantile brethren. Nor can the apparent contradiction be explained on the basis of an insufficient number of instances, for even the mercantile employees' schedules embraced 2504 individuals. More probably, the explanation is due to a difference in the wage inquiry as phrased on the employers' and employees' schedules. The employees were asked for their "wages per week." The employers were asked to give wages "per week of full time." For mercantile establishments that meant in most cases a simple transcription of weekly time rates from the pay-rolls, the same sums which their employees would report as their weekly earnings. For factories paying by the piece the operation was not so simple. The commission neglected to specify any method of calculating full-time earnings, leaving it to the individual to interpret the phrase as he liked. Now in many

Actual and full-time earnings

11

Twin City factories the full-time hours per week number fifty-four, and workers employed on piece rate come and go at irregular hours and very frequently work less than the full time. In such factories fifty hours or less is not an uncommon week's work. In filling out the schedules the employers seem commonly to have increased the weekly earnings of each piece rate worker during the week of the enumeration to what she would have earned had she worked the entire fifty-four hours at the same rate. These full-time earnings might be appreciably in excess of the average weekly earnings of even the most industrious worker. Particularly inaccurate would it be when based upon a very short week's work, for the speed maintained during two or three days, or six working days of six hours each, would be physically impossible during the full time of fifty-four hours. While the employers interpreting the phrase "per week of full time" quite generally increased the actual earnings to proportionate full-time earnings, the employees, if resisting the tendency to lie about their wages for the sake of appearances, would naturally set down their average earnings during the number of hours which they had come to regard as constituting a normal week's work. In view of the fact, however, that the mercantile employers' and employees' reports agree so closely, the slightly higher level reported by employers than was reported by the employees in the same industry appears attributable to a difference of definition rather than to a conscious effort to deceive the commission. The manufacturing employers were reporting in many cases actual piece rate earnings; the employees were generally reporting their average actual earnings.

The discrepancy for all manufacturing-employees--time and piece rate combined--amounts only to 3.6 per cent.

Our first method of checking the accuracy of the employers' reports on wages--that of comparing them with the wage

Comparison of employers' and employees' returns, summary

reports of the employees from the same establishments--appears to vindicate the honesty and care of the employers. The

very close parallelism, amounting virtually to coincidence, between the two returns for mercantile establishments creates a presumption in favor of the accuracy of the employers' returns. The presumption may not, however, be regarded as a proof, for there were causes at work tending to make the employees' returns themselves unduly high. In the case of manufacturing industries the wages reported by employers range about 3.6 per cent higher than those reported by employees, a difference which appears to be caused by the inclusion in the employers' returns of "full-time" earnings for many piece-workers who themselves reported actual earnings, Altho only a fraction of manufacturing employees are employed at piece rates the proportion seems in all likelihood sufficient to influence the total.

(b) Checking the accuracy of the wage returns, second method.

Comparison with results of former studies in Minnesota.

In the early part of the present chapter attention was called to former studies of women's wages within the state made by the State Bureau of Labor, the census, and the United States Bureau of Labor. In a discussion of the method of these several studies it was pointed out that certain of the investigations were sufficiently accurate to furnish a basis of comparison with the minimum wage commission's statistics. The studies of value for comparison were:

Upward movement
of women's wages

Minnesota Bureau of Labor, 1900, 1910, and, somewhat less reliable, 1902. (94)

U. S. Census Bureau, Census of Manufactures, 1905, covering the wages in 1904. (95)

U. S. Bureau of Labor, 1888. (96)

By comparing the wages reported by these several sources two ends may be accomplished: the accuracy of the minimum wage commission's statistics may be checked, and if they be found reliable, the movement of wage rates in Minnesota during the past fifteen years may be measured. In the following pages evidence is presented to show that the wage statistics of the commission are in harmony

(94) Supra., 57-60.

(95) Supra., 62.

(96) Supra., 63.

with the previous studies made by the state bureau of labor and the federal census, and that the advance in the level of wages indicated by the commission's statistics over that prevailing before was but a part of a country-wide increase in wage rates coincident in time and of like magnitude. The general level of wages of women employed in stores and factories in the state is shown to have advanced from 1900 to 1914 in the approximate ratio of 100 for 1900, 123 for 1910, and 137 for 1914.

The following tables present in parallel columns the wages from 1888 to 1914 of women in the state employed in mercantile establishments, in manufacturing plants, and in mercantile and manufacturing combined, excluding laundries, telephone and telegraph exchanges, and street railway offices. In each case,

Method of presenting the comparative wage data

the data are presented graphically as ogive frequency curves. The cumulative frequency curves are used because the varying spread of the wage classes used by some of the investigations makes comparison by non-cumulative curves impossible. To insure the comparability of the statistics for the several years the wage data of the state labor bureau have been sifted to exclude from the total laundry, telephone, telegraph, and office employees, a task which in the case of the 1910 and 1900 figures involved great labor.

Table 10 and its accompanying graph (Plate 4) present the available data on wages of females employed in mercantile establishments of the state from 1900 to 1914. The mode remained constant at \$6

Wages of mercantile employees, 1900-1914

Table 10.

Wages of females employed in mercantile establishments in Minnesota from 1900 - 1914.

	1900 State Labor Bureau (a)			1902 State Labor Bureau (b)			1910 State Labor Bureau (c)			Minimum wage Commission, 1914. (d)		
	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent
Total	2,034	100.0		3,984	100.0		962	100.0		2504	100.0	
Under \$2.00 per week												
2.00 and under 3.00	203	10.0	10.0							14	.5	.5
3.00 " " 4.00	223	10.9	20.9							118	4.7	5.2
4.00 " " 5.00	234	11.5	32.4	476	11.9	11.9	251	26.1	26.1	249	10.0	15.2
5.00 " " 6.00	254	12.5	45.0	636	16.0	27.9	17	1.8	27.9	435	17.4	32.6
6.00 " " 7.00	345	17.0	62.0	615	15.5	43.4	217	22.5	50.4	372	14.8	47.4
7.00 " " 8.00	254	12.5	74.5	558	14.0	57.3				320	12.8	60.2
8.00 " " 9.00	187	9.2	83.7	379	9.5	66.8	164	17.0	67.4	214	8.5	68.8
9.00 " " 10.00	89	4.4	88.1	264	6.6	73.4				236	9.4	78.2
10.00 " " 11.00										67	2.7	80.9
11.00 " " 12.00	108	5.3	93.4	454	11.4	84.8	171	17.8	85.2	237	9.5	90.4
12.00 " " 15.00	74	3.6	97.0	313	7.9	92.7	85	8.8	94.0	144	5.8	96.1
15.00 " " 18.00	25	1.2	98.2	216	5.4	98.1	44	4.6	98.6	38	1.5	97.6
18.00 " " 20.00	13	.6	98.8							40	1.6	99.2
20.00 " " 25.00				73	1.9	100.0	13	1.4	100.0	20	.8	100.0
25.00 and over	25	1.2	100.0									
Average		\$6.47			\$8.11			\$7.79			\$8.92	
Median		6.30			7.48			6.98			8.20	
Mode, actual		6.00			6.00 (?)			?			6.00	
Mode, calculated		6.30			?			?			6.60	

(a) Data compiled from Minnesota Bureau of Labor, seventh biennial report, 1899-1900, 188-237

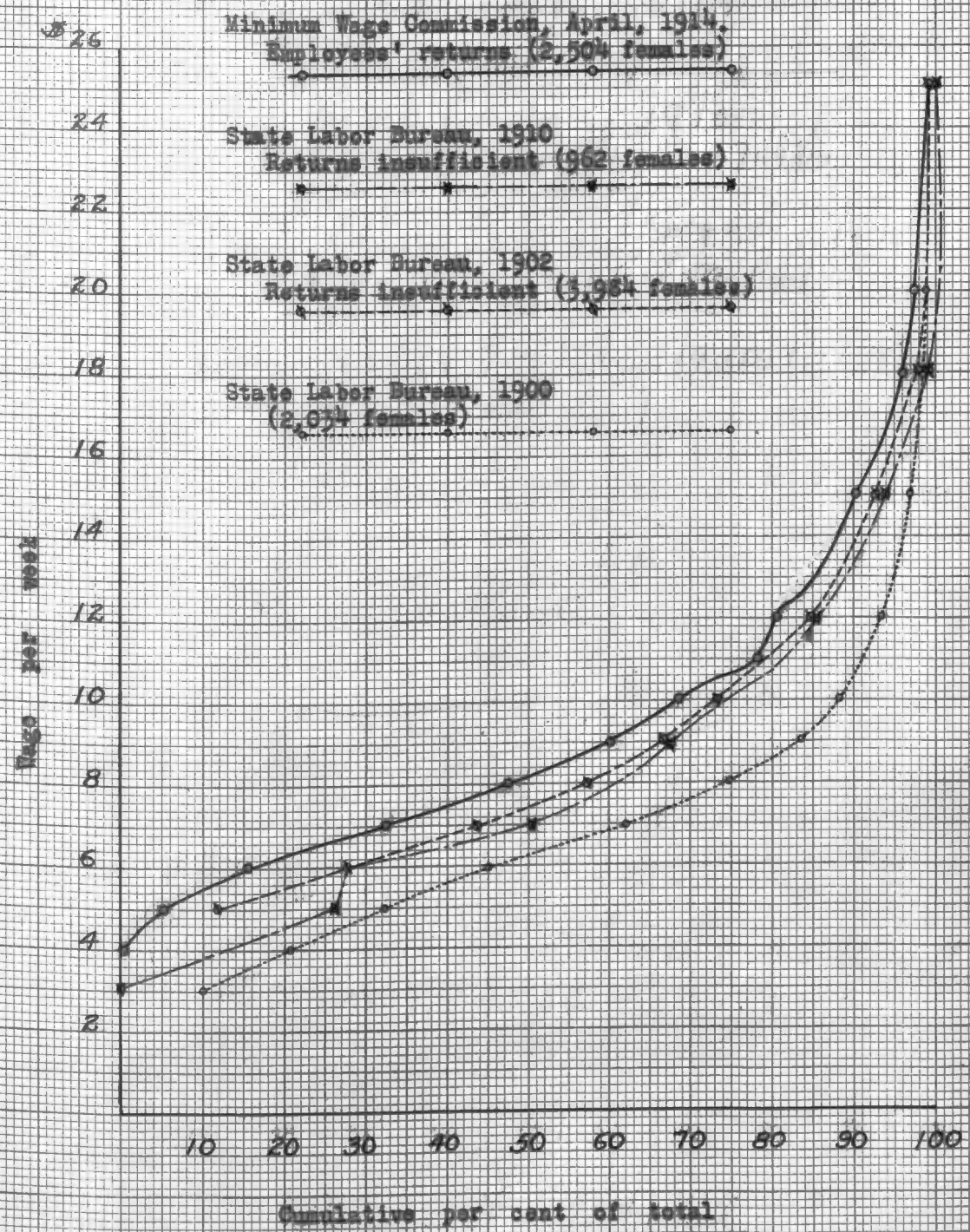
(b) Data compiled from eighth biennial report vol.1, 231 - 268.

(c) Data compiled from twelfth biennial report, 332.

(d) Employees' returns, Twin Cities and Duluth, cf. p. 239.

PLATE 4

Wages of females employed in mercantile establishments in Minnesota, 1900 - 1914



per week. The average wage calculated from the data given was \$6.47 in 1900, \$8.11 in 1902, \$7.79 in 1910, and \$8.92 in 1914. The median varied during the same period from \$6.30 in 1900 to \$7.48 in 1902, \$6.98 in 1910, and \$8.20 in 1914. According to these figures the general level of wages advanced about one-third from 1900 to 1914, but actually declined from 1902 to 1910. A comparison of the curves for 1902 and 1904 shows that the general level of wages reported from 1910 is about forty cents lower than that of the 1902 reports eight years before. It is highly improbable that the decline indicated between these two years represents the truth. We have already called attention ⁽⁹⁷⁾ to the questionable accuracy of the investigation of 1902. Without questioning the precision of Mr. Lescohier's work it may be doubted whether the 962 women reported by the bureau in 1910 included a proportion of the females employed in mercantile industry ⁽⁹⁸⁾ adequate to represent the whole. The fact that the median based upon Mr. Lescohier's 1910 figures increased only \$.68 (10.8 per cent) from 1900 to 1910 is difficult to reconcile with the increase for manufacturing according to his own figures, based upon ample numbers, which during the same period amounted to \$1.57 (26.1 per cent). The general level of wages in the country as a whole increased in the same ten-year interval about

(97) Supra., 58.

(98) For example the 1910 returns for department stores, altho covering 52 establishments, embraced only 596 females employed. A single Minneapolis department store reported 962 females to the wage commission.

(99) 25 per cent. The labor bureau's 1910 statistics of wages of female mercantile employees seem, therefore, to be too low. Applying similar tests to the 1902 figures there is evidence that they are unduly high. We have already expressed confidence in the care with which the 1900 statistics were prepared. Assuming that they are approximately correct, the 1902 returns indicate an advance in mercantile industry from 1900 to 1902 of 18.8 per cent of the median wage for 1900. According to the same returns, wages in manufacturing increased but 9.8 per cent in the same period. This latter percentage of increase is not out of harmony with the federal labor bureau's index for all wages, which rose from 105.5 in 1900 to 112.2 in 1902. Comparisons, therefore, of the labor bureau's 1902 and 1910 wage returns with other statistical benchmarks of greater reliability indicate that the 1902 returns are considerably too high and those for 1910 too low. It is in the highest degree improbable that wages of mercantile employees declined from 1902 to 1910.

Table 11. Increase in average and median wage of females in mercantile employment in Minnesota, 1900 - 1914

	1914	1910	1900	Per cent of increase 1900-1914	Per cent of increase 1910-1914
Average	\$8.92	\$7.79	\$6.47	37.9	14.5*
Median	8.20	6.98	6.30	30.2	17.5*

* Probably too high.

The general level of wages of women in mercantile establishments thus seems to have increased about one-third in the interval 1900-1914. The amount of increase from 1910 to 1914 cannot be determined. It was undoubtedly less than 14.5 per cent, perhaps in the neighborhood of 10 per cent.

The data on changes in wage rates of females employed in manufacturing in Minnesota are more numerous and far more reliable. Mr. Lescohier's statistics for 1910 are, in the case of manufacturing employees, not only prepared with his customary precision, but embrace 4,818 women, a sufficient number of instances to insure their representative character. The manufacturing returns for 1902 while perhaps a trifle high, are not far in error. They indicate an increase in wages of 7.5 per cent over 1900, while the federal labor bureau's index gives an increase of 4.9 per cent for the same period in the entire country. In addition there are available the wage statistics for 1904, col-

Wages of manufacturing employees, 1900-1914

lected by the census of manufactures for the following year.

A glance at Table 12 and its accompanying graph (Plate 5) shows that the median weekly wage for women rose from \$6.01 in 1900 to \$6.46 in 1902, dropped slightly to \$6.33 in 1904, rose again to \$7.58 six years later, and in 1914 was \$8.41. The decrease in the median of 7 cents from 1902 to 1904 probably does not mean that wages actually decreased during this two-year period. As pointed out in the discussion of the methods and scope of the census of manufactures (p. 62), its enumerators obtained the actual earnings during a particular week, which would give a lower general level of wages than the full-time earnings. The methods of the state labor bureau were not uniform. Under self-enumeration by the employer, the method which was used after 1900, some employers seem to have reported full-time rates and some actual earnings. In 1902, the bureau itself, in tabulating, edited many incomplete reports by multiplying a reported hourly wage by the full-time hours per week to get weekly rates. A part of the apparent decline in wages from 1902 to 1904 was thus due to a difference in definition of "wages"; the 1904 returns representing actual earnings exclusively, the 1902 returns representing in part full-time rates. There is, however, reason to suppose that an actual decline in wages occurred from 1903 to 1904 caused by the financial crisis of 1903. Wages rates over the country as a whole in important manufacturing industries dropped slightly in 1904 as shown in the histogram of Plate 7. A far sharper decline followed the graver panic of 1907. The conclusion seems warranted that wages of female employees in

Table 12.

Wages of females employed in manufacturing industries in Minnesota; (laundry, telephone and telegraph, and street railway employees not included)

Wage per week	(a) State Labor Bureau, 1900			(b) State Labor Bureau, 1902			(c) U. S. Census, 1904			(d) State Labor Bureau, 1910			(e) Minimum Wage Commission, 1914		
	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent	Frequency	Per cent	Cumulative per cent
Total	6,238	100.0		4,120			4,079			4,818			3,945	100.0	
Under \$2.00															
2.00 and under 3.00	357	5.7	5.7				272	6.7	6.7	7	.1	.1			
3.00 " " 4.00	716	11.5	17.2				549	13.5	20.2				15	.4	.4
4.00 " " 5.00	981	15.7	32.9	1,055	25.6	25.6	600	14.7	34.9	640	13.3	13.4	85	2.2	2.6
5.00 " " 6.00	1,051	16.8	49.7	635	15.4	41.0	598	14.7	49.6	356	7.4	20.8	353	9.0	11.6
6.00 " " 7.00	1,300	21.0	70.8	803	19.5	60.5	624	15.3	64.9	1,079	22.4	43.2	616	15.6	27.2
7.00 " " 8.00	636	10.2	81.0	587	14.2	74.7	417	10.2	75.1				652	16.5	43.7
8.00 " " 9.00	451	7.2	88.2	358	8.7	83.4	344	8.4	83.5	1,125	23.8	66.5	607	15.4	59.0
9.00 " " 10.00	232	3.7	91.9	224	5.4	88.8	202	4.9	88.4				474	12.0	71.0
10.00 " " 11.00													468	11.9	82.9
11.00 " " 12.00	266	4.3	96.2	293	7.1	95.9	277	6.8	95.2	1,065	22.1	88.6	152	3.8	86.7
12.00 " " 15.00	158	2.5	98.7	143	3.5	99.4	137	3.4	98.6	298	6.2	94.8	329	8.3	95.0
15.00 " " 18.00	51	.8	99.5							158	3.3	98.1	123	3.1	98.2
18.00 " " 20.00	13	.2	99.7	16	.4	99.9							25	.6	98.8
20.00 " " 25.00	18	.3	100.0				59	1.4	100.0	90	1.9	100.0	23	.6	99.4
25.00 and over				6	.1	100.0							23	.6	100.0
Average		\$6.06			\$6.48			\$6.24			\$8.03			\$8.70	
Median		6.01			6.46			6.33			7.58			8.41	
Mode, actual		6.00			6.00			6.00			?			7.00	
Mode, calculated		6.38			6.48			6.41			?			7.50	

(a) Data compiled from Minnesota Bureau of Labor, seventh biennial report, 1899 - 1900, 188 - 237.

(b) Data compiled from eighth biennial report, Vol. 1, 231 - 268.

(c) Data compiled from U. S. Bureau of the Census, Bul. 93, 110 - 113.

(d) Data compiled from Minnesota Bureau of Labor, twelfth biennial report, 332

(e) Employees returns. Twin Cities and Duluth, cf. p 239.

TABLE 5

Mags of females employed in manufacturing establishments in Minnesota 1900 - 1911
 (Laundry, telephone, telegraph and street railway employees not included)

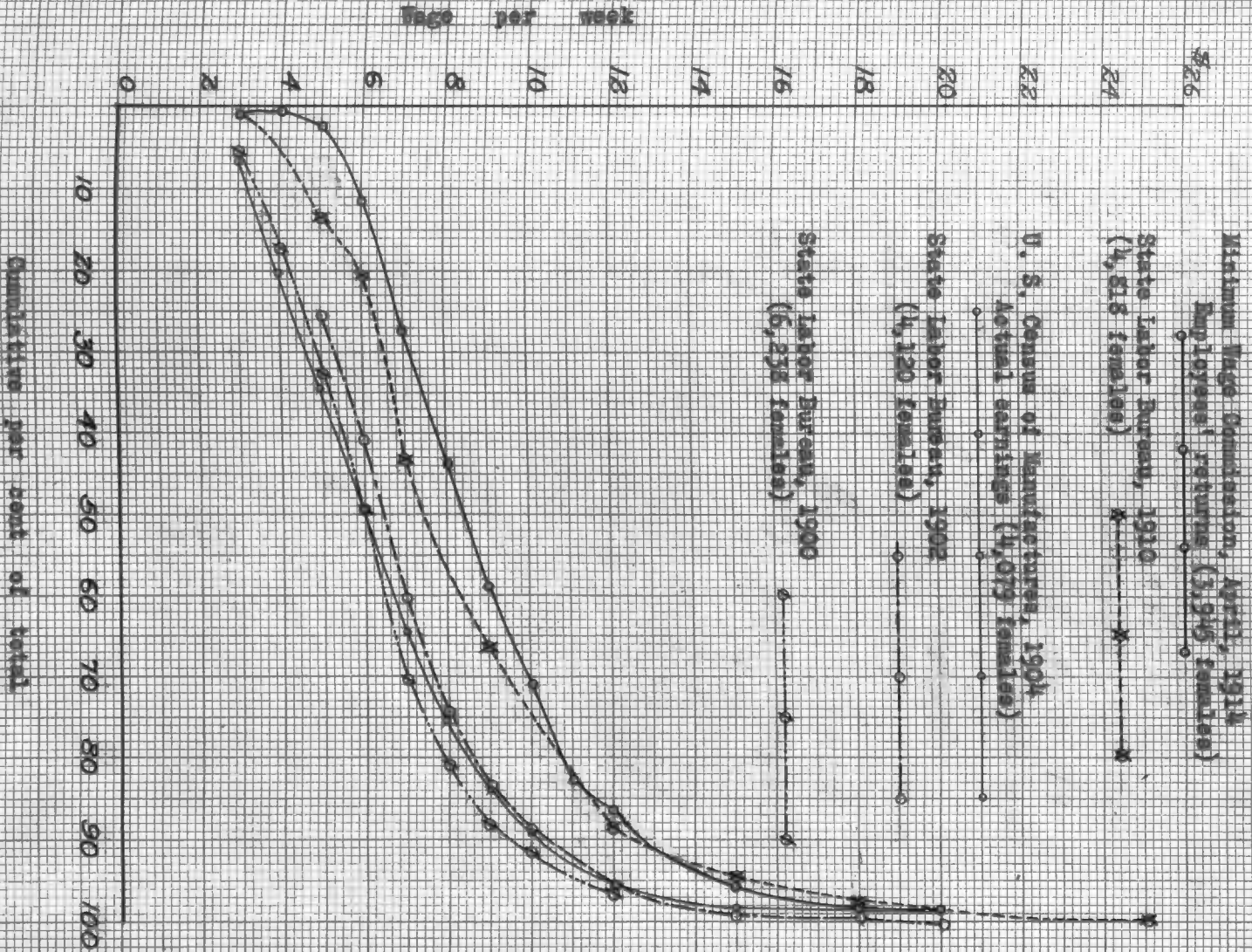


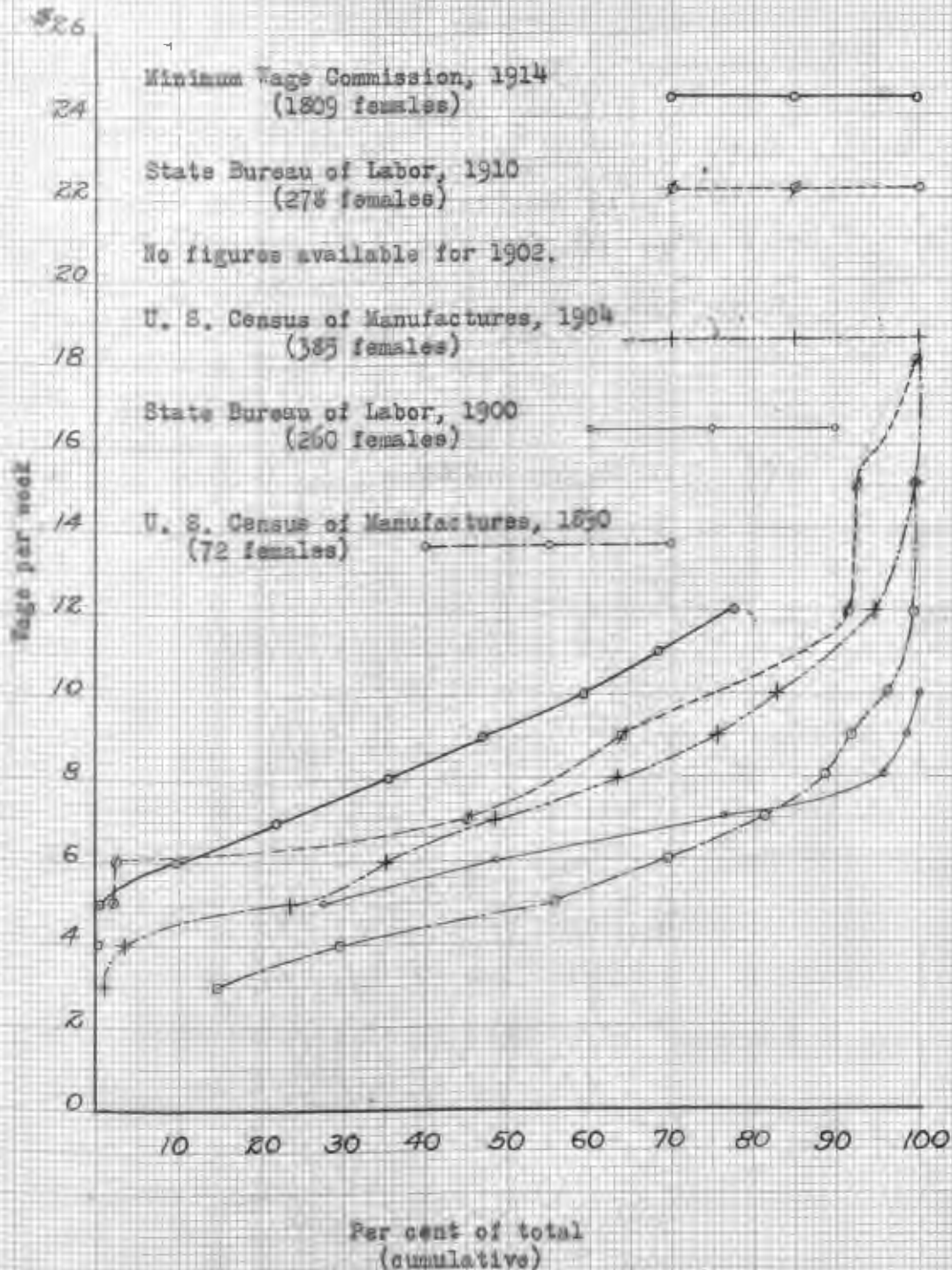
Table 13.

Wages of females employed in knitting mills (hosiery and underwear manufacturing) in Minnesota, 1890 to 1914.

Wages per week	U.S. Census 1890	State Labor Bureau 1900	U. S Census 1904	State Labor Bureau 1910	Minimum Wage Commission 1914
Total, all wages	72	260	385	278	1809
Under \$2.00 per week					
2.00 and under 3.00	} 20	} 38	} 4	} 0	} 1
3.00 " " 4.00						39	8	6	4
4.00 " " 5.00	} 15	} 68	} 79	} 0	} 175
5.00 " " 6.00						36	45	119	215
6.00 " " 7.00	20	30	51	} 52	} 250
7.00 " " 8.00	14	20	58			208
8.00 " " 9.00	2	8	46	} 77	} 228
9.00 " " 10.00	1	11	28			164
10.00 " " 11.00		} 8	} 44	} 2	} 166
11.00 " " 12.00						2	20	} 398
12.00 " " 15.00			21		
15.00 " " 18.00			} 1		
18.00 " " 20.00				2	
20.00 " " 25.00					
25.00 and over					
Average wage	\$5.60?	\$5.04	\$7.10	\$8.35	\$9.62
Median	6.10	4.78	7.09	7.27	9.23
Mode, actual	6.00	4.00	4.00	6.00	7.00
Mode, calculated	6.00	4.00	4.00	6.00	7.00

Plate 6.

Wages of females employed in knitting mills in
Minnesota,
1890 - 1914



factories in Minnesota declined slightly after 1903, but less sharply than indicated by a casual comparison of the 1902 and 1904 returns.

The following table summarizes the movement of wages in the state for manufacturing industries, as indicated by the available sources.

Table 13a. Increase in average and median wage of females in manufacturing employments in Minnesota, 1900-1914

	Wage per week					Per cent of increase			
	1900	1902	1904	1910	1914	1900-1914	1902-1914	1904-1914	1910-1914
Average	\$6.06	\$6.48	\$6.24*	\$8.03	\$8.70	43.5	34.2	39.5	8.3
Median	6.01	6.46	6.33*	7.58	8.41	40.0	30.2	32.8	10.9

* Actual earnings per week

From 1900 to 1914 wages appear to have increased about two-fifths, from 1902 and 1904 to 1914, about one-third, and from 1910 to 1914, about 9 per cent. The mode (Table 12) remained at \$6.00 per week in 1900, 1902, 1904, and rose to \$7.00 in 1914.

The accuracy of our conclusions as to the trend of the wages in manufacturing employments in the state may be checked by comparison with the federal labor bureau's index numbers of wages.

The general index of wages, discontinued in 1907, serves to check the Minnesota rates only in 1900, 1902, and 1904.

Contemporaneous movement of wages in manufacturing in U. S

For the years subsequent to 1907, there are available only wage index numbers for specific manufacturing industries. In eight of them,

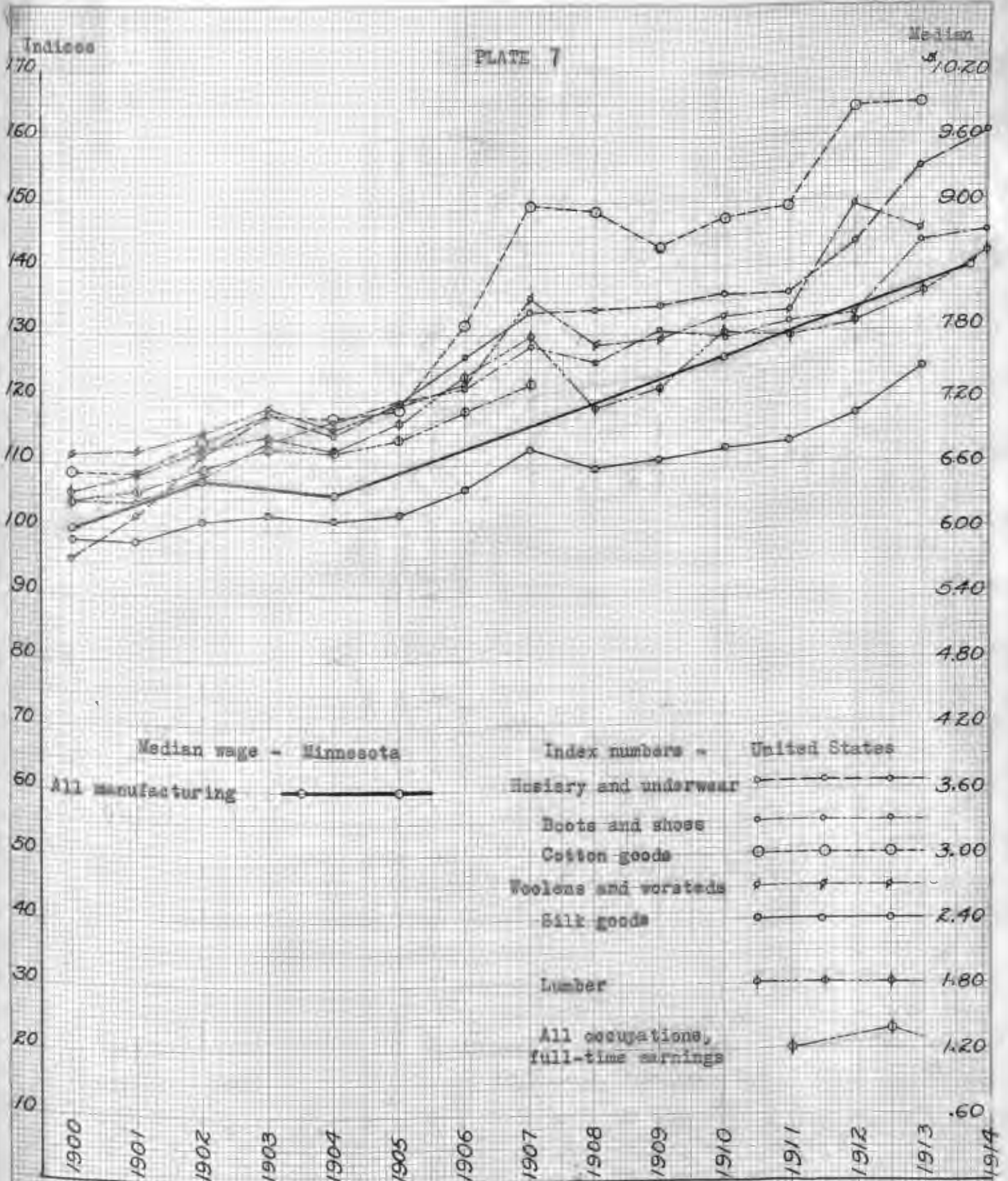
the manufacture of hosiery and underwear, boots and shoes, cotton goods, woolens and worsteds, silk goods, lumber, mill work, and furniture, the bureau has published weighted index numbers for the industry from 1900 to 1913; in the case of car-building, the weighted index for the industry has not been calculated, but a series of indices complete from 1900 to 1913 are given for 9 important occupations within the industry.

In the accompanying historigram (Plate 7) the course of the median wage of women in manufacturing in Minnesota is plotted by the side of the more significant of the labor bureau's series of wage indices. Index numbers for the United States are to be read on the left hand scale; and the median for Minnesota, represented by the heavy dotted line, may be read in dollars and cents on the scale to the right. The general

(100) For two of these, hosiery and underwear and boots and shoes, data for the year 1914 have appeared. Cf. Appendix II, 560..

(101) The median for the minimum wage commission's investigation of 1914 is plotted at the 1st quarter of the space for the year 1914, instead of at the center, because the returns represented wages on April 1, 1914, and hence are typical of the twelve months Nov. 1, 1913 to Oct. 31, 1914 rather than for the year, Jan. 1, 1914 to Dec. 31, 1914. The point of the intersection of the curve with the ordinate for 1913 (\$8.22) may be assumed as a representative value for the calendar year 1913.

PLATE 7



Comparison of course of wages of females in Minnesota with wages of all employees in selected manufacturing industries in the United States.

correspondence of the curves is striking. The rate of increase in most of the nation-wide manufacturing industries is greater than that in manufacturing as a whole in Minnesota. This is in a large measure due to the fact that the federal indices represent the "relative wage per hour" while the Minnesota figures are earnings per week. Along with the tendency toward increased wages per hour observable from 1900 to the present has gone a decrease in the number of hours worked per week. A decrease in working time, the wage per hour remaining constant, decreases the weekly wage. The increase in weekly earnings is therefore somewhat less than the increase in relative wages per hour; how much less cannot be determined, for the labor bureau began the publication of indices of full-time earnings only in 1910. It is evident, however, that curves representing full-time earnings, if available, would be deflected downward somewhat from the course of the relative wage per hour curves by an amount increasing with the lapse of time, and would therefore approximate even more closely the line representing the trend of full-time wages in Minnesota.

The comparative increase of wages in these several industries is expressed mathematically in the accompanying table (Table 14). The table presents the percentage increase of the year 1913 over each of the other years 1900, 1902, 1904, and 1910. The percentages are based, not upon the median wage of the commission's statistics for April 1914, but rather upon an interpolated value for the year 1913, obtained by inspection

Table 14.

Comparative percentages of increase of wages of females employed in manufacturing in Minnesota and wages of manufacturing employees in certain industries in the United States, 1900-1913.

Industry and locality	Base (1890-1899) to 1913	Per cent of increase			
		1900 to 1913	1902 to 1913	1904 to 1913	1910 to 1913
Minnesota median weekly wages of females employed in manufacturing		50.8 ^(a)	27.5 ^(a)	29.9 ^(a)	8.4 ^(a)
United States relative wages per hour of males and females employed in manufacturing industries employing women largely ^(b)					
Hosiery and underwear	55.0	62.6	39.7	35.0	14.4 ^(c)
Boots and shoes	43.6	37.9	33.0	22.7	10.8 ^(c)
Cotton goods	64.9	52.1	45.5	40.8	11.6 ^(c)
Woolen and worsted goods	45.7	30.9	26.8	26.3	10.0 ^(c)
Silk goods	24.9	26.9	23.2	22.7	11.1 ^(c)
Manufacturing industries employing chiefly men ^(d)					
Lumber	36.9	29.8	22.1	21.9	5.3 ^(c)
Mill work	35.5	28.0	20.2	17.1	6.0 ^(c)
Furniture	40.3	37.0	22.9	19.4	7.5 ^(c)

(a) These percentages are calculated upon a value for 1913 of \$8.22, interpolated between those for 1910 and April, 1914. Cf. note 101, p. 130.

(b) Based on Table 5, Appendix II.

(c) These percentages of increase will be found to differ slightly from those of Appendix, p⁵⁵⁸⁻⁶¹ calculated on the indices whose base - 1913, because of the different method of calculating these indices.

(d) Based on Table 2, Appendix II.

13

from the historigram of Plate 7. A careful scrutiny of Table 14 reveals the fact that in the light of the observed increase in wages in the country as a whole, there is nothing improbable in the percentages of increase indicated for the state. The percentages of increase from 1900 to 1913 and from 1910 to 1914 are, for the most of the industries employing women largely higher in the United States as a whole than in manufacturing in the state. This is to be expected, because, as explained above, the federal labor bureau's indices represent rates of wages per hour, and not actual earnings or earnings per week as do the state returns. In the case of the three industries employing almost exclusively men, wages increased in smaller ratio than for female manufacturing employees in Minnesota. Not all such industries in which male laborers predominate were characterized by small increases in wage. In seven out of nine occupations in the car-building industry in the United States, wages per hour increased more than 36 per cent from 1900 to 1913, and from 1910 to 1913 increased more than 8 per cent in six occupations. Thus in many occupations open exclusively to men wage rates in the country as a whole since 1900 have advanced quite as rapidly as have the wages of female manufacturing employees in Minnesota.

In the case of two manufacturing industries only, wage indices for the United States have been carried by the bureau down to 1914, the year in which the Minnesota commission's statistics were collected. A comparison of the increase of these industries to 1914 is therefore particularly instructive

Table 15. Comparative percentages of increase of wages of females employed in manufacturing in Minnesota and wages of all employees in hosiery and underwear manufacturing, and boot and shoe manufacturing in the United States, 1900-1914.

Industry	Per cent of increase				
	1890 to 1914	1900 to 1914	1902 to 1914	1904 to 1914	1910 to 1914
Minnesota.					
Females employed in all manufacturing industries - median weekly wage		40.0	30.2	32.8	10.9
Females employed in knitting mills, average weekly wage (a)	51.4	91.0		35.5	15.2
United States, relative wages per hour of males and females (c)					
Hosiery and underwear manufacturing (knitting mills)	51.7	68.0	44.3	39.5	18.2
Boot and shoe manufacturing	47.2	39.3	34.2	25.0	11.9

(a) Based upon Table 13.
 (b) Per cent of increase based on the median wage, The average for 1890 cannot be accurately calculated.
 (c) Based on Table 5 , Appendix p. 560.

(Table 15). In the boot and shoe industry, relative wages per hour have increased in approximately equal ratio with weekly wages of all females employed in manufacturing in Minnesota.

In the hosiery and underwear industry, otherwise known as knit-goods manufacturing, direct comparison between wages in the United

States and Minnesota is possible, with

Trend of wages
in the knit-
goods industry
in Minnesota
and the United
States

(102) striking results. In the twenty-four years 1890 to 1914 the increase amounted to 51.4 per cent for Minnesota and 51.7 per

cent for the country as a whole. In 1900 wages in the industry were relatively much lower in Minnesota than in the country as a whole, and much lower, absolutely, than wages in other manufac-

(102) turing industries in the state. Hence the percentage of increase from 1900 to 1910 indicated by the Minnesota returns, is much greater than that indicated by the national returns. From 1904 to 1914 the increases run closely parallel, 35.5 per cent for the state as against 39.5 for the United States. Similarly, the increases from 1910 to 1914 are approximately equal; for the state 15.2 per cent, and for the country 18.2 per cent. From this comparison of wage movements in a single industry, it appears that the increases indicated by the minimum wage commission's figures approximately equal the increases reported by the United States Bureau of Labor for the entire country.

(102) Cf. Table 13a, and accompanying graph (Plate 6)
The average wage of all female manufacturing employees was \$6.06 per week. The average for 260 females employed in "knitting works" was \$5.04.

As already pointed out, the percentage increases in wage rates based upon the federal labor bureau's indices of relative wages per hour are in excess of the increase as measured by full-time earnings instead of wages per hour increase in full-time earnings during the same period, because of the contemporaneous decrease in number of working hours per week. The only reason for employing the indices of relative wages per hour in the preceding computations was the lack of indices of full-time earnings before 1910. A comparison of the increase in full-time earnings in the United States from 1910 to 1914 with the increase in wages in Minnesota during the same period should, therefore, be of great utility in detecting errors of deception in the commission's 1914 returns. Particularly is this true in view of the acknowledged dependability of the 1910 manufacturing returns as a base upon which the rate of increase may be calculated.

Table 16.

	Minnesota		United States	
	All manufactur- ing industries	Knit Goods	Knit goods	Boots and shoes
Per cent of increase in full time earnings 1910 - 1914	10.9	15.2	12.6	8.8

In the two industries for which the labor bureau has published indices down to 1914, the increase is somewhat less than that for all manufacturing in Minnesota. Full-time wages in knitting mills

rose 15.2 per cent in the state and 12.6 per cent in the country. The greater increase in wages of knitting mill operatives in Minnesota is probably a fact attributable in part to the remarkable prosperity a certain large knitting mill in Minneapolis whose employees constituted the bulk of the 1809 females reported in (104) 1914.

Comparisons with increase in full-time earnings for the period 1910 to 1913 are possible in many industries in the United States and are presented in the following table:

(104) The Northwestern Knitting Co., Minneapolis, said by labor leaders in the Twin Cities to pay the highest wages of any plant of the kind in the world.

Table 17. Comparison of increase in wages of all females employed in manufacturing in Minnesota with increase in full-time earnings of male and female employees in certain manufacturing industries in the United States, 1910 to 1913.

Industry	Per cent of increase in full-time earnings, 1910-1913.
Minnesota, all manufacturing	8.4
United States, specific manufacturing industries	(a)
Employing women largely.	
Hosiery and knit goods	10.4
Boots and shoes	8.8
Cotton goods	14.9
Woolen and worsted goods	8.1
Silk goods	10.1
Employing men almost exclusively.	
Lumber	5.4
Mill work	5.4
Furniture	4.1
Car-building	8.9
Iron and steel	
Blast furnaces	10.5
Bessemer converters	13.6
Open hearth furnaces	13.4
Blooming mills	17.9
Plate mills	14.0
Standard rail mills	9.5
Bar mills	6.6
Sheet mills	16.3
Tin plate mills	17.7

(a) Based upon Appendix II. pp. 554-562.

The increase of wages in all manufacturing industries in Minnesota based upon the reports of the minimum wage commission and state labor bureau is thus less than the increase in four out of five industries in the United States employing women largely, and less than that in nine out of thirteen industries employing almost exclusively men. One is forced to the conclusion that the Minnesota figures for 1910 and 1914 are harmonious, and hence the margin of error in the wage commission's returns as a whole is small.

It may well be asked how closely the course of wages of all employees, in these ten manufacturing industries in the country at large, may be assumed to approximate the course of wages of women only in manufacturing of all kinds, within the borders of a single state. The approximation would approach coincidence only if the trend of the wages of male and female employees were the same, the wage rates in the selected industries typical of all manufacturing industry, and the trend of wages in Minnesota coincident with that in the country at large. As to the first of these conditions of comparability, it seems that the trend of women's wages would, over an extended period, approximate that of men's, probably lagging somewhat behind men's because of the efficacy of trade unionism in raising the wages of men. The indices of the labor bureau, based for a specific industry upon the wages of its male as well as its female employees, may be assumed roughly to represent the wages of females alone.

As to the second condition of comparability, the movement of wages in a single industry may indeed be so affected by peculiar causes that its course will differ in direction and magnitude from that of all manufacturing industry. The European war has, for example, enormously increased the wages of copper miners in the United States, while its effect upon the wages of coal miners has been negligible. The major industries, however, covered by the labor bureau's index numbers from 1910 or earlier to the present, employ about one-third of the wage earners in manufacturing industry in the country, ⁽¹⁰⁵⁾ and it seems probable that a weighted index based upon them would approximate that for wages of all manufacturing employees. Finally, the course of wages in Minnesota presumably though not necessarily would reflect that prevailing in the rest of the country. The general level of wages is,

(105) As reported by the Census of 1910:

Industry	Employees.
Hosiery and knit-goods.....	129,275
Boots and shoes.....	198,297
Woolen and worsted goods.....	168,722
Cotton goods.....	378,880
Silk goods.....	99,037
Lumber and timber.....	695,019
Furniture.....	128,452
Car-building.....	43,086
Iron and steel, including blast furnaces.....	278,505

Total industries for which indices are
available...2,119,273

Total, all industries.....6,615,046

as we shall see, much higher in Minnesota than in the East or South, but the trend of wages would, in the absence of peculiar causes of local application, tend to be the same. A priori therefore, it seems probable that the movement of wages of all women employed in manufacturing in the State of Minnesota should exhibit a high degree of correlation with the movement of wages of men as well as women in important manufacturing industries in the country at large; and the fact that such a correlation is exhibited by the two sets of statistics confirms the substantial accuracy of the minimum wage commission's data.

Table 18, and its accompanying plate (Plate 8) summarize the existing data on the wages of females employed in mercantile and manufacturing establishments in Minnesota. Except for 1888, the statistics given for each year are the sums of the corresponding columns under the similar tables for mercantile and manufacturing employees.

Wages of all
female mer-
cantile and
manufacturing
employees
1888-1914

Statistics are available for 1914, 1910, 1902, 1900, and 1888. The returns for 1888, based upon 333 women employed in stores and factories in the state, are necessarily insufficient in numbers and too limited in geographical scope to represent adequately the general level of wages in the state. (106) Since they seem not improbable in themselves they are, however, presented here as the sole indicator of the level of wages of all females in Minnesota antedating 1900. The percentages of increase based upon them must be used, therefore, merely as suggesting the move-

Table 18.

Wages of females employed in mercantile and manufacturing establishments in Minnesota from 1888 - 1914. (Laundry, telephone, telegraph and street railway employees not included)

Wage per week	U. S. Bureau of Labor, 1888, St. Paul (a)			State Labor Bureau, 1900, (b)			State Labor Bureau, 1902, (c)			State Labor Bureau, 1910, (d)			Minimum Wage Commission, Employees' Reports, (e)			Minimum Wage Commission, Employees' Reports (f)		
	Fre- quency	Per cent	Cumu- lative per cent	Fre- quency	Per cent	Cumu- lative per cent	Fre- quency	Per cent	Cumu- lative per cent	Fre- quency	Per cent	Cumu- lative per cent	Fre- quency	Per cent	Cumu- lative per cent	Fre- quency	Per cent	Cumu- lative per cent
Total	333	100.0		8,521	100.0		8,104	100.0		5,780			6,542	100.0		14,317	100.0	
Under \$2.00	2	.6	.6													1	.1	.1
2.00 and under 3.00	12	3.6	4.2	560	6.6	6.6				7	.1	.1				10	.1	.1
3.00 " " 4.00	32	9.6	13.8	965	11.3	17.9							30	.5	.5	82	.6	.6
4.00 " " 5.00	66	19.8	33.6	1,247	14.6	32.5	1,531	18.9	18.9	891	15.4	15.5	224	3.4	3.9	448	3.1	3.7
5.00 " " 6.00	60	18.0	51.7	1,348	15.8	48.3	1,271	15.9	34.6	373	6.5	22.0	610	9.3	13.2	1,341	9.4	13.1
6.00 " " 7.00	52	15.6	67.3	1,682	14.7	68.0	1,418	17.5	52.1	1,296	22.4	44.4	1,069	16.3	29.5	2,198	15.4	28.5
7.00 " " 8.00	43	12.9	80.2	920	10.8	78.8	1,145	14.1	66.2				1,042	15.9	45.4	2,090	14.6	43.1
8.00 " " 9.00	25	7.5	87.7	665	7.8	86.6	737	9.1	75.3	1,289	22.3	66.7	938	14.3	59.7	1,856	13.0	56.1
9.00 " " 10.00	17	5.1	92.8	340	4.0	90.6	488	6.0	81.3				691	10.6	70.3	1,616	11.3	67.4
10.00 " " 11.00													707	10.8	81.1	1,506	10.5	77.9
11.00 " " 12.00				396	4.6	95.2	747	9.2	90.5	1,236	21.4	88.1	221	3.4	84.5	685	4.8	82.7
12.00 and " 15.00				247	2.9	98.2	456	5.6	96.1	383	6.6	94.7	568	8.6	93.1			
15.00 " " 18.00				81	1.0	99.2				202	3.5	98.2	271	4.2	97.3	2,484	17.4	100.0
18.00 " " 20.00	24	7.2	100.0	27	.3	99.5	232	2.9	99.0				64	1.0	98.3			
20.00 " " 25.00													63	1.0	99.3			
25.00 and over				43	.5	100.0	79	1.0	100.0	103	1.8	100.0	44	.7	100.0			
Average		\$6.10			\$6.19			\$7.29			\$8.00			\$8.77			\$8.97	
Median		5.91			6.08			6.88			7.50			8.32			8.53	
Mode, actual		4.00			6.00			6.00			6.00			6.00			6.00	
Mode, calculated		4.65			6.48			6.48			?			6.63			6.61	

(a) Compiled from U. S. Bureau of Labor, Fourth annual report, Working Women in large cities, 514; "Annual earnings" are given by the report which are here divided by 50 to obtain the weekly wage.

(b) Data compiled from Minnesota Bureau of Labor, Seventh Biennial report, 1899 - 1900, 188 - 237

(c) Data compiled from Eighth biennial report, Vol. 1, 231 - 268

(d) Data compiled from Twelfth Biennial report, 332. Cf. summary table, Appendix

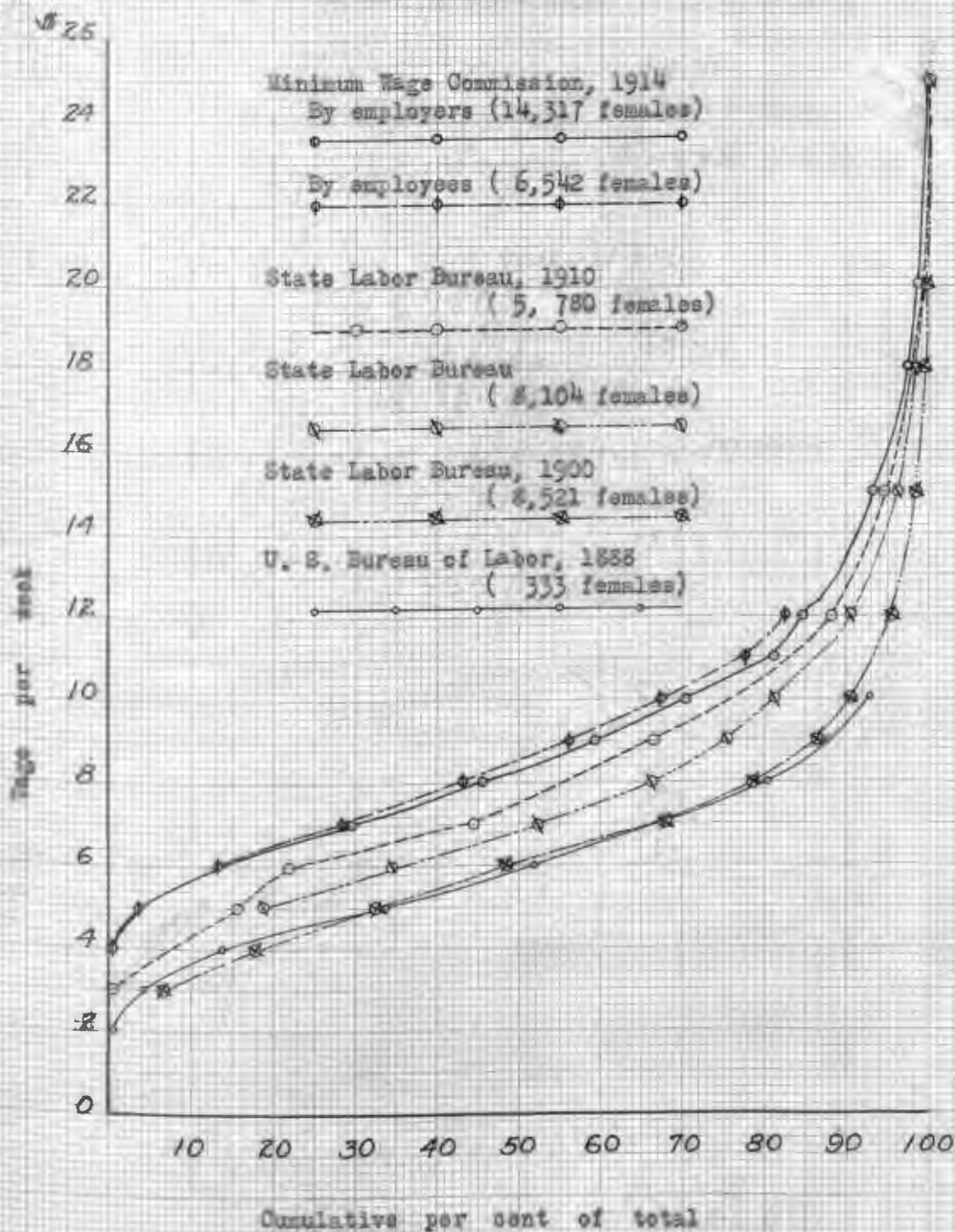
(e) Employees' returns from Minneapolis, St. Paul, Duluth and Winona; Cf. p. 238.

(f) Employers' returns from Minneapolis, St. Paul and Duluth. Cf. p. 165.

PLATE 8

Wages of females employed in mercantile and manufacturing establishments of Minnesota
1888 - 1914

(Laundry, telephones, telegraph, and street railway employess not included).



ment of wages, not as measuring it with accuracy. If anything, they are perhaps too low since the average wage of some 1300 females employed in the state, as reported by the state labor bureau, was \$6.67⁽¹⁰⁷⁾ as compared with \$6.10, the average of the figures reported by the federal bureau.

The average weekly wage of women employed in manufacturing and mercantile business thus increased little if any from 1888 to 1900. In 1888 it was perhaps \$6.10, or even as high as \$6.67, as against \$6.19 a decade later. From this point it rose sharply to \$7.29 in 1902, \$8.00 in 1910, and \$8.77 in April, 1914. The sudden increase of 17.8 per cent⁽¹⁰⁸⁾ from 1900 to 1902 is incorrect, caused by the obvious error in the mercantile returns of 1902 which we have already noted (page 122). Allowance for this must also be made in interpreting the increase from 1902 - 1914.

The following table summarizes the rate of increase in the general level of women's wages in manufacturing and mercantile industries in the state:

(107) Minnesota Bureau of Labor, First biennial report, 1887-1888, 140. The average wage only is given.

(108) The median wage increased only 14.5 per cent.

Table 19.

	Wage per week					Per cent of increase			
	1888	1900	1902	1910	1914	1888 to 1914	1900 to 1914	1902 to 1914	1910 to 1914
Average Wage	\$6.10	\$6.19	\$7.29	\$8.00	\$8.77*	43.8	41.6	20.3	9.6
Median Wage	5.91	6.08	6.88	7.50	8.32*	40.8	36.8	20.9	10.9

* Based on employee's returns

During the same period the modal wage rose from \$4.00 in 1888 to \$6.00 in 1900, where it remained even as late as 1914.

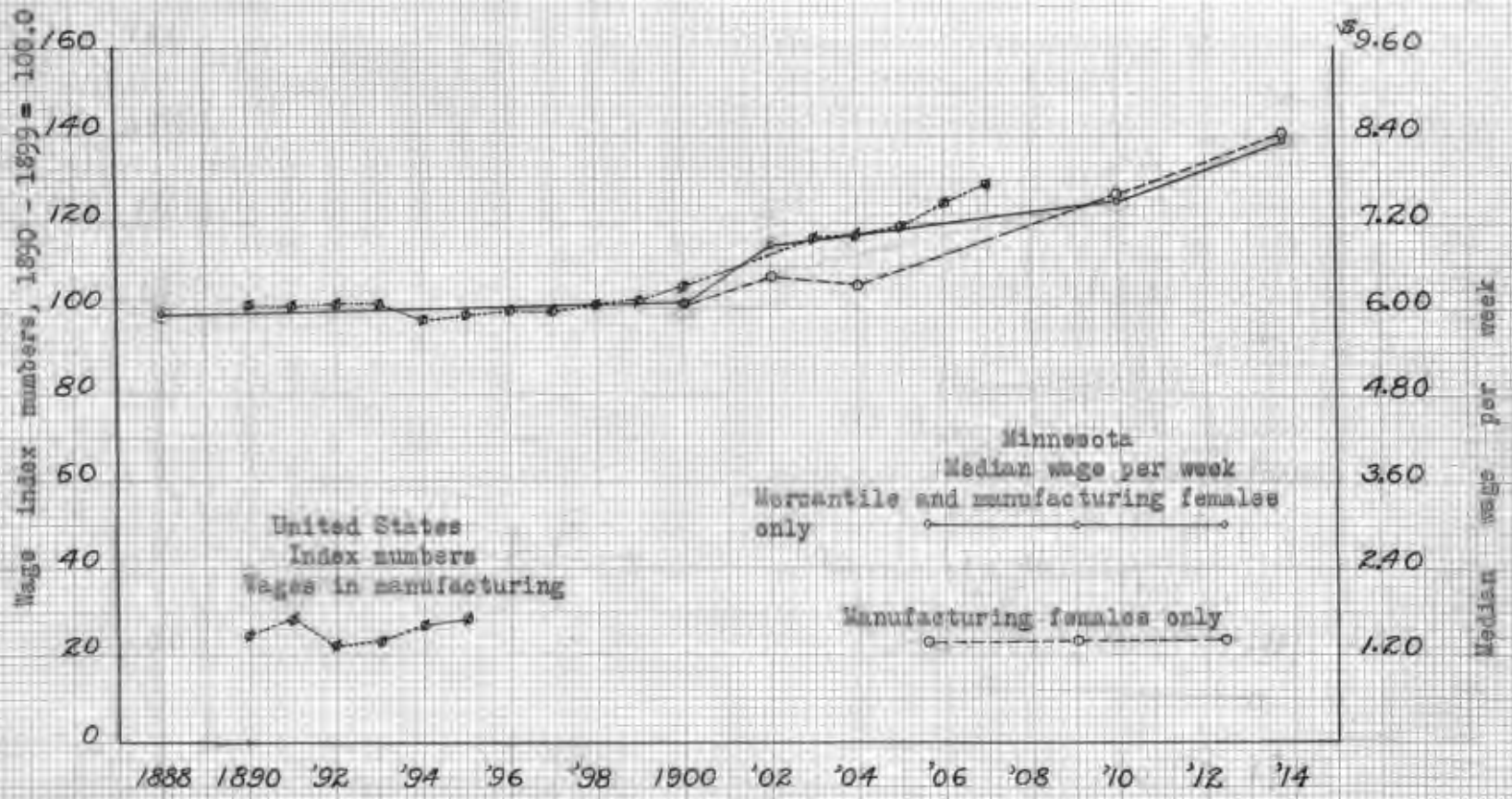
Table 19 indicates that the general level of women's wages had risen up to 1914 about two-fifths since 1888, about 38 per cent since 1900, over one-fifth since 1902, and about one-tenth since 1910.

The historigram of Plate 9 presents graphically the movement from 1888 to 1914 of the median weekly wage, which, in view of the uncertainties in weighting the wage classes in calculating the average wage, is the most reliable measure of the trend of wages. The median wage may be read in dollars on the right hand scale. No indices of all wages, whether in state or country, are available for comparison. The federal labor bureau's general weighted index of wages of all manufacturing employees from 1890 to 1907 is plotted on a comparable scale, and may be read from the left hand ordinate. The course of the median wage for manufacturing in Minnesota is also added. It is

PLATE 9

Historiogram. Wages of all females employed in manufacturing and mercantile establishments in Minnesota, 1888 - 1914

(Laundry, telephone, telegraph and street railway employees not included)



to be remembered that the apparent decline in manufacturing wages from 1902 to 1900 is largely due to the fact that the 1902 data represent wage rates and the 1904, actual earnings. Wages of all females in Minnesota, therefore, discounting the unduly high figure of 1902, appear to have been roughly constant from 1890 to 1900, and from about 1900 to have risen steadily to the present. The increase from the level of 1890 to 1900 up to April, 1914 seems to have been about 40 per cent.

The preceding comparative study demonstrates that the minimum wage commission's statistics on wages are consistent

with the results before published by other state and federal agencies. Wages of women as reported in April 1914 are indeed higher by 10 per cent than wages in 1910, and by

Summary, checking the commission's wage returns by comparison with former studies in Minnesota
40 per cent than wages in 1900. This increase in the general level of wages is not in itself improbable, since wages in certain important manufacturing industries in the country at large have been increasing in similar ratio during the same period.

c. Checking the accuracy of the wage returns, third method.

Comparison with the general level of women's wages in the country as a whole.

The federal labor bureau's wage indices represent of course only relative wages. The parallelism exhibited in the reported movements of wages in Minnesota and in the country at large demonstrates the accuracy of the wage commission's 1914 returns only if the Minnesota Bureau of Labor's returns of 1900, 1902, and 1910 were accurate. Comparison of the actual level of women's wages in Minnesota with that in the country at large will throw added light on the probable accuracy of the Minnesota returns. Plate 10 presents ogive curves for wages in the year 1910 of females employed in manufacturing in Minnesota, ⁽¹⁰⁹⁾ for wages of 72,515 females in the United States engaged in manufacturing and mining as reported by United States Immigration Commission, ⁽¹¹⁰⁾ and for wages of more than 100,000

(109) 4,818 females in manufacturing (laundry, telephone, telegraph, and railway employees not included) as reported by Minnesota Bureau of Labor, Twelfth annual report.

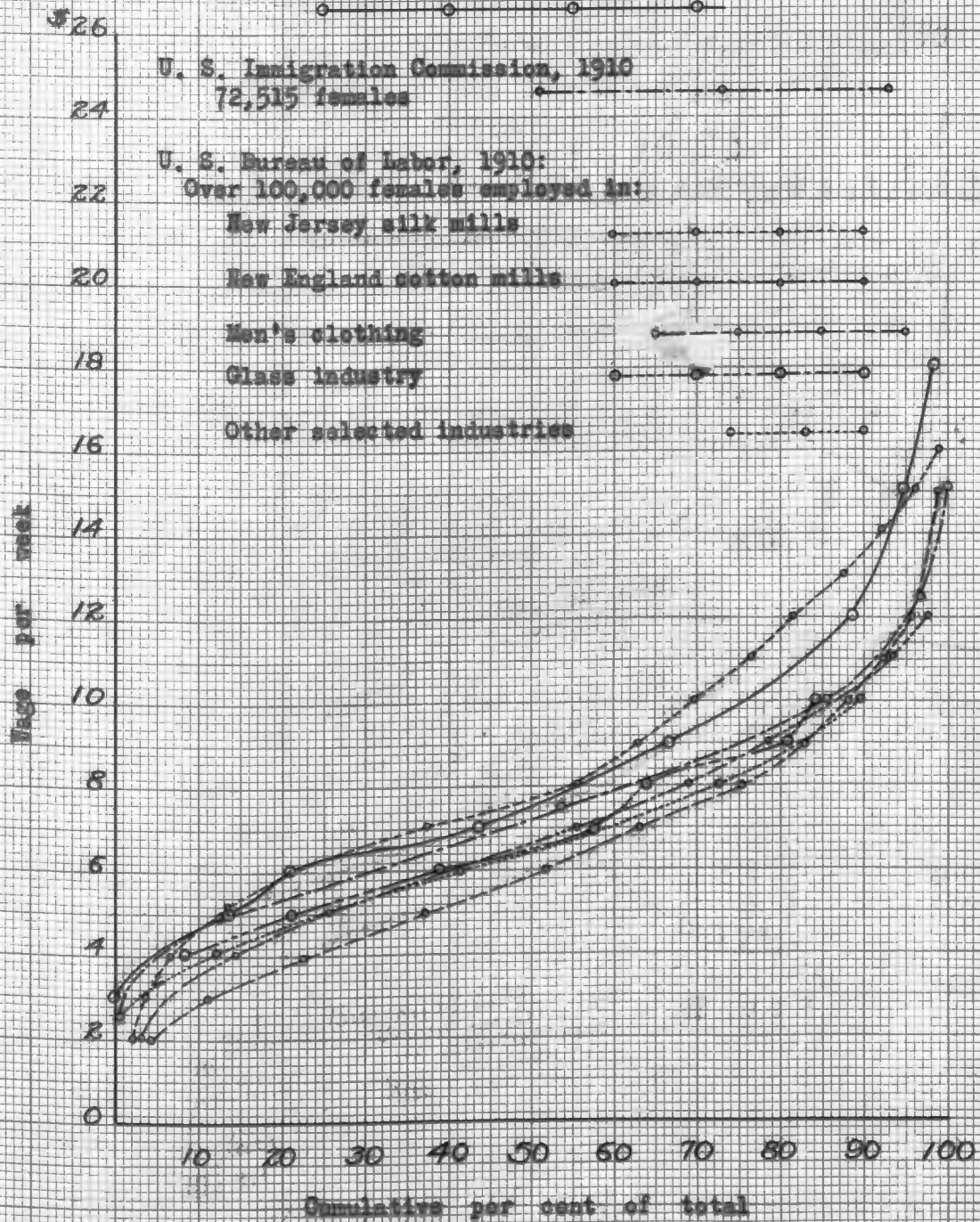
(110) Abstracts of reports of the immigration commission, Vol. I, 376, 378. (S. Doc. no. 747, 61 Cong., 3d sess., serial nos. 5865; 5866.) Summarized in following table:

	Number	Per cent earning per week						
		Under \$2.40	Under \$5.00	Under \$7.50	Under \$10.00	Under \$12.50	Under \$15.00	\$15.00 and over
Total all ages over 14	72,515	.6	12.4	53.4	85.2	96.8	99.3	100.0
Women over 18	57,712	.1	5.5	45.0	82.1	96.3	99.2	100.0
Girls 14 and under 18	14,803	2.7	39.5	86.2	97.6	99.0	100.0	

PLATE 10

Comparison of the absolute wages of women in Minnesota and in the country as a whole, 1910

Minnesota Bureau of Labor, 1910.
4,818 females in manufacturing



female employees reported by the federal labor bureau in the
 following industries: silk manufacturing in New Jersey; (111)
 cotton manufacturing in New England; (112) the manufacture of men's
 clothing; (113) the finishing department of the glass industry; (114)
 and miscellaneous factories and selected industries. (115)

Inspection of the curves of Plate 10 shows that
 in one industry, silk goods manufacturing, wages ran constantly
 higher than in all manufacturing in Minnesota. In all other
 industries for which data from the country at large are available,
 the wages of females are somewhat less. (116) The median weekly wages,
 in descending order of magnitude, are as follows:

Table 20.

Silk mills, New Jersey.....	\$7.78
Minnesota, all manufacturing.....	7.40
Manufacturing and mining, as reported by the United States Immigration Commission	7.10
Cotton mills, New England.....	6.60
Glass industry.....	6.55
Selected manufacturing industries.....	6.40
Men's clothing industry.....	5.80

- (111) Bureau of Labor, Report on condition of woman and child wage-earners in the United States, Vol. IV, 155.
- (112) Ibid., Vol. I., 305.
- (113) Ibid., Vol. II., 129.
- (114) Ibid., Vol. III., 411.
- (115) Ibid., Vol. XVIII., 23.
- (116) Read from the curves by inspection.

The differences between the level of wages in Minnesota and the country as a whole are thus considerable, yet such as would be expected in view of the higher cost of living in the Northwest. The lower wages found in the industries investigated by the immigration commission - selected because of the high proportion of immigrant labor they employed - may be ascribed in part to the depressing effect of immigrant labor upon wage rates in industries which it enters. Again, in all industries, the average for the country as a whole is lowered by the generally prevailing low wages in the East, and particularly in the South. In addition the smaller proportion of female minors engaged in gainful occupations in Minnesota than in the country as a whole tends to make the average wage of female earners higher in Minnesota than in the country at large. (117) In view of these causes operating to elevate wages in Minnesota above those prevailing in the United States as a unit, the state statistics of the Minnesota Bureau of Labor in 1910 are confirmed by the national statistics of the federal labor bureau and the immigration commission of the same year.

(117) In the United States according to the occupation census of 1910, 11.9 per cent of the female population 10 to 15 years of age are engaged in gainful occupations, as against 2.9 per cent in Minnesota.

d. Checking the accuracy of the wage returns, fourth method.
Comparison of the statistics of the Minnesota commission with
those of other minimum wage boards and investigating commissions.

For absolute wages of women in the United States as a whole, no statistics have been collected later than the work of the immigration commission and the federal labor bureau's "Report on the Condition of Woman and Child Wage-earners in the United States," both of which covered the year 1910. To check the absolute level of wages as reported by the Minnesota Minimum Wage Commission we must therefore turn to the reports of the several state wage boards and investigating commissions which,

while covering limited areas, are yet of more recent date. The method, scope, and comparability of these studies have already been discussed (pp 71-76). Table 21 summarizes the

Wages of females
in mercantile
establishments
in different
sections of
the country

statistics of wages of females employed in mercantile establishments in Minnesota and in ten other divisions of the country.

The dates of these enumerations vary from 1910 to 1914. To minimize the effect of this discrepancy in time, they have been grouped for comparison into enumerations from 1910 to 1912, and enumerations from 1913 to 1914.

Five comparable enumerations of the wages of female mercantile employees made in the United States from 1910 to 1912, are graphically represented in Plate 11. For purposes of com-

During the period
1910-1912

parison, the curve for Minnesota in April, 1914, is added. The median wages are as

Table 21.

Wages of females employed in mercantile establishments
in different sections of the country, 1911 - 1914

Wage per week	Minnesota April, 1914, employees' reports (a)	Minnesota April, 1914, employers' reports (b)	Massa- chusetts 1911 (c)	Connec- ticut, 1913-(d) 1914	New York, Chicago & Philadel- phia (e)	District of Columbia, Dec. 1, 1912 (f)	Kentucky, 1911 (g)	Ohio 1913 (h)	Indiana 1913-1914 (i)	Colorado, Aug., 1914 (j)	Oregon, 1912 (k)	Washington, 1913-1914 (l)
Cumulative per cent of total												
Under \$2.00 per week		.1										
2.00 and under 3.00		.1		.2	2.0	2.1	3.2	2.3	1.3			
3.00 " " 4.00	.5	1.0	12.0	5.3	8.4	13.8	20.2	6.6	9.8		.1	1.0
4.00 " " 5.00	5.2	5.4	21.2	13.2	17.1	30.5	34.9	14.9	22.7		2.5	3.7
5.00 " " 6.00	15.2	15.2	38.9	22.0	26.4	45.4	49.0	26.2	33.0	30.8	9.1	8.0
6.00 " " 7.00	32.6	31.8	55.1	39.6	43.3	60.6	61.9	41.0	47.9	44.5	24.2	18.3
7.00 " " 8.00	47.4	46.3	65.9	52.5	57.5	72.1	70.3	55.1	58.4	55.7	31.1	29.6
8.00 " " 9.00	60.2	59.3		63.0	68.6	85.4	77.0	66.3	68.6	67.9	47.1	43.3
9.00 " " 10.00	68.8	69.1		72.8	76.1		81.8	73.8	74.9	76.6	58.2	55.6
10.00 " " 11.00	78.2	79.1		80.2	83.2		87.9	82.2		85.0		
11.00 " " 12.00	80.9	82.1	100.0	82.2	85.4		89.5	84.2	84.7	88.0	82.5	
12.00 " " 13.00	87.1			87.0	89.6		92.9					
13.00 " " 14.00	88.5			87.9			93.5					
14.00 " " 15.00	90.3			90.4	92.5	100.0	94.7	91.8			98.3	100.0
15.00 " " 16.00	94.4			93.3			96.7		100.0	100.0		
16.00 " " 17.00	95.2	100.0		95.0	96.0		97.3					
17.00 " " 18.00	96.0			96.0			97.9					
18.00 " " 19.00	97.4			97.6	97.1		98.2				100.0	
19.00 " " 20.00	97.6			97.7			98.2	97.3				
20.00 " " 25.00	99.2			98.9	98.4		98.8	100.0				
25.00 and over	100.0			100.0	100.0		100.0					

(a) Employees' returns, Twin Cities and Duluth. (b) Employers' returns, Twin Cities and Duluth. (c) Massachusetts, Report of Commission on minimum wage boards, 9 - 10. (d) Connecticut, Report of Bureau of Labor on conditions of wage earning women. (e) U. S. Bureau of Labor, Report on Condition of woman and child wage-earners, Vol. V, 45. (f) U. S. Bureau of Labor, Bul. 116, 21. Data transcribed from pay-rolls. (g) Report of Commission to investigate conditions of working women in Kentucky, 48 - 9. (h) Industrial Commission of Ohio. Report No. 1, 9. (i) U. S. Bureau of Labor statistics, Bul. 160, 331. (j) Colorado, First Report State Wage Board, 11. (Department and 5 and 10 cent stores). (k) Oregon, Report of Social Survey Committee of Consumers' League of Oregon, 25. Portland department stores only. (l) Washington, Report of I. W. C. on Wages, etc., 1914, 18. Retail stores.

follows:

Table 22.

Minnesota	April, 1914	\$8.20
	(118)	
Minnesota.	Estimated 1912	7.70
New York, Chicago and Philadelphia	1910	7.48
Massachusetts	1911	6.69
Kentucky	1911	6.07
District of Columbia	1912	6.30
Oregon	1912	9.26

The figures for New York, Chicago and Philadelphia are not strictly comparable because, altho they embrace 35,772 females, they represent only employees in large department stores. As it is, they range higher than the returns of later date from Massachusetts, Kentucky, and the District of Columbia. Wages in Minnesota even on the basis of the estimated median wage for 1912 (\$7.70) are higher than in the East but much lower than in Oregon. Wages along Mason and Dixon's line as represented by Kentucky and the District of Columbia, are lower than in Massachusetts. The position of the curve for Minnesota, midway between those for Oregon and the East, corresponds with familiar differences in prices and the cost of living.

The second group of wage studies made during the years 1913 and 1914 is exhibited graphically in Plate 12, and also

During the period
1913-1914

confirms the accuracy of the Minnesota Commission's statistics. Median weekly wages

(118) Obtained by graphic interpolation.

PLATE 11

Comparative wages of females employed in mercantile establishments in Minnesota, 1914, and in other sections of the United States 1910 - 1912

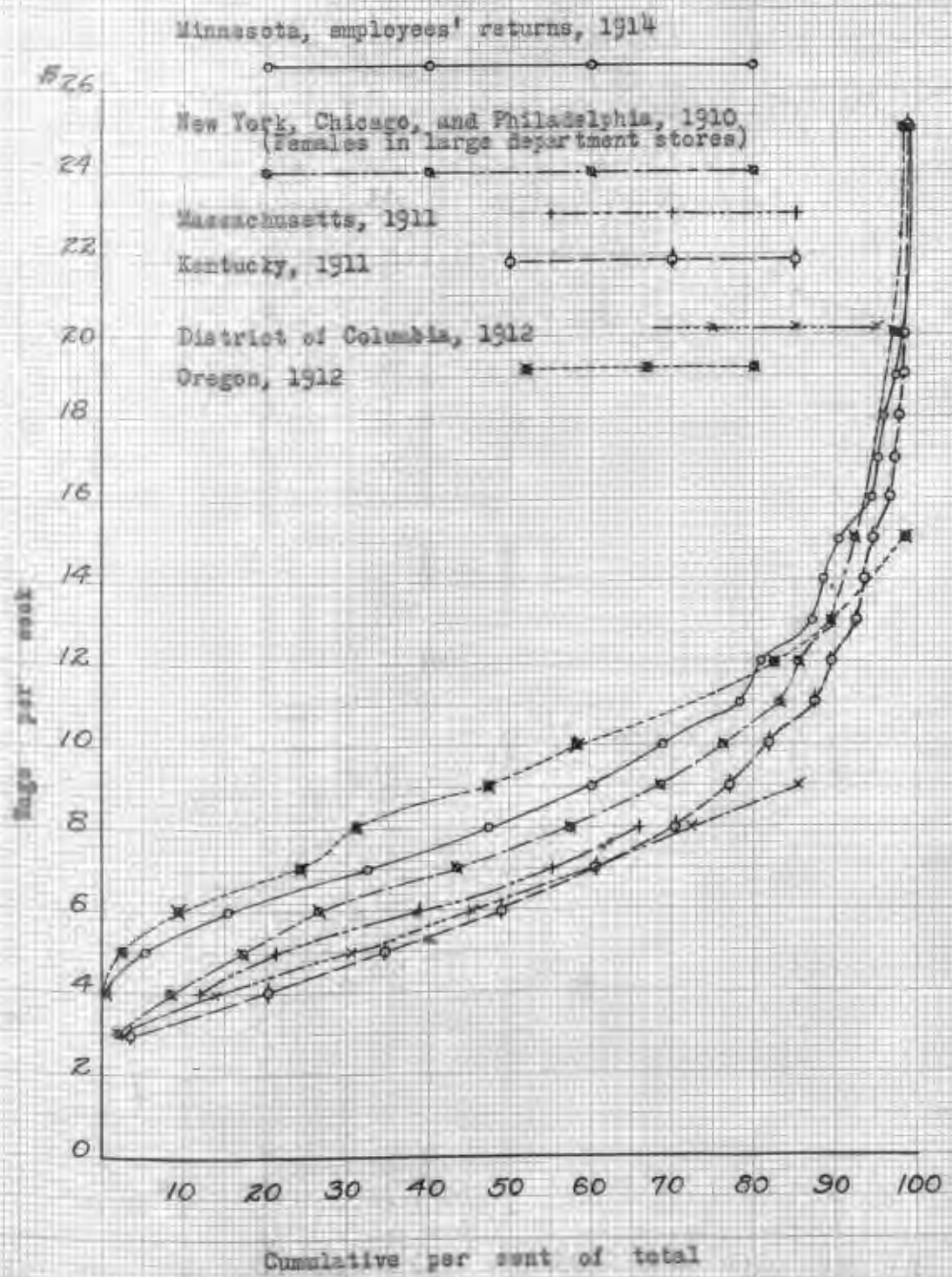
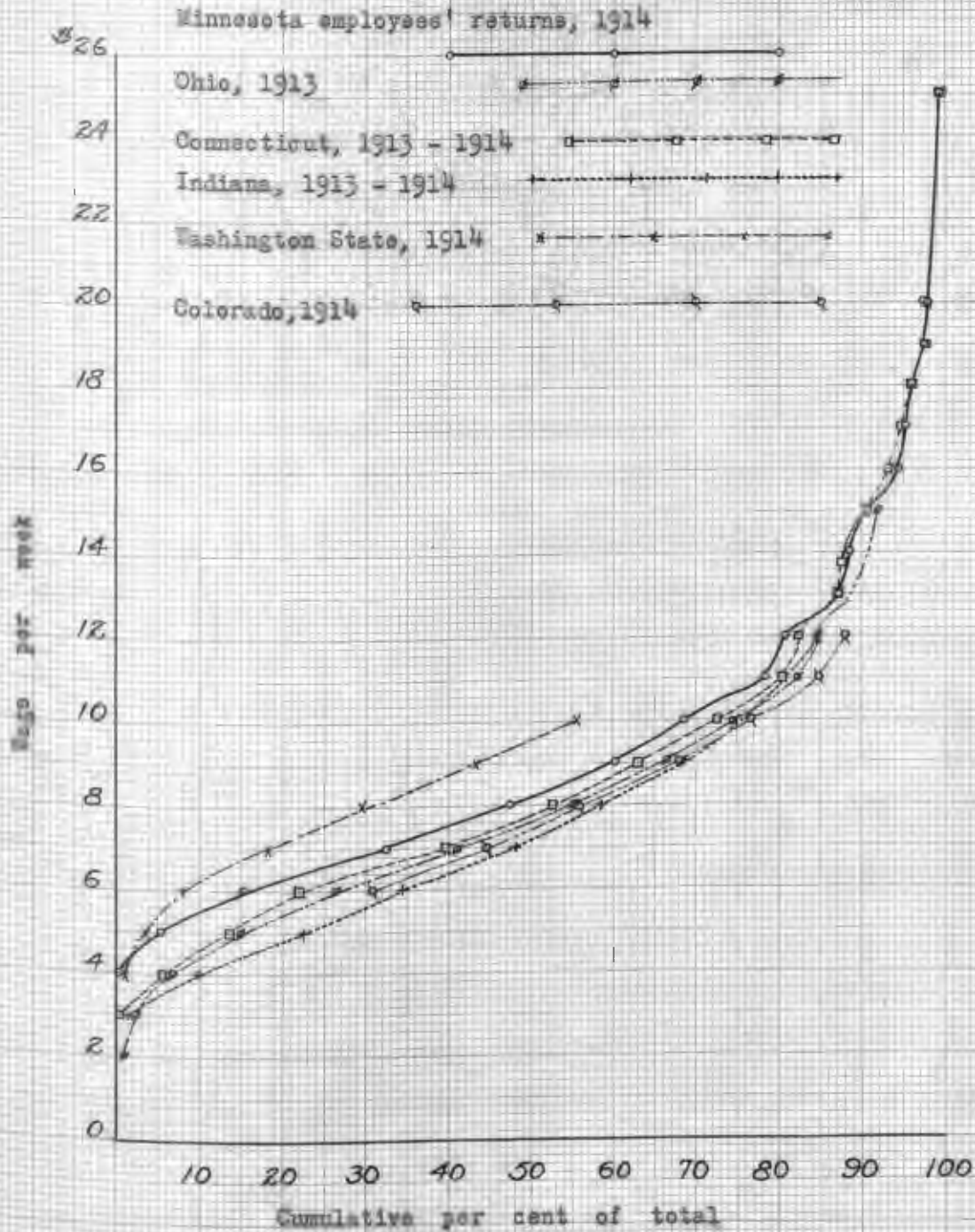


PLATE 12

Comparative wages of females employed in mercantile establishments in Minnesota and in other sections of the United States, 1913-1914



are as follows:

Table 23.

Minnesota	April, 1914	\$8.20
Connecticut	1913-1914	7.80
Ohio	1913	7.64
Indiana	1913-1914	7.20
Colorado	August, 1914	7.49
Washington (State)	1913-1914	9.55

A glance at the graph shows that wages of female mercantile employees in Ohio, Indiana, and Connecticut, range approximately the same, the median wage being at or near \$7.50 per week. On about the same level are wages in Colorado as reported by the State Wage Board in 1914. Wages on the Pacific Coast, represented by Washington, range about \$2.00 per week higher than in the East. Higher than in Connecticut, Indiana, Ohio, and Colorado, but much lower than in Washington, run wages in Minnesota.

The commission's returns on wages in Minnesota are thus consistent with published studies of women's wages elsewhere made at about the same time. As indicated

Summary

by comparing wages of females in mercantile employment in different states, the level of women's wages is lowest in the South, increases toward the North and from the East to the West, and reaches a maximum in the Pacific Northwest.

Wages in Minnesota, according to the wage commission's returns, are midway between the rates paid in the East and the high rates

of the Pacific Coast. The fact that these observed variations accord with what might a priori be expected in view of commonly accepted differences in prices and cost of living in East and West, confirms the probable accuracy of the minimum wage commission's statistics of wages in Minnesota.

Accuracy of the commission's wage returns, - summary.

The elaborate discussion just concluded is justified if we have succeeded in demonstrating the substantial accuracy of the Minnesota commission's wage statistics. Of the information obtained by the schedule, that only is of value which gives the weekly full-time earnings of females and of male minors according to the pay-roll nearest to April 1, 1914.

Wages of
females

To answer these two inquiries the intelligence and records of the employers sufficed even under a system of self-enumeration where supervision was impossible. Errors due to misinterpretation of the schedule were eliminated by careful editing of the returns. In many cases where the number of females employed at over \$12.00 could be obtained from the schedule only by assumption, the assumption was checked by a conference with the employer. In addition the returns appear to have been made in good faith. Altho the motive to deceive may well have been present in the minds of the employers, such tests as can be applied indicate that its effect in distorting the facts must have been small. Four tests confirm the substantial accuracy of the employers' returns. (1) The replies of the employees from the same establishments give, in the case of mercantile business, results almost identical with those of the employers. The slightly higher wages reported by manufacturing employers than by their employees are due to a difference in definition: the employers were reporting earnings per week of full time, the

employees tended to report actual earnings. (2) The commission's statistics of 1914 are in harmony with wage studies previously made in the state from 1888 to 1910. The increase in the median weekly wage of women in the state based upon these several reports was approximately 40 per cent from 1900 to 1914 and 10 per cent from 1910 to 1914, a rate closely approximating the general rate of increase in the country at large during the same period. (3) Not only have women's wages in Minnesota increased in the same ratio as in the country at large, but the absolute level of wages reported by the state labor bureau in 1910 accords with that in the United States as disclosed by contemporary federal investigations. (4) Finally, wages as reported by the Minnesota commission are much lower than wages on the Pacific Coast and higher than wages in the East, in accordance with observed variations in prices and the cost of living. None of these four tests conclusively establishes the accuracy of the Minnesota employer's returns; for no other measurements exist of the difference between wages in Minnesota and wages elsewhere, with which the differences based upon the commission's work may be compared. In the absence of such measurements, however, relying upon the observed phenomena that wages have materially risen since 1900 and that wages increase from East to West in the United States, we may accept as strong confirmation of the accuracy of the commission's report its apparent harmony with comparable investigations at other times and in other localities.

No means are available for separately determining the reliability of the commission's statistics of wages of male

Wages of
Male minors

minors. In all probability their accuracy is of the same order as that of the statistics

of women's wages.

Summary - accuracy and adequacy of the commission's wage statistics.

The conclusion seems justified that the commission's wage statistics accurately represent the full-time earnings of male minors and of all females in the establishments they cover during a single week in the spring of 1914.

Summary, margin
of error in the
wage statistics

In the case of mercantile employees and of manufacturing employees paid by time rate, these full-time earnings are identical with actual earnings. In the case of manufacturing employees paid by piece rate, the actual earnings may be less, how much less on the whole cannot be estimated.

The adequacy of the returns, accurate for the establishments they cover, is in the case of mercantile and manufacturing as a whole entirely sufficient. The adequacy for twelve important manufacturing industries can be estimated from a comparison with the census of manufactures. In the case of the remaining manufacturing industries, and of particular mercantile businesses aside from department stores, figures must be accepted with reservation. The possibility of the existence of other large establishments not reporting makes it conceivable that the published statistics may give a wholly erroneous impression of the industry as a whole. The commission's data thus may be relied

upon as giving a correct picture of wages of females and male minors in broad groups of industry. For small individual industries they represent the actual wage rates paid in the establishments reporting, and the probable rates in the industry as a whole.

III. Wages of females and male minors employed in mercantile and manufacturing industries in cities of the first class as reported to the Minimum Wage Commission.

The Commission's statistics of wages embrace only the three cities of the first class, Minneapolis, St. Paul, and Duluth. (119) For the first two of these statistics have not been

separately presented. From the outset the commission regarded the Twin Cities as an economic unit. (120) Not only are they coterminous but a con-

siderable part of the working population of Minneapolis lives within the borders of St. Paul, and vice versa. While the proportion of women at work is slightly higher in St. Paul than in Minneapolis (121) and the major manufacturing industries in the two cities strikingly distinct, (122) there is no evidence that

(119) Except 93 females from Winona who were tabulated in the employees' returns. Table 50, p. 238.

(120) The federal labor bureau's report on Living conditions of wage-earning women in Minneapolis and St. Paul, in Report on condition of woman and child wage-earners in the United States. Vol. V. Chapter VI. pp. 122 - 137, created a precedent in the matter.

(121) St. Paul, 30.4 per cent; Minneapolis, 28.8 per cent. Cf. Supra., 81.

(122) The leading manufacturing industries of the Twin Cities, ranked according to number of wage-earners are:

- | Minneapolis | St. Paul |
|--------------------------------------|--------------------------------|
| 1. Lumber and timber products. | 1. Car construction and repair |
| 2. Foundry and machine shop products | 2. Foundry and machine shop |
| 3. Car construction and repair. | 3. Printing and publishing. |
| 4. Flour-mill and gristmill products | 4. Boots and shoes. |
| 5. Printing and publishing. | 5. Fur goods. |

the cost of living or the rate of wages prevailing in similar occupations vary materially between the two cities.

The following table summarizes the wages of the 14,317 females and 2655 male minors presented in this paper. The total number of both sexes and all ages employed in the 517 establishments reporting to the commission was 33,362.

Table 24.

Weekly wage	Females			Male Minors.		
	Number	Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent
Total, all wages	14,317	100.0		2,655	100.0	
Under \$2.00	1	.1	.1			
\$2. and under \$3	10	.1	.1	1	.1	.1
3 " "	4	.6	.6	3	.1	.2
4 " "	5	448	3.1	49	1.8	2.0
5 " "	6	1,341	9.4	185	7.0	9.0
6 " "	7	2,198	15.3	329	12.4	21.4
7 " "	8	2,090	14.6	459	17.3	38.7
8 " "	9	1,856	13.0	386	14.5	53.2
9 " "	10	1,616	11.3	391	14.7	67.9
10 " "	11	1,506	10.5	297	11.2	79.1
11 " "	12	685	4.8	134	5.0	84.1
12 and over	2,484	17.3	100.0	421	15.9	100.0
Average wage		\$8.97			\$9.10	
Median wage		8.53			8.78	
Mode, actual		6.00			7.00	
Mode, calculated		6.61			7.54	

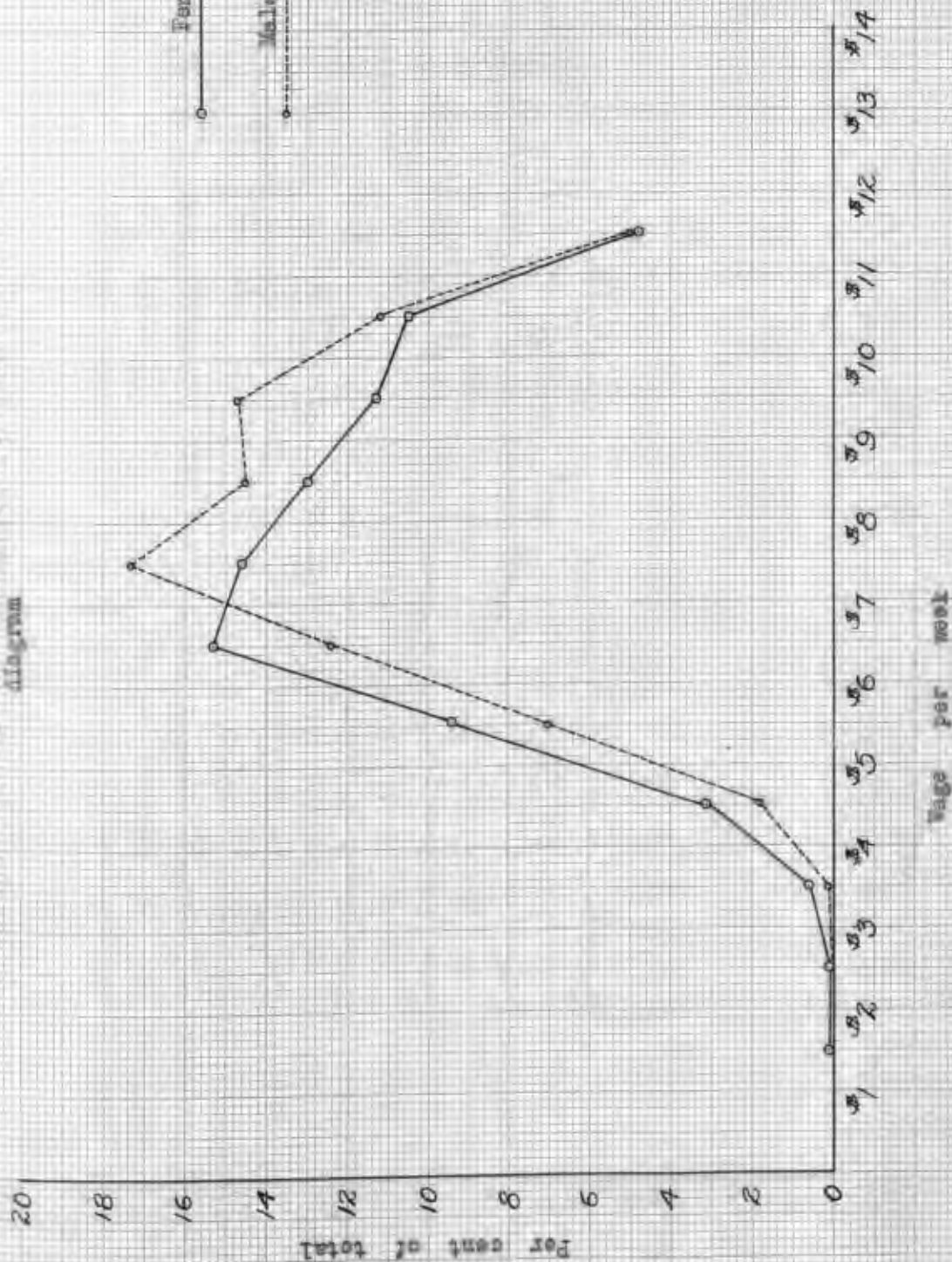
Plate 13 presents the same information graphically in the form of frequency curves.

The average weekly wage of females in the two

PLATE 13

Rages of females and of male minors in all establishments reporting from Minneapolis, St. Paul, and Duluth. Based on Table

Only employees earning less than \$12.50 represented on diagram



great industrial divisions mercantile and manufacturing is thus
(123)
\$8.97. The wage most often received is \$6.00. The median-
the most satisfactory single measure of wages, - is \$8.53. The
average approximates the figure of \$9.00 per week set by the com-
mission's order of Oct., 1914, as the minimum wage in mercantile
employments. Over one-half - 56.1 per cent to be exact - of
all female employees are earning less than the figure estimated
by the commission as the minimum cost of living. Thirteen per
cent are earning less than \$6.00, the rate at which the manufac-
turing advisory board proposed to start learners; and 28.5 per
cent receive less than \$7.00, the sum to be paid after 6 months
experience. About one-sixth (17.3 per cent) earn \$12.00 or
more per week of full time.

Wages of male minors range slightly higher. The
graph (Plate 13) shows the mode for males as from \$7.00 to \$8.00
as against \$6.00 to \$7.00 for females. Similarly the average
is \$9.10, seventeen cents higher than that for females. The dis-
persion of the wages of males is less than for females; boy
learners begin at slightly better wages than girls of the same
experience, and there are relatively fewer boys than women
earning over \$10.00 per week. The proportion earning less than
the \$9.00 minimum is somewhat less than for females but is still

(123) The calculation of this average is attended with some
uncertainty because the exact wages of employees earning
over \$12.00 were not reported.

over half (53.2 per cent) of all the male minors employed. Nine per cent receive less than the proposed initial wage for learners and 21 per cent, less than \$7.00, the wage advocated for apprentices and learners of 6 months training.

The higher wage rate for male minors than for females prevailing in industry as a whole is not characteristic of all specific industries, as will be seen from the following table:

Table 25.

	Total, mercantile and manufacturing	Mercantile			Manu- facturing
		Total	Retail	Wholesale	
Females, median weekly wage.	\$8.53	\$8.29	\$8.08	\$9.53	\$8.71
Male minors, median weekly wage	8.78	8.30	8.06	8.71	9.12

In retail stores and indeed in mercantile employments as a whole, the median wages of male minors and females are almost identical. In wholesale business, where the principal occupations open to women are probably stenography and other forms of office work, the wages of females are unusually high, the median being \$9.53, nearly a dollar and a half higher than is received by their sisters in retail establishments. Wages of male minors in wholesale business are, indeed, higher than in retail, yet they are much lower than those of female wholesale employees, a large proportion of the males under age being employed as stock boys, packers, minor shipping assistants, and office boys.

It is in manufacturing employments that the wages of boys rise conspicuously above those of females. For all manufacturing establishments reporting, the median wage of male minors was \$9.12 as compared with \$8.71, the median wage of females.

The problem of fixing a minimum wage for boys is, therefore, if anything less pressing than that of determining minima for females, because of the relatively higher wages paid to boys than to females.

The law requires that before fixing a minimum rate, the commission shall satisfy itself that one-sixth of the women and minors in the industry are receiving less than living wages. Even accepting as the minimum cost of living \$7.50, the estimate advanced by the mercantile employers of the Twin Cities, 38.5 per cent of all female employees and 33.5 per cent of the boys are receiving less than the barest level of subsistence. Under the injunction laid upon it by the statute, the commission had therefore no choice but to proceed to fix living wages for boys as well as for girls and women.

The injunction laid upon the commission by the statute to regard, in fixing the minimum, geographical differences in the cost of living rendered it advisable to investigate the

prevailing rate of wages in Duluth separately from the Twin Cities. For, while there seemed no reason for supposing that prices and

Wages in the Twin Cities and Duluth as reported by female employees

wages in Minneapolis differed materially from those prevailing in St. Paul, an opinion was widely current that the cost of living

was higher in Duluth, and it was inferred that wages might also be higher there. The commission's investigation revealed little difference in the cost of living. (124) The wages prevailing in Duluth appear to be slightly higher than those for similar occupations in the Twin Cities. It is difficult to state with confidence the wage differential between the two localities because of the inadequacy of the wage returns received from the Duluth manufacturers. (125) It is believed, however, that the following table (Table 26), summarizing wages as reported by the employees

(124) Infra., 388 .

(125) Cf. p 91 . The wages of the 314 females reported by Duluth manufacturers were much lower than the Twin City returns. The median weekly wage for Duluth was \$7.73 as compared with \$8.74 for the Twin Cities, altho as it happened, the mode in Duluth was higher. This difference persisted in all the principal groups of manufacturing industries with the single exception of the clothing industry. In the manufacture of food products, liquors, and tobacco, of leather and rubber goods, of lumber and furniture, of metal products, of textiles, and in printing, wages of females were reported as lower in Duluth than in Minneapolis and St. Paul. It does not follow, however, that wages are lower in Duluth than in the Twin Cities for the same occupation. As already remarked, a manufacturer employing a high proportion of skilled operators may be paying a higher average wage than his competitor, who pays identical wages in corresponding occupations. A possible explanation for the lower rates of wages reported by manufacturers of Duluth may thus be the greater proportion of unskilled female help employed by them. That the explanation is not a lower wage scale in Duluth, is indicated by two facts: (1) in the case of females employed in retail stores, for which the Duluth returns are adequate, wages in Duluth were reported as higher than in the Twin Cities, and (2) the Duluth manufacturing employees, who reported in relatively larger numbers than did the manufacturing employers, give their wages as higher than do the Twin City employees (median weekly wage \$8.71 as against \$8.40, cf. p. 239). It therefore seems probable that the wage returns of the manufacturing employers of Duluth are not representative and that the cause is inadequacy.

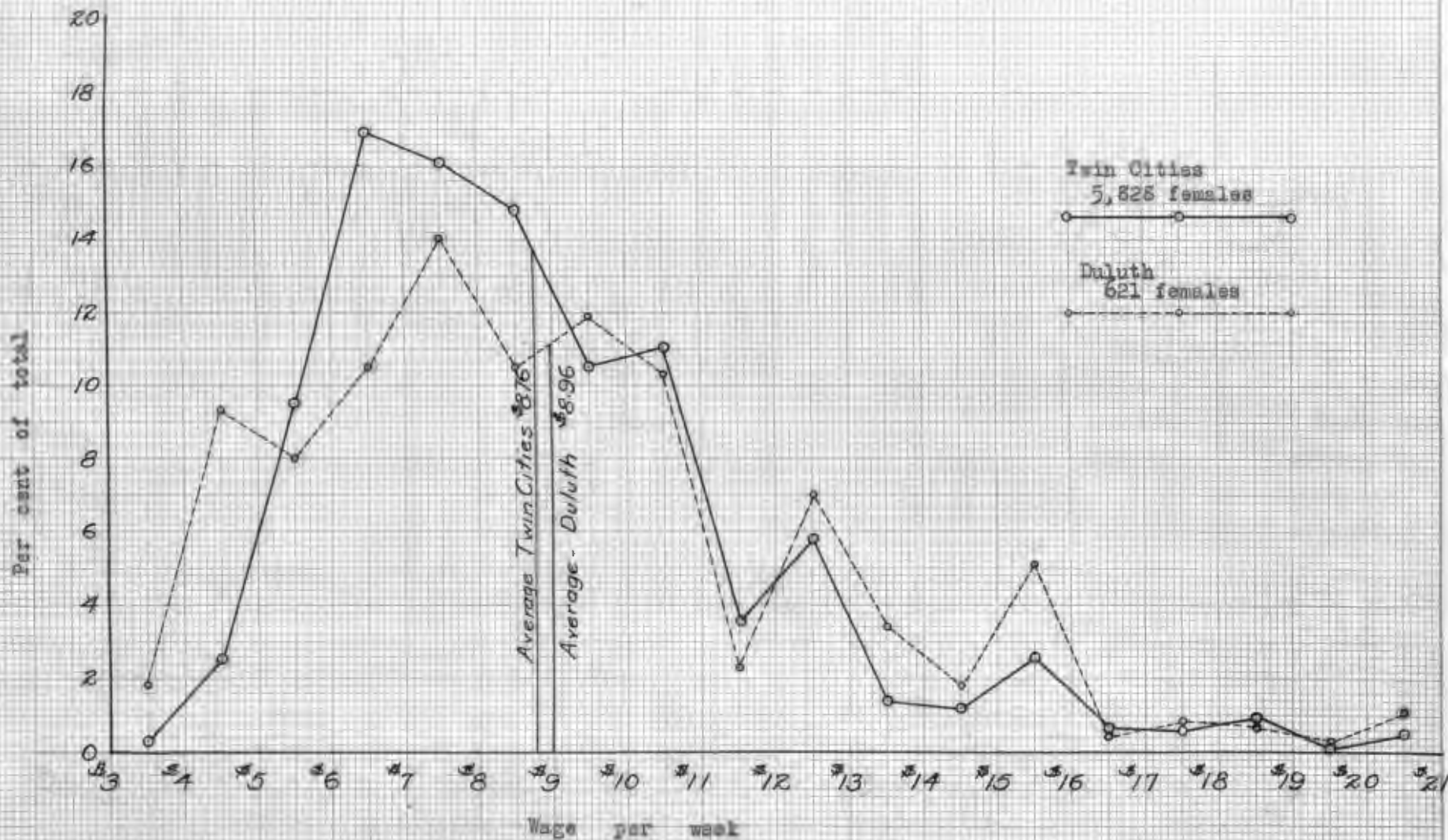
Table 26.

Female employees.
Comparative weekly wages in the Twin Cities and Duluth in mercantile and manufacturing establishments as reported by themselves to the commission on employees' schedules.

Weekly wage	Duluth			Twin Cities		
	Number	Per cent of total	Cumulative per cent	Number	Per cent of total	Cumulative per cent
Total, all wages	621	100.0		5,828	100.0	
Under \$4.00	11	1.8	1.8	18	.3	.3
\$4.00 and under 5.00	58	9.3	11.1	145	2.5	2.8
5.00 " " 6.00	50	8.0	19.1	552	9.5	12.3
6.00 " " 7.00	65	10.5	29.6	986	16.9	29.2
7.00 " " 8.00	87	14.0	43.6	937	16.1	45.3
8.00 " " 9.00	65	10.5	54.0	862	14.8	60.1
9.00 " " 10.00	74	11.9	65.9	614	10.5	70.6
10.00 " " 11.00	64	10.3	76.2	640	11.0	81.6
11.00 " " 12.00	14	2.3	78.5	205	3.5	85.1
12.00 " " 15.00	75	12.1	90.6	491	8.4	93.5
15.00 " " 18.00	39	6.3	96.9	228	3.9	97.4
18.00 " " 20.00	5	.8	97.7	58	1.0	98.4
20.00 " " 25.00	11	1.8	99.5	52	.9	99.3
25.00 and over	3	.5	100.0	40	.7	100.0
Average wage		\$8.96			\$8.76	
Median wage		8.61			8.32	
Mode, actual		7.00			6.00	
Mode calculated		7.50			6.63	

PLATE 14

Comparison of wages in the Twin Cities and Duluth. Wages of all female employees who reported to the Commission



themselves, gives figures for Duluth and the Twin Cities which may be accepted as roughly comparable. Plate 14 presents graphically the same information in the form of frequency curves.

It will be seen (Plate 14) that the dispersion of the Duluth wage curve is greater, and that the average weekly wage is \$8.96, twenty cents higher than in the Twin Cities.

A similar difference is found in the median wages for the two localities. One-half of the females reporting from Duluth earn less than \$8.61 per week, while from the Twin Cities one-half earn under \$8.32. The mode, or wage most commonly received, is \$7.00 in Duluth as against \$6.00 in the Twin Cities, but the proportion receiving the mode is 14.0 per cent of the total, a smaller fraction than in the Twin Cities.

A wage for male minors correspondingly higher in Duluth than in the Twin Cities is exhibited in Table 27, based upon the employers' reports. It will be

As reported by employers -male minors

seen that the median weekly wage in Duluth is \$8.91, or 1.6 per cent higher than the

median in the Twin Cities (\$8.77). The mode, however, is higher in the Twin Cities than in Duluth. From the curves of Plate 15 (126)

which presents the same information graphically it is noteworthy that, as already observed in the case of wages of females, the dispersion of the Duluth curve is greater than that of the Twin Cities. Of all boys employed in the Duluth establishments which reported, 21.7 per cent earned \$12.00 per week or over,

(126) Ogive curves are used because the numbers earning specific wages at \$12.00 and above are not known.

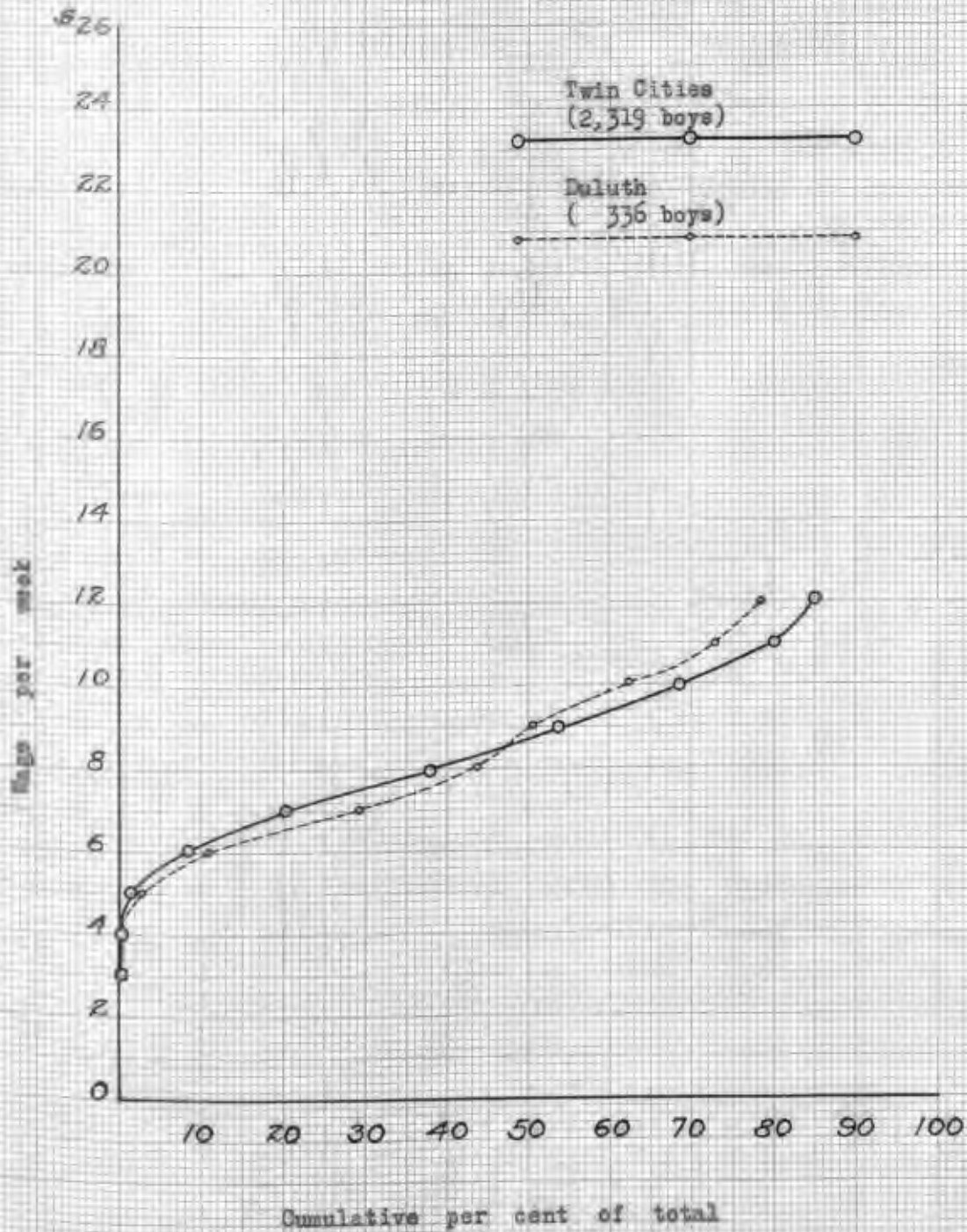
Table 27.

Comparative weekly wages in the Twin Cities and Duluth of male minors
employed in mercantile and manufacturing es-
tablishments as reported
by employers.

Weekly wage	Number	Male minors				
		Duluth		Twin Cities		
		Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent
Total, all wages	336	100.0		2,319	100.0	
Under \$2.00				1	.1	.1
\$3.00 and under 4.00				3	.1	.1
4.00 " " 5.00	9	2.7	2.7	40	1.7	1.8
5.00 " " 6.00	28	8.3	11.0	157	6.8	8.6
6.00 " " 7.00	61	18.2	29.2	268	11.6	20.2
7.00 " " 8.00	49	14.6	43.8	410	17.7	37.9
8.00 " " 9.00	23	6.8	50.6	363	15.7	53.6
9.00 " " 10.00	40	11.9	62.5	351	15.1	68.7
10.00 " " 11.00	35	10.4	72.9	262	11.3	80.0
11.00 " " 12.00	18	5.4	78.3	116	5.0	85.0
12.00 and over	73	21.7	100.0	348	15.0	100.0
Median wage		\$8.91			\$8.77	
Mode, actual		6.00			7.00	
Mode, calculated		6.64			7.58	

PLATE 15

Comparison of wages in the Twin Cities and Duluth
Wages of male minors as reported by employers



while in the Twin Cities the proportion was only 15.0 per cent. 29.2 per cent of the Duluth boys were reported as earning less than \$7.00, as compared with only 20.2 per cent in the Twin Cities.

That wages in Duluth are slightly higher than in the Twin Cities and characterized by greater dispersion is the conclusion suggested by these two comparative studies. Against

As reported by
employers - fe-
males in retail
stores

each, as a measure of the wage differential between the two localities, can be directed the criticism of doubtful comparability. It

is impossible to tell with certainty whether the employees included in the totals for the two localities are drawn from the same occupations in equal proportion. To resolve this uncertainty

Table 28 has been prepared, giving the wages of females employed in retail stores, a business which varies less in the occupations it embraces than any other at our disposal.

An examination of Table 28, and its accompanying frequency curves (Plate 16) confirms the conclusion that wages are slightly higher in Duluth than in corresponding occupations in the Twin Cities. The average wage cannot be accurately computed. The mode is identical in the two curves (\$6.00 per week). The median wage in Duluth is \$8.13, about 1.1 per cent higher than in the Twin Cities. As in the case of wages of all female employees, the dispersion of wages in retail stores is somewhat greater in Duluth than in the Twin Cities; i.e., the proportion of both very poorly paid and very well paid employees is greater and the proportion of moderately paid employees less in Duluth than in the Twin Cities.

The wage commission's statistics thus serve to show

Table 28

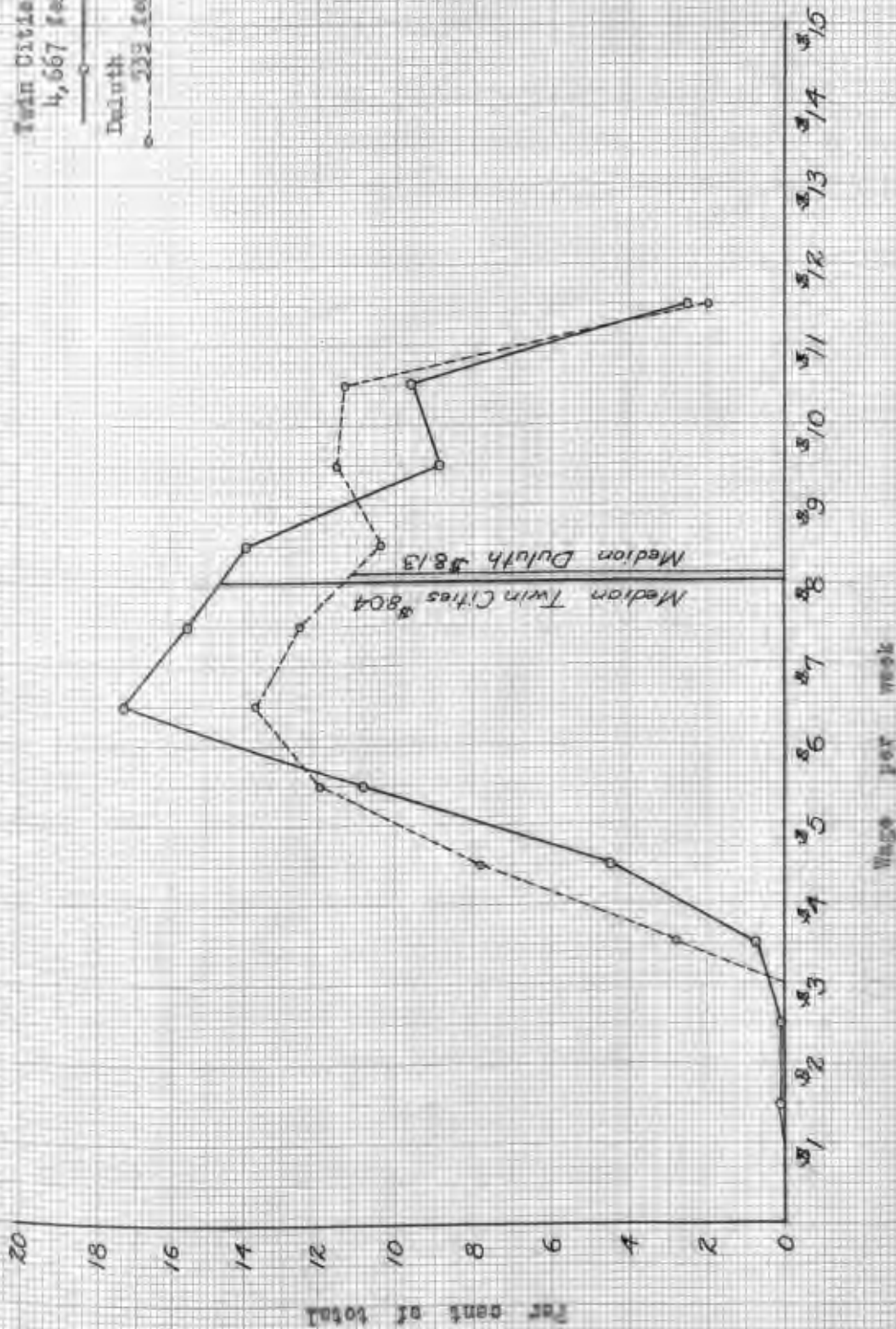
Comparative weekly wages in the Twin Cities and Duluth of females employed in retail mercantile establishments as reported by employers

	Duluth			Twin Cities		
	Number	Per cent of total	Cumulative per cent	Number	Per cent of total	Cumulative per cent
Total, all wages	539	100.0		4,667	100.0	
Under \$2.00				1	.1	.1
\$2.00 and under 3.00				3	.1	.1
3.00 " " 4.00	15	2.8	2.8	40	.7	.8
4.00 " " 5.00	42	7.8	10.6	211	4.5	5.3
5.00 " " 6.00	64	11.9	22.5	504	10.8	16.1
6.00 " " 7.00	74	13.7	36.2	810	17.3	33.4
7.00 " " 8.00	67	12.4	48.6	721	15.5	48.9
8.00 " " 9.00	56	10.4	59.0	599	12.9	61.8
9.00 " " 10.00	62	11.5	70.5	416	8.9	70.7
10.00 " " 11.00	61	11.3	81.8	442	9.6	80.3
11.00 " " 12.00	10	1.9	83.7	117	2.5	82.8
12.00 and over	88	16.3	100.0	803	17.2	100.0
Median wage		\$8.13			\$8.04	
Mode, actual		6.00			6.00	
Mode, calculated		6.51			6.59	

PLATE 16.

Comparison of wages in the Twin Cities and Duluth. Wages of females employed in retail mercantile establishments.

(Only women earning less than \$12.00 per week represented on diagram)



6/20/21

that wages in Duluth are somewhat higher than in Minneapolis and St. Paul. The conclusion is confirmed by the only other source of comparable data known to me, the state Bureau of Labor's investigation of 1902. (127) Computations based upon this report

Wages in Duluth and the Twin Cities at former investigations

give the median wage of all females employed in manufacturing, mechanical and mercantile establishments as \$7.12 in Duluth, \$6.78 in the state as a whole, and \$7.05 in Minneapolis, while the average for Duluth was much higher than for the Twin Cities. The fact of a higher scale of wages in Duluth in 1902 strongly confirms the similar differential of 1914, tho alone not sufficient to establish its existence.

It may be worth while in passing to attempt a measurement of this differential between wages in the Twin Cities and wages for the same labor service performed in Duluth. Expressed absolutely, this differential probably amounts to 10 or 20 cents a week. In terms of the weekly wage it appears to range from 1 to 4 per cent. That is, wages in Duluth, ceteris paribus, should be from 1 to 4 per cent higher than wages in identical occupations in Minneapolis and St. Paul. In practice, however, a multitude of causes may tend to exaggerate or completely reverse the differential. It can be used only as a very rough measure of a tendency which makes itself felt in the absence of counteracting causes.

(127) Minnesota, Bureau of Labor, Eighth biennial report, 1902, 263 - 267.

Table 28, a.

Differential between Duluth and Twin Cities.	Females			Male	
	Employers' returns Retail Stores	Employees' returns Mercan- tile	Manufacturing Total	Minors, total reported by employers	
Based on average weekly wage. Amount	Not calculable	\$-.08	\$.37	\$.20	Not calculable
Per cent of Twin City wage.	Not calculable	-9%	4.6%	2.3%	Not calculable
Based on median weekly wage. Amount	\$.09	\$.31	\$.31	\$.29	\$.14
Per cent of Twin City wage.	1.1%	3.8%	3.7%	3.5%	1.6%

The conclusion seems justified that there is very little difference in the level of wages for the same labor service in the three cities of the first class. Wage rates in Minneapolis and St. Paul are believed to be essentially the same. Wages in Duluth are apparently slightly higher than in the Twin Cities, the differential amounting to less than 4 per cent of the weekly wage. In specific industries, the differential may be completely obscured by other factors.

In addition, wages in Duluth are characterized by a wider dispersion manifesting itself in a larger proportion of poorly paid and also of highly paid employees, and a somewhat smaller proportion of employees receiving average wages.

In the commission's orders of October, 1914, a dif-

ferential of 50 cents per week was fixed between the minimum rates in "cities of the first class" and "cities of the second, third and fourth classes," because it was believed that the cost of living was somewhat less in the smaller municipalities

Wages of cities
of the 2nd, 3rd,
and 4th classes

than in the large cities. The only statistics of wages of females in cities of the second, third, and fourth classes yet tabulated

by the commission are the replies of 93 employees from Winona, which will be found in Table 50. The number of instances is too small to be accepted as typifying conditions in Winona. It is significant, however, that the wages reported are much lower than in the three large cities, the average wage reported being \$7.29 compared with \$8.79 in the Twin Cities and Duluth. The computed median is \$6.92, less by \$1.42 than that in the first class cities. That women's wages in Winona and in other towns in Southern Minnesota should be relatively low need not appear surprising in view of the actual decline in population and the pronounced preponderance of females which now characterizes these communities. The population of Winona decreased 5.7 per cent in the decennium 1900 - 1910 and the ratio of males to females at the last census was 92.6, as compared with 109.1 in Minneapolis, 108.7 in St. Paul, and 133.5 in Duluth.

We approach now the subject of wages in specific industries. Under the terms of the Minnesota statute, the minimum wage must be based solely upon the cost of living to the workers, without consideration of the ability of the industry

affected to pay the minimum. Interpreting the law literally, the commission's only interest in studying wages is to locate the particular parasitic industries in which extremely low wages undercut the standard of reasonable living. Practically, however, it becomes also of social import to know how heavy is the burden saddled upon each industry by the orders of the commission, for obviously it would be possible to fix a wage so high as to destroy industry in Minnesota could it be enforced. The remainder of the present chapter is devoted to presenting wages by specific industries. In most cases the adequacy of the statistics is impossible of determination and therefore open to question. Yet in the absence of complete data, the returns are of value as the only indicator of the rate of wages prevailing in the industry.

At the outset be it understood that the statistics represent wages in an entire industry and not in occupations within the industry. It is impossible even to separate the office employees from the total reported. The figures for a given industry represent, therefore, the total number of females and male minors on the pay-rolls of the establishments in that industry which happened to report to the commission.

In the absence of specific information in regard to occupations within the industry it becomes next to impossible to draw any conclusion as to the liberality of the employers in a given industry; whether the employers in an industry drive sharp or generous bargains with their help can be ascertained only if it is known whether wages in that industry are lower than in the same occupations elsewhere. A level of wages in the

wholesale grocery trade higher than that prevailing in retail clothing stores may thus conceivably be due less to a more generous management in the former than to a higher proportion of experienced office employees. Without information as to the nature of the service purchased by the wage we can form no judgment of the employers' liberality. The commission's statistics are, however, of value for two reasons. In the first place they point out the industries in which large numbers of underpaid women and children are concentrated, and which are therefore parasitic in nature, contagion spots which a wise social sanitation would seek to purge. In the second place the commission's statistics indicate which of the industries would be burdened most heavily by the enforcement of a flat minimum; from the standpoint of the employer who under the Minnesota law must pay a minimum rate to all his employees, it matters not whether his underpaid helpers be operatives of power machine or comptometer; the significant thing to him is that by the enforcement of the minimum his labor cost will be raised so and so much.

The only divisions of industry for which the commission fixed distinct minimum wage rates were the broad groups, mercantile and manufacturing. The following table, graphically presented in Plates 17 and 19, compares wages of females employed in mercantile and manufacturing establishments in cities of the first class.

Wages in mercantile and manufacturing

Table 29.

Weekly wages of females employed in mercantile and manufacturing industries in cities of the first class as reported by employers.*

	Grand Total			Mercantile Industries									Manufacturing		
				Total			Retail			Wholesale					
	Number	Per Cent of Total	Cumulative %	Number	Per Cent of Total	Cumulative %	Number	Per Cent of Total	Cumulative %	Number	Per Cent of Total	Cumulative %	Number	Per Cent of Total	Cumulative %
Total, all wages.....	14,317	100.0	.....	5,940	100.0	.....	5,206	100.0	.....	734	100.0	.....	8,377	100.0	.....
Under \$2.00 per week.....	1	.1	.1	1	.1	.1	1	.1	.1						
\$2.00 and under \$3.00.....	10	.1	.1	3	.1	.1	3	.1	.1				7	.1	.1
3.00 and under 4.00.....	82	.6	.6	55	.9	1.0	55	1.1	1.1				27	.3	.4
4.00 and under 5.00.....	448	3.1	3.7	259	4.4	5.4	253	4.9	6.0	6	.8	.8	189	2.3	2.7
5.00 and under 6.00.....	1,341	9.4	13.1	582	9.8	15.2	568	10.9	16.9	14	1.9	2.7	759	9.0	11.7
6.00 and under 7.00.....	2,198	15.4	28.5	987	16.6	31.8	884	17.0	33.9	103	14.0	16.7	1,211	14.5	26.2
7.00 and under 8.00.....	2,090	14.6	43.1	862	14.5	46.3	788	15.1	49.0	74	10.1	26.8	1,228	14.7	40.9
8.00 and under 9.00.....	1,856	13.0	56.1	770	13.0	59.3	655	12.6	61.6	115	15.7	42.6	1,086	12.9	53.8
9.00 and under 10.00.....	1,616	11.3	67.4	581	9.8	69.1	478	9.2	70.8	103	14.0	56.6	1,035	12.4	66.2
10.00 and under 11.00.....	1,506	10.5	77.9	595	10.0	79.1	503	9.7	80.5	92	12.5	69.1	911	10.9	77.1
11.00 and under 12.00.....	685	4.8	82.7	180	3.0	82.1	127	2.4	82.9	53	7.2	76.3	505	6.0	83.1
12.00 and over.....	2,484	17.4	100.0	1,065	17.9	100.0	891	17.1	100.0	174	23.7	100.0	1,419	16.9	100.0

Average wage	\$8.97 #	\$8.90#	Not calculable	Not calculable	\$9.02#
Median wage	8.53	8.29	\$8.08	\$9.53	8.71
Mode, actual	6.00	6.00	6.00	8.00	7.00
Mode, calculated	6.61	6.60	6.58	8.58'	7.47

* Clipped from First biennial report of the Minnesota Minimum Wage Commission, 14, for which it was prepared by the author.

Cf. note 128, p186.

17. Wages of female wage-earners in MERCANTILE AND MANUFACTURING establishments, as reported by employers of Minneapolis, St. Paul and Duluth.

Only women earning under \$12.00 represented on diagram.

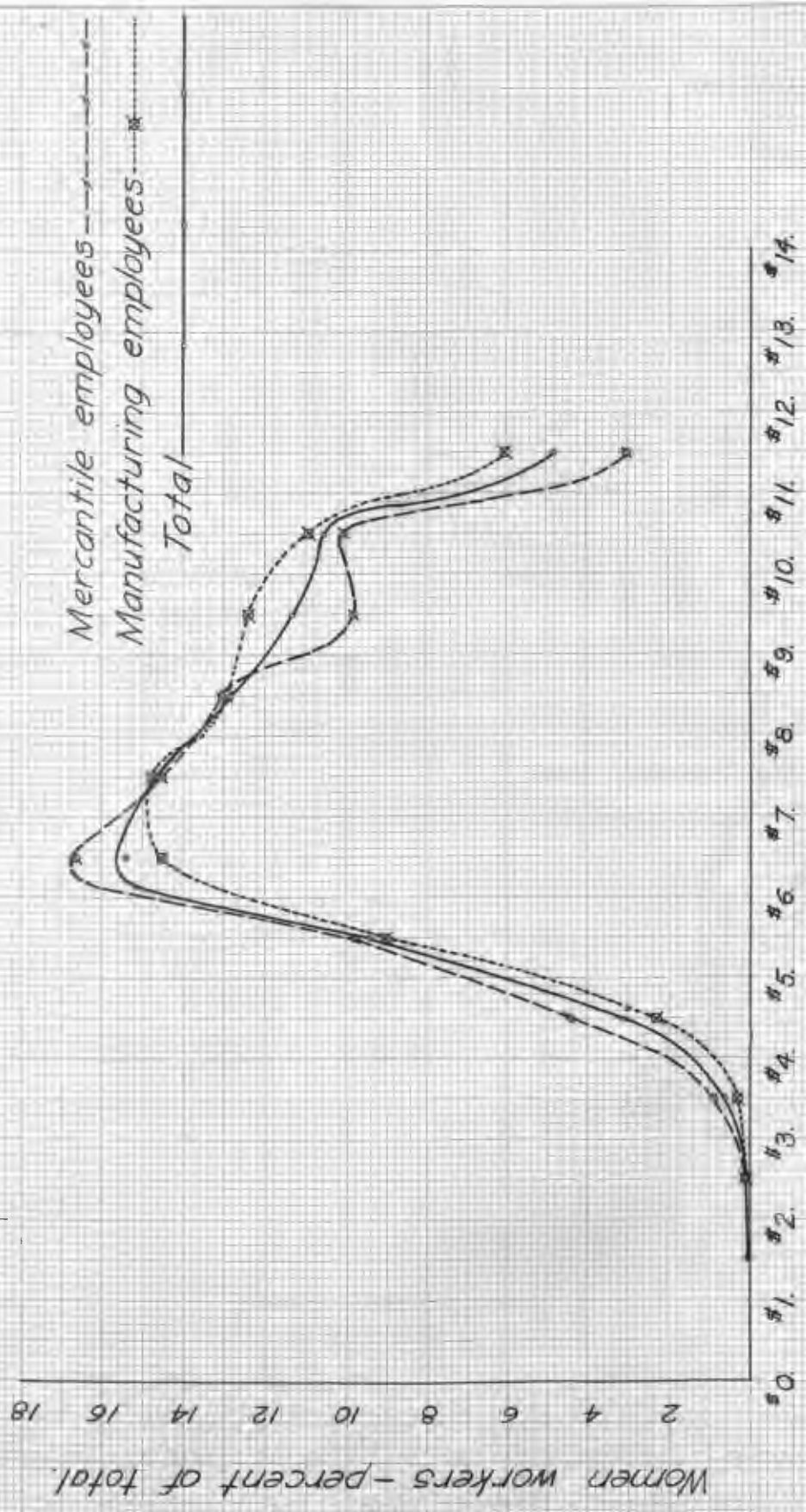


PLATE 17.

Wage per week.

Women workers - percent of total.

It will be seen that wages are consistently somewhat higher in manufacturing as a whole than in trade. Fifty-nine per cent of the females employed in mercantile establishments are earning less than the commission's living wage of \$9.00 per week; of manufacturing employees the proportion is smaller, 54 per cent. The average wage for mercantile business is \$8.97; for manufacturing it is \$9.02.⁽¹²⁸⁾ The median, a more reliable index to the general level of wages, is \$8.71 for manufacturing and \$8.29 for mercantile. Similarly, the modal manufacturing wage is \$1.00 higher than the mercantile mode. The proportion of mercantile employees earning \$12.00 and over per week is, however, greater, being 17.9 per cent as compared with 16.9 per cent of all manufacturing employees. Opportunities for advancement to better paid positions are therefore somewhat better in store than in factory.

It should be remembered that the manufacturing employers' returns, representing in many cases full-time earnings of piece workers, are perhaps in excess of the actual earnings of their employees, while the reports of the mercantile employers,

(128) These averages cannot be computed directly from the employers' returns, because the exact wages of persons earning \$12.00 or over were not asked for. The averages given for all employees, for total mercantile and for total manufacturing, were obtained by assuming that the average wage of women earning \$12.00 or over was the same as that of the employees who reported their own wages. The close correspondence of the employers' and employees' wage returns has already been noted. The averages obtained are probably too high and distinctly less reliable than the medians.

who pay their help very largely on time rate basis, are believed to closely approximate actual earnings. This source of error in comparison can be largely eliminated by recourse to the employees' returns, (129) which confirm the conclusion that wages are higher in manufacturing than in trade, though by a smaller difference. The median weekly wage of the 3,945 manufacturing women was (130) \$8.41, twenty-one cents higher than that of mercantile employees. As in the case of the employers' returns, the mode for manufacturing is \$7.00 per week; that for trade is \$6.00.

The prevailing wage of all females in manufacturing is thus from 2.5 to 5 per cent higher than that among mercantile employees. In the case of male minors the difference is more striking, amount^{ing}/to about 10 per cent of the median mercantile wage. From an examination of Table 30, and Plate 18 which summarize the wages of male minors as reported by mercantile and manufacturing employers in Minneapolis, St. Paul, and Duluth, it will be seen that the median weekly wage of boys in factories is \$9.12 as compared with \$8.30 paid in stores. Sixty-two per cent of the male minors reported from mercantile employments earned less than the commission's \$9.00 living wage, while only 48 per cent of those in manufacturing were reported as below this level.

The cause of the higher wages reported from manufacturing establishments, even allowing for the discrepancy between

(129) Supra., 144.

(130) Cf. Table 51, p.239.

Table 30

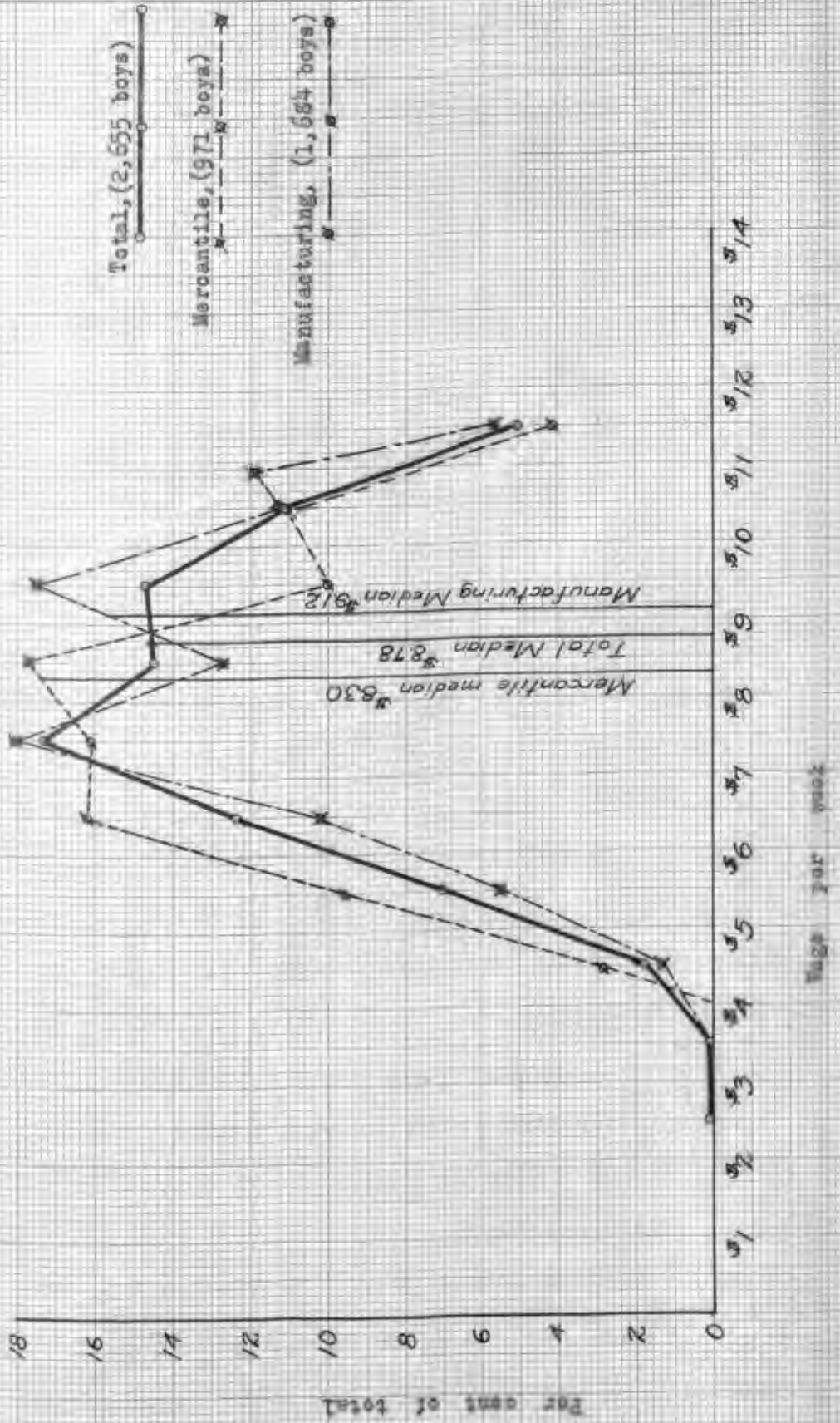
Weekly wages of male minors employed in mercantile and manufacturing industries in cities of the first class as reported by employers.

Weekly wages	Grand total			Mercantile businesses						Manufacturing					
	Number	Per cent of total	Cumulative per cent	Total			Retail			Wholesale			Number	Per cent of total	Cumulative per cent
Total, all wages	2655	100.0		971	100.1		590	99.9		381	100.1		1684	100.0	
Under \$2.00															
2.00 and under 3.00	1	.1	.1										1	.1	.1
3.00 " " 4.00	3	.1	.2										3	.2	.3
4.00 " " 5.00	49	1.8	2.0	27	2.8	2.8	20	3.4	3.4	7	1.8	1.8	22	1.3	1.6
5.00 " " 6.00	185	7.0	9.0	93	9.6	12.4	64	10.9	14.4	29	7.6	9.4	92	5.5	7.1
6.00 " " 7.00	329	12.4	21.4	157	16.2	28.6	124	21.0	35.4	33	8.7	18.1	172	10.2	17.3
7.00 " " 8.00	459	17.3	38.7	156	16.1	44.7	80	13.6	49.0	76	20.0	38.1	303	18.0	35.3
8.00 " " 9.00	386	14.5	53.2	172	17.7	62.4	108	18.3	67.3	64	16.8	54.9	214	12.7	48.0
9.00 " " 10.00	391	14.7	67.8	97	10.0	72.4	41	6.9	74.2	56	14.7	69.6	294	17.5	65.5
10.00 " " 11.00	297	11.2	79.1	108	11.1	83.5	62	10.3	84.5	46	12.1	81.7	189	11.2	76.7
11.00 " " 12.00	134	5.0	84.1	39	4.0	87.5	18	3.1	87.6	21	5.5	87.2	95	5.6	82.3
12.00 and over	421	15.9	100.0	122	12.6	100.0	73	12.4	100.0	49	12.9	100.0	299	17.7	100.0
Median wage		\$8.78			\$8.30			\$8.06			\$8.71			\$9.12	
Mode, actual		7.00			8.00			6.00			7.00			7.00	
Mode, calculated		7.54			8.38			6.56			7.66			7.55	

PLATE 16

Wages of male minors employed in mercantile and manufacturing establishments in the Twin Cities, and Duluth, as reported by employers.

Only boys earning less than \$12.00 represented on the diagram



full-time and actual earnings - is not apparent. A contributing factor is the fact that the proportion of very young girls is greater among store than among factory employees. The age distribution of the female employees in mercantile and manufacturing businesses is closely similar (see Plate 22-1), yet it is true that only 13 per cent of those in manufacturing are under 18 years of age as against 17 per cent in mercantile employment. This difference in age is probably correlated with difference in difficulty of the work.

Comparison also of wages of females employed in retail stores with those in wholesale houses may be had by consulting Table 29. Plate 19 gives simple

Wages in retail
and wholesale
mercantile
establishments

frequency curves for the same information.

It will be seen that wages in wholesale business are very much higher than in retail business. The wage most commonly reported from the former is \$8.00, greater by \$2.00 than that for retail employees.

Of wholesale employees 43 per cent earn less than \$9.00 per week, the minimum fixed by the commission for "women and minors of ordinary ability", while of retail employees, a much larger proportion, (62 per cent) receive less than this "living wage".

The median wage in retail establishments is \$8.08; in wholesale houses it is \$9.53, the difference amounting to 17.8 per cent of the lower wage. A similar tho less striking difference prevails in the case of the wages of boys (Table 30);

19 Wages of female wage-earners in **MERCANTILE** establishments, wholesale, retail and total, as reported by employers of Minneapolis, St. Paul and Duluth.

Only women earning under \$12.00 represented on diagram.

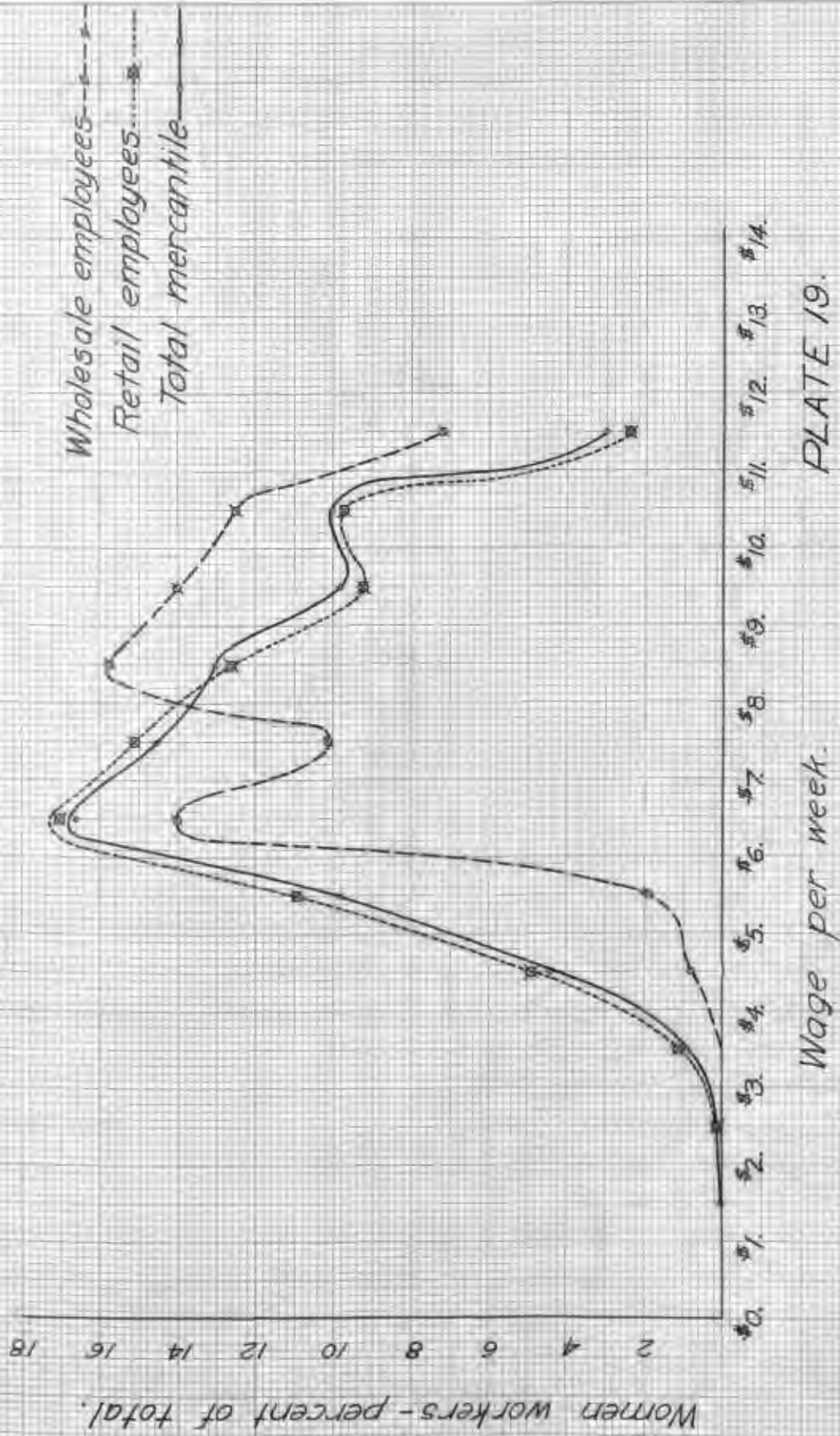


PLATE 19.

the median wage of male minors in wholesale houses is \$8.71, eight and one-tenth per cent higher than that in retail establishments (\$8.06). The mode also is higher in wholesale than in retail business.

Of boys reported from wholesale establishments, 55 per cent earn less than the prescribed \$9.00 minimum; of boys in retail stores, 67 per cent. The probable cause of the higher wages paid in wholesale business is that it embraces a greater proportion of occupations requiring training and experience. Statistics of the ages of wholesale as distinct from retail employees have unfortunately not been prepared; it is probable however, that the median age of females in wholesale business is considerably higher. It is certain that the proportion of office help - usually better paid than salespeople - is greater on the pay-rolls of wholesale establishments. Hardly a retail store of size is to be found in the cities of the state which does not number some females among its sales force, yet in many jobbing and wholesale houses - particularly those handling bulky goods, there are no openings for women outside the office force. The higher wages prevailing in wholesale establishments is not, therefore, due solely to the greater liberality of wholesale dealers, tho this is probably a contributing factor; the difference is due primarily to a higher average species of service exacted from the employee, for which the employer must pay in proportion.

Wages in the principal kinds of retail stores are

Table 31. a.

Wages in selected retail mercantile businesses in cities of the first class as reported by employers. Of females.

		Females											
		Total, retail mercantile		Five and ten cent stores		Department stores		Clothing stores		Dry goods stores		Retail millinery stores	
Wage per week		Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages		100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00		.1	.1			.1	.1	.3	.3			2.6	2.6
3.00	and under 4.00	1.1	1.1			1.4	1.4		.3	.2	.2		2.6
4.00	" " 5.00	4.9	6.0	9.4	9.4	4.7	6.1	.7	1.0	8.2	8.4		2.6
5.00	" " 6.00	10.9	16.9	34.9	44.3	11.8	17.9	4.0	5.1	6.0	14.4	5.3	7.9
5.00	" " 7.00	17.0	33.9	35.0	79.4	18.7	36.6	11.0	16.1	9.3	23.7	2.6	10.5
7.00	" " 8.00	15.1	49.0	11.2	90.6	16.8	53.4	8.8	24.9	10.3	34.0	10.5	21.0
8.00	" " 9.00	12.6	61.6	2.5	93.1	13.4	66.8	9.7	34.6	11.5	45.5	13.2	34.2
9.00	" " 10.00	9.2	70.8	1.9	95.0	8.4	75.2	12.4	47.0	13.0	58.5	7.9	42.1
10.00	" " 11.00	9.7	80.5	3.8	98.8	8.3	83.5	15.8	62.8	14.7	73.2	21.1	63.2
11.00	" " 12.00	2.4	82.9	.6	99.4	2.1	85.6	3.4	66.2	3.3	76.5		63.2
12.00	" over	17.1	100.0	.6	100.0	14.4	100.0	33.8	100.0	23.5	100.0	36.8	100.0
Median wage		\$8.08		\$6.16		\$7.80		\$10.19		\$9.35		\$10.37	
Mode		6.00		6.00		6.00		10.00		10.00		10.00	

Table 31 b.

Wages of male minors in selected retail mercantile businesses in cities of the first class as reported by employers.

Wage per week	Male minors							
	Total, retail mercantile		Department stores		Clothing stores		Dry goods stores	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0	
Under \$3.00								
3.00 and under 4.00								
4.00 " " 5.00	3.4	3.4	2.5	2.5			8.1	8.1
5.00 " " 6.00	10.9	14.4	6.2	8.7	8.1	8.1	33.8	41.9
6.00 " " 7.00	21.0	35.4	20.5	29.2	44.9	53.0	21.6	63.5
7.00 " " 8.00	13.6	49.0	14.3	43.5	10.2	63.3	13.6	77.0
8.00 " " 9.00	18.3	67.3	23.6	67.0	10.2	73.5	10.9	87.9
9.00 " " 10.00	6.9	74.2	8.1	75.1	4.1	77.6		87.9
10.00 " " 11.00	10.3	84.5	10.6	85.7	12.2	89.8	5.4	93.3
11.00 " " 12.00	3.1	87.6	2.0	87.7		89.8	5.4	98.7
12.00 and over	12.4	100.0	12.3	100.0	10.2	100.0	1.3	100.0
Median wage	\$8.06		\$8.26		\$6.93		\$6.37	
Mode	6.00		8.00		6.00		5.00	

presented in Table 31, in parallel columns in order to facilitate comparison. The lowest wages are paid by the 5 and 10 cent stores. The employing no girls at less than \$4.00 per week,

they pay only five per cent of their female help as much as \$10.00 and pay 93 per cent

less than the commission's living wage. The median wage is \$6.16 per week. Wages in department stores are higher. The rate most often received by females is \$6.00, and by male minors, \$8.00. The median wages are \$7.80 and \$8.26 respectively.

Almost exactly two-thirds of both sexes receive less than the \$9.00 minimum. In clothing, dry-goods, and retail millinery stores, wages of females are very much higher, the wage most often received being \$10.00 per week. In selling goods of this character the services of experienced women are required and the prevailing wages are consequently higher. Upon such businesses the burden of a minimum wage rests less heavily for approximately three-fifths of their employees already receive over \$9.00 per week. The boys employed in clothing and dry-goods stores are largely errand and stock boys, receiving low wages. The median wage of boys in dry-goods stores, for example, is \$6.37 per week.

As already pointed out (p.190) wages in wholesale and jobbing houses are considerably higher than in retail stores, probably because of the larger proportion of stenographic and clerical help numbered among wholesale employees. Table 32 summarizes the earnings of women and boys in selected wholesale

Table 32.

Wages in selected wholesale mercantile businesses in cities of the first class as reported by employers.

	Females						Male minors									
	Total, whole- sale mercantile		Seeds, garden and field		Groceries, li- quors and tobacco		General merchan- dize and mail order houses		Hardware, agri- cultural imple- ments and machi- nery		Total, whole- sale mercantile		General merchan- dize and mail order houses		Hardware, agri- cultural imple- ments and machi- nery	
	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00																
3.00 and under 4.00																
4.00 " " 5.00	.8	.8	2.3	2.3					1.8	1.8	1.8	1.8			4.1	4.1
5.00 " " 6.00	1.9	2.7	5.8	8.1	5.0	5.0	.9	.9	.9	2.7	7.6	9.4	5.8	5.8	6.8	10.9
6.00 " " 7.00	14.0	16.7	42.6	50.7	7.4	12.4	21.9	22.8	3.6	6.3	8.7	18.1	6.8	12.6	7.4	18.3
7.00 " " 8.00	10.1	26.8	9.1	59.8	12.3	24.7	17.3	40.1	2.6	8.9	20.0	38.1	20.4	32.9	22.9	41.2
8.00 " " 9.00	15.7	42.6	11.5	71.3	8.7	33.4	21.5	61.6	15.7	24.6	16.8	54.9	26.2	59.1	13.5	54.7
9.00 " " 10.00	14.0	56.6	5.7	77.0	7.4	40.8	15.0	76.6	18.3	42.9	14.7	69.6	18.5	77.6	12.2	66.9
10.00 " " 11.00	12.5	69.1	8.0	85.0	9.8	50.6	7.8	84.4	17.4	60.3	12.1	81.7	14.6	92.2	8.8	75.7
11.00 " " 12.00	7.2	76.3	3.5	88.5	7.4	58.0	6.8	91.2	10.7	71.0	5.5	87.2	4.9	97.1	5.4	81.1
12.00 and over	23.7	100.0	11.5	100.0	42.0	100.0	8.7	100.0	29.0	100.0	12.9	100.0	2.9	100.0	18.9	100.0
Median wage	\$9.53		\$6.98		\$10.94		\$8.45		\$10.45		\$8.71		\$8.65		\$8.48	
Mode	8.00		6.00		?		6.00		9.00		7.00		8.00		7.00	

Wages in whole-
sale mercantile
establishments businesses. While the median wages of male
minors are quite constant, being \$8.65, \$8.48,
and \$8.71 for mail order houses, wholesale hardware, and total
wholesale, respectively, those of females vary within wide limits,
from slightly under \$7.00 in the seed business to between \$10.00
and \$11.00 in the wholesale grocery and hardware trades. The
variation again is probably largely due to differences in the
occupations included in the several businesses and emphasizes
once more the difficulty of interpreting wage statistics in which
occupations are not distinguished. The seed trade employs the
largest proportion of cheap female labor; seven-tenths of the
females on the pay-roll earn under the \$9.00 minimum wage. Its
wage rates are depressed by the high proportion of inexperienced
girls employed as packers at \$6.00 per week, during certain
seasons of the year. The wage most commonly paid to females by
the general wholesale merchandise and mail order houses is \$6.00
per week. Approximately three-fifths of both females and
male minors receive less than the commission's estimated living
wage. In the wholesale trade in food products and in hardware,
agricultural implements and machinery, 33.4 per cent and 24.6
per cent respectively of the female employees earn less than the
minimum; for male minors in the same group the proportion is much
greater, exceeding one-half. The much higher wages paid to
females than to male minors in these two businesses is due to
the preponderance of office help among the women and of shipping

and stock room help among the boys. In general, the burden of a minimum wage would fall less heavily upon wholesalers than upon most other employers.

The level of wages as measured by the median displays much less variation from one manufacturing industry to another than from one retail business to another. With two unimportant exceptions median weekly wages as shown in Table 33 for females in the principal groups of manufacturing industry lie between \$8.00 and \$9.50 per week. The first exception is the manufacture of drugs, paints, oils and chemicals, reporting only 65 female employees in all, whose median wage is computed at \$6.63 per week. The girls employed are young and inexperienced, engaged in chiefly packing and labeling. At the other extreme stands the manufacture of agricultural implements and vehicles, including automobiles, which reported only 42 women employees; these 42 women were almost exclusively stenographers and clerks, and more than half of them received \$12.00 or more per week. Somewhat the same situation exists in the lumber and furniture industries, which reported 91 females earning a median wage of \$9.59. Next in median rank, aside from miscellaneous manufacturing, is the manufacture of textiles, bags, and bedding. In number of employees one of the most important, this group of industries pays a median wage of \$9.15, a relatively high figure, caused by the exceptional wages in one very large knitting mill. The clothing manufacture, sister industry to textiles, is first in

Wages of females
in principal groups
of manufacturing
industries

Table 33.

Wages of females in principal groups of manufacturing industries in cities of the first class as reported by employers.

Females												
Wage per week	Total manufacturing		Drugs, paints oils, and chemicals		Food products, liquors, and tobacco		Leather and rubber goods		Lumber and furniture		Agricultural implements & vehicles	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00	.1	.1										
3.00 and under 4.00	.3	.4			.2	.2						
4.00 " " 5.00	2.3	2.7	4.6	4.6	1.8	2.0	4.9	4.9				
5.00 " " 6.00	9.0	11.7	30.7	35.3	12.1	14.1	15.3	20.2	4.4	4.4		
6.00 " " 7.00	14.5	26.2	23.1	58.5	17.4	31.5	12.4	32.6	5.5	9.9	2.4	2.4
7.00 " " 8.00	14.7	40.9	12.3	70.8	14.1	45.6	11.1	43.7	11.0	20.9	2.4	4.8
8.00 " " 9.00	12.9	53.8	9.2	80.0	9.0	54.6	12.0	55.7	18.7	39.6	4.8	9.6
9.00 " " 10.00	12.4	66.2	7.7	87.7	10.0	64.6	9.5	65.2	17.6	57.2	2.4	12.6
10.00 " " 11.00	10.9	77.1	7.7	95.4	16.1	80.6	9.5	74.7	7.7	64.9	11.9	23.9
11.00 " " 12.00	6.0	83.1	1.5	96.9	6.5	87.1	4.2	78.9	6.6	71.5	9.5	33.4
12.00 and over	16.9	100.0	3.1	100.0	12.9	100.0	21.1	100.0	28.6	100.0	66.6	100.0
Median wage	\$8.71		\$6.63		\$8.49		\$8.53		\$9.59		over \$12.00	
Mode	7.00		5.00		6.00		5.00		8.00			

Table 33 continued.

Wages of females in principal groups of manufacturing industries in cities of the first class as reported by employers.

Wage per week	Metal products		Printing and paper goods		Textiles, bags and bedding		Clothing		All other manufacturing	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0	
Under \$3.00							.3	.3		
3.00 and under 4.00							.9	1.2		
4.00 " " 5.00			1.8	1.8	.2	.2	4.9	6.1		
5.00 " " 6.00	8.2	8.2	8.4	10.2	7.4	7.6	8.6	14.7	6.4	6.4
6.00 " " 7.00	15.2	23.4	18.8	29.0	12.9	20.5	12.3	27.0	15.1	21.5
7.00 " " 8.00	22.0	45.4	18.7	47.7	14.3	34.7	13.6	40.6	10.5	32.0
8.00 " " 9.00	9.9	55.3	18.2	65.9	13.2	47.9	12.6	53.2	11.6	43.6
9.00 " " 10.00	14.0	69.2	12.4	78.3	13.9	61.8	12.0	65.2	18.6	62.2
10.00 " " 11.00	9.3	78.5	6.1	84.4	10.1	71.9	11.5	76.7	14.5	76.7
11.00 " " 12.00	2.3	80.8	2.0	86.4	8.6	80.5	6.0	82.8	7.0	83.7
12.00 and over	19.2	100.0	13.6	100.0	19.5	100.0	17.2	100.0	16.3	100.0
Median wage	\$8.47		\$8.12		\$9.15		\$8.75		\$9.35	
Mode	7.00		6.00		7.00		7.00		9.00	

number of female employees reported and fifth in rank of median wage. Exactly one-half of its women workers are receiving less than \$8.75, the figure set by the commission as the minimum wage for manufacturing employees in cities of the first class. In none other of the principal divisions of manufacturing does the median reach the commission's "living wage". In the manufacture of food products and tobacco, of leather and rubber goods (including shoes and gloves), and of metal products, the median wage is close to \$8.50. In printing and paper goods, the median descends to \$8.12 per week.

The wage for beginners is about \$4.00 in most of the industries of Table 33. Only in food-products and clothing were females reported as earning less than \$4.00. In the latter 7 employees were reported at less than \$3.00 per week; 6 of these were milliners' and dressmakers' apprentices, and one was a beginner in a garment factory.

The proportion of all females who earn \$12.00 or over per week is fairly constant. Aside from the three industries already mentioned as exceptional - drugs and chemicals, lumber and furniture, and agricultural implements and vehicles - from one-eighth to one-fifth of the women employed earn at least \$12.00. The proportion earning \$12.00 or more is lowest in food products (12.9 per cent) and printing and paper goods (13.6 per cent). In leather goods, textiles and clothing it ranges about 20 per cent.

The comparative constancy noted in the prevailing

Table 34.

Wages of male minors in principal groups of manufacturing industries in cities of the first class as reported by employers

Wage per week	Male minors											
	Total manufacturing		Drugs, paints, oils and chemicals		Food products, liquors and tobacco		Leather and rubber goods		Lumber and furniture		Agricultural implements and vehicles	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00	.1	.1							.4	.4		
3.00 and under 4.00	.2	.3							.4	.8		
4.00 " " 5.00	1.3	1.6					1.8	1.8	.7	1.5	1.2	1.2
5.00 " " 6.00	5.5	7.1	11.8	11.8	6.0	6.0	6.6	8.4	2.5	4.0	4.7	5.9
6.00 " " 7.00	10.2	17.3		11.8	8.0	14.0	15.1	23.5	10.0	14.0	10.6	16.5
7.00 " " 8.00	18.0	35.3	5.9	17.7	16.1	30.1	13.9	37.4	29.0	43.0	8.2	24.7
8.00 " " 9.00	12.7	48.0	17.6	35.3	9.6	39.8	13.2	50.6	4.3	47.3	3.6	28.3
9.00 " " 10.00	17.5	65.5	52.9	88.2	16.9	56.7	14.5	65.1	24.4	71.7	8.2	36.5
10.00 " " 11.00	11.2	76.7	5.9	94.1	11.6	68.3	13.8	78.9	12.9	84.5	5.9	42.4
11.00 " " 12.00	5.6	82.3		94.1	12.0	80.3	4.8	83.7	4.0	88.5		42.4
12.00 and over	17.7	100.0	5.9	100.0	19.7	100.0	16.3	100.0	11.5	100.0	57.6	100.0
Median wage	\$9.12		\$9.27		\$9.60		\$8.96		\$9.12		over \$12.00	
Mode	7.00		9.00		9.00		6.00		7.00		?	

Table 34 continued.

Wages of male minors in principal groups of manufacturing industries in cities of the first class as reported by employers.

Wage per week	Male minors									
	Metal products		Printing and paper goods		Textiles, bags and bedding		Clothing		All other manufacturing	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0	
Under \$3.00										
3.00 and under 4.00	.6	.6	.2	.2						
4.00 " " 5.00	1.9	2.5	2.4	2.6			1.5	1.5	2.7	2.7
5.00 " " 6.00	.6	3.1	10.3	12.9			4.6	6.1	8.0	10.7
6.00 " " 7.00	11.4	14.5	14.2	27.1	1.2	1.2	7.7	13.8	8.0	18.7
7.00 " " 8.00	10.7	25.2	21.1	48.2	11.6	12.8	29.3	43.1	9.3	28.0
8.00 " " 9.00	13.8	39.0	13.0	61.2	34.1	46.9	10.8	53.9	10.6	38.6
9.00 " " 10.00	17.6	56.6	10.6	71.8	23.7	70.5	21.5	75.4	22.7	61.4
10.00 " " 11.00	14.5	71.1	8.5	80.3	9.8	80.3	15.4	90.8	13.3	74.7
11.00 " " 12.00	3.8	74.9	4.3	84.6	8.7	89.0	4.6	95.4	5.3	80.0
12.00 and over	25.1	100.0	15.4	100.0	11.0	100.0	4.6	100.0	20.0	100.0
Median wage	\$9.62		\$8.15		\$9.12		\$8.66		\$9.50	
Mode	9.00		7.00		8.00		7.00		9.00	

wage of women in the principal branches of manufacturing applies also to male minors, (Table 34). The highest wages are paid in

Wages of male minors in principal groups of manufacturing industries

the agricultural implement and vehicle industry, which reported 85 boys of whom over half earned \$12.00 or more. These young fellows are largely machinists or machinists'

helpers, many of them in automobile assembly plants, and their high wages are a short-time phenomenon. The lowest median wage paid to male minors was \$8.15 in the important printing and paper goods industry, and the next lowest in clothing manufacturing (\$8.66). In all other of the industry groups the median wage exceeds the \$8.75 minimum promulgated by the commission in its order of October 1914. Wages of male minors are thus uniformly higher than those of females as a class with the exception of the clothing industries in which the computed median for females is nine cents higher than that for male minors (\$8.66), and of the lumber and furniture industries, the female employees of which as already noted are largely office help.

The wage of boys just starting to work varies within wide limits. Six dollars per week is the lowest reported earnings in the textile group; \$5.00 appears to be the initial wage in drugs and chemicals and food products; in leather goods, clothing and agricultural implements, \$4.00 is common. Two industries, metal products and printing and paper goods, report \$3.00 as the lowest wage paid, while lumber and furniture start male learners in certain occupations at less than \$3.00 per week.

Table 35

Wages in manufacture of drugs, paints, oils and chemicals in cities of the first class as reported by employers.

	Females		Male minors	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0	
Under \$3.00				
\$3.00 and under 4.00				
4.00 " " 5.00	4.6	4.6		
5.00 " " 6.00	30.7	35.3	11.8	11.8
6.00 " " 7.00	23.1	58.5		11.8
7.00 " " 8.00	12.3	70.8	5.9	17.7
8.00 " " 9.00	9.2	80.0	17.6	35.3
9.00 " " 10.00	7.7	87.7	52.9	88.2
10.00 " " 11.00	7.7	95.4	5.9	94.1
11.00 " " 12.00	1.5	96.9		94.1
12.00 and over	3.1	100.0	5.9	100.0
Median wage	\$6.63		\$9.27	
Mode	5.00		9.00	

The manufacture of drugs, paints, oils and chemicals (Table 35) was represented by eight establishments in the

Twin Cities, including one soap factory.

Wages in manufacture of drugs, paints, oils, and chemicals

The numbers reported (65 females and 17 male minors) are hardly sufficient as a basis

for generalization.

For the important group of food products, liquors and tobacco (Table 36) reports were received covering the wages of 1,373 females and 223 male minors employed in 49 establishments

Wages in the manufacture of food products, liquors and tobacco

manufacturing bakery products, confectionery, crackers, flour and cereals, stock food, cigars, and miscellaneous food products.

The lowest median wage (\$6.73) is found in the last named group, which comprises chiefly pickles, macaroni, and miscellaneous groceries. Eighty per cent of the females in this group earned less than \$8.75. In striking contrast are the wages of the 155 females employed in the manufacture of breakfast foods and other cereals. (131) None of these received

less than \$7.00, and the median woman earned \$10.64 per week. The enforcement of the \$8.75 minimum wage would place no burden upon this industry for but 1.2 per cent of its female employees would be affected. These women are not office help; indeed less than 4 per cent of them earn \$12.00 or more. The firms have merely of their own volition placed all their female employees on a wage sufficient to maintain themselves in decency.

(131) 146 of these were employed in the Cream of Wheat factory.

Table 36.

Wages in manufacture of food products, liquors and tobacco in cities of the first class as reported by employers, - selected industries.

Wage per week	Females										Male minors							
	Total, food products, liquors and tobacco		Bakeries		Confectionery and crackers		Flour and cereals		Stock food		Cigars and tobacco		Miscellaneous food products		Total, food products, liquors and tobacco		Confectionery and crackers	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00																		
3.00 and under 4.00	.2	.2									.8	.8						
4.00 " " 5.00	1.8	2.0			2.6	2.6					5.3	6.1						
5.00 " " 6.00	12.1	14.1			14.7	17.3			2.3	2.3	7.8	13.9	37.5	37.5	6.0	6.0	2.9	2.9
6.00 " " 7.00	17.4	31.5	9.1	9.1	24.5	41.8			28.8	31.1	12.0	25.9	17.0	54.5	8.0	14.0	8.8	11.7
7.00 " " 8.00	14.1	45.6	24.3	33.4	9.3	51.1	.6	.6	11.5	42.6	22.3	48.2	25.5	80.0	16.1	30.1	18.6	30.3
8.00 " " 9.00	9.0	54.6	21.2	54.6	12.5	63.6	.6	1.2	9.2	51.8	8.5	56.7	2.0	82.0	9.6	39.8	13.7	44.0
9.00 " " 10.00	10.0	64.6	18.2	72.8	12.8	76.4	11.6	12.8	10.9	62.7	5.3	62.0	7.5	89.5	16.9	56.7	30.4	74.4
10.00 " " 11.00	16.1	80.6	12.1	84.9	15.7	92.1	60.0	72.8	12.0	74.8	11.2	73.1	2.5	92.0	11.6	68.3	11.8	86.2
11.00 " " 12.00	6.5	87.1	5.0	89.9	2.3	94.4	23.2	96.0	12.6	87.4	3.4	76.5	5.5	97.5	12.0	80.3	2.9	89.1
12.00 and over	12.9	100.0	10.1	100.0	5.6	100.0	3.9	100.0	12.6	100.0	23.5	100.0	2.5	100.0	19.7	100.0	10.8	100.0
Median wage	\$5.49		\$5.77		\$7.87		\$10.64		\$8.80		\$8.20		\$6.73		\$9.60		\$9.20	
Mode	6.00		7.00		6.00		10.00		6.00		7.00		5.00		9.00		9.00	

The median wage paid by the manufacturer of stock food who reported was \$8.80. The most important group numerically is confectionery and cracker manufacturing, embracing 476 women and girls who earn a median wage of \$7.87.

The distribution of wages in cigar manufacturing is typical of the piece rate system. Some inexperienced or incompetent workers earn as little as \$3.00 per week; 56.1 per cent receive less than the subsistence wage of \$8.75; yet for the experienced worker the rewards are high, the proportion earning \$12.00 or more being 23.5 per cent, vastly greater than any other industry in the group. Indeed it is not uncommon to find women cigar makers who earn \$20.00 per week. Two large breweries in St. Paul, employing in all 867 persons, paid no wage lower than \$8.00 per week.

It should be noted that the board often included as a part of the wage of employees in bakeries, has been assigned a cash value and added to the weekly wage.

The group leather and rubber goods (Table 37) includes 14 establishments manufacturing belting and leather specialties, harness and saddlery, boots and shoes, and gloves.

The last two only are represented by numbers of female employees sufficient to serve as a basis for generalization. Wages in both display the wide dispersion characteristic of the piece-rate system. Of boot and shoe employees, 24 per cent earn less than \$6.00, but the proportion receiving \$12.00 or more is nearly as

Wages in manu-
facture of
leather and
rubber goods

Table 37.

Wages in the manufacture of leather and rubber goods in cities of the first class as reported by employers, by selected industries.

Wage per week	Females					Male minors				
	Total, leather and rubber goods		Boots and shoes		Gloves	Total, leather and rubber goods		Boots and shoes		
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0	
Under \$3.00										
3.00 and under 4.00	4.9	4.9	6.9	6.9			1.8	1.8		
4.00 " " 5.00	15.3	20.2	16.9	23.8	15.7	15.7	6.6	8.4	6.5	6.5
5.00 " " 6.00	12.4	32.6	10.5	34.3	17.7	33.4	15.1	23.5	15.4	21.9
6.00 " " 7.00	11.1	43.7	11.6	45.9	13.7	47.2	13.9	37.4	13.9	35.8
7.00 " " 8.00	12.0	55.7	10.4	56.3	11.7	58.9	13.2	50.6	12.2	48.0
8.00 " " 9.00	9.5	65.2	10.5	66.9	7.8	66.7	14.5	65.1	13.7	61.7
9.00 " " 10.00	9.5	74.7	9.3	76.2	11.8	78.5	13.8	78.9	14.7	76.4
10.00 " " 11.00	4.2	78.9	3.4	79.6	5.8	84.3	4.8	83.7	5.7	82.1
11.00 " " 12.00	21.0	100.0	20.4	100.0	15.7	100.0	16.3	100.0	17.9	100.0
12.00 " over										
Median wage	\$8.53		\$8.40		\$8.24		\$8.96		\$9.15	
Mode	5.00		5.00		6.00		6.00		6.00	

Table 38.

Wages in the manufacture of lumber and furniture in cities of the first class as reported by employers,- selected industries.

Wage per week	Females				Male minors							
	Total, lumber and furniture		Total, lumber and furniture		Sash, doors mouldings and mill work		Cabinet work and pattern making		Furniture factories		Wooden boxes and baskets	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00			.4	.4			1.6	1.6				
3.00 and under 4.00			.4	.8			1.6	3.2				
4.00 " " 5.00			.7	1.5			1.6	4.8				
5.00 " " 6.00	4.4	4.4	2.5	4.0	1.4	1.4		4.8	3.8	3.8	1.3	1.3
6.00 " " 7.00	5.5	9.9	10.0	14.0	1.4	1.4	7.9	12.7	7.5	11.3	1.3	2.6
7.00 " " 8.00	11.0	20.9	29.0	43.0	36.1	37.4	47.6	60.2	24.5	35.8	19.5	22.1
8.00 " " 9.00	18.7	39.6	4.3	47.3	2.8	40.2	6.3	66.5	3.8	39.6	15.6	37.7
9.00 " " 10.00	17.6	57.2	24.4	71.7	20.9	61.1	6.4	72.9	3.8	43.4	2.6	40.3
10.00 " " 11.00	7.7	64.9	12.9	84.5	19.5	80.6	8.0	80.9	22.7	62.2	46.8	87.0
11.00 " " 12.00	6.6	71.5	4.0	88.5		80.6	15.9	96.8	20.8	83.0	6.5	93.5
12.00 and over	28.6	100.0	11.5	100.0	19.4	100.0	3.2	100.0	1.9	84.9	6.5	93.5
									15.1	100.0	6.5	100.0
Median wage	\$9.59		\$9.12		\$9.47		\$7.78		\$9.47		\$9.21	
Mode	8.00		7.00		7.00		7.00		7.00		9.00	

great. In both shoe and glove manufacturing the median wage is a half-dollar less than that fixed by the commission as the "limit of decency". The male minors employed in shoe manufacturing receive somewhat more than the females.

Forty-six establishments engaged in the manufacture of lumber and timber (Table 38) in the Twin Cities and Duluth reported to the commission; of these 6 were saw and planing mills, 9 made sash, doors, and mill-work, 17 were chiefly engaged in cabinet work and pattern making, 9 were furniture factories, and 5 were box factories.

Wages in lumber
and furniture
manufacturing

Of the 91 females engaged by these concerns, several were office employees, and a considerable proportion were engaged in non-wood-working trades such as upholstering and decorating in establishments whose principal business was wood-working. The prevailing wages of these female employees were high; only 40 per cent of them received less than \$9.00 per week. Of the 279 minor males employed nearly one-half received less than \$9.00. The lowest wages were paid to male learners and apprentices in cabinet work and pattern making, probably because the value of the trade learned was generally estimated to offset the low earnings, a phenomenon analogous to the low wages of dressmakers' and milliners' apprentices. Wages in the box factories were lower than in furniture, and sash and door factories.

The ten establishments reporting that they were engaged in the manufacture of agricultural implements or of vehicles (Table 39) were confined to the Twin Cities. In spite of the small numbers of employees falling under the protection of the

Wages in the
manufacture of
agricultural
implements and
vehicles.

Table 39.

Wages in the manufacture of agricultural implements
and vehicles in cities of the
first class as reported by employers

Wage per week	Females total		Male minors total	
	Per cent of total	Cumula- tive per cent	Per cent of total	Cumula- tive per cent
Total, all wages	100.0		100.0	
Under \$3.00				
3.00 and under 4.00				
4.00 " " 5.00			1.2	1.2
5.00 " " 6.00			4.7	5.9
6.00 " " 7.00	2.4	2.4	10.6	16.5
7.00 " " 8.00	2.4	4.8	8.2	24.7
8.00 " " 9.00	4.8	9.6	3.6	28.3
9.00 " " 10.00	2.4	12.0	8.2	36.5
10.00 " " 11.00	11.9	23.9	5.9	42.4
11.00 " " 12.00	9.5	33.4		42.4
12.00 and over	66.6	100.0	57.6	100.0
Median wage				
Mode	over \$12.00		over \$12.00	

No establishments from Duluth reported.

minimum wage law who were reported by this group of industries - 42 women and 85 male minors - it has been believed desirable to distinguish the group because of its growing importance in the Twin Cities, as measured both by the total number of its employees and its invested capital. The wages paid both to male minors and to females are exceptionally high; for both classes the median weekly wage is over \$12.00. The females are almost exclusively office employees. The highest wages in the group were reported from the 3 automobile plants. The Ford Motor Co. in particular employs no one at less than \$2.00 per day. The group as a whole is one that would be little affected by the enforcement of a high minimum wage.

The classification of the metal trades, always a matter of difficulty, has been attempted by grouping all establishments engaged in the manufacture of anything largely constructed of metal into a single division of "metal products" (Table 40). The only metal-consuming industries not so included were the manufacture of agricultural implements, and automobiles. The group is thus a miscellaneous one, embracing 33 establishments manufacturing anything from tin cans to structural steel. The totals for the whole mean little; the subdivisions are easier of interpretation.

The 36 females reported from foundries and machine shops were exclusively office employees and only two were receiving less than the living wage for manufacturing of \$8.75. More

Wages in the manufacture of metal products

Table 40. Wages in the manufacture of metal products in cities of the first class as reported by employers,- selected industries.

	Females						Male minors					
	Total, metal products		Foundry and machine shops		Miscellaneous metal products		Total, metal products		Foundry and machine shops		Miscellaneous metal products	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00												
3.00 and under 4.00							.6	.6			.9	.9
4.00 " " 5.00							1.9	2.5	1.2	1.2	2.8	3.7
5.00 " " 6.00	8.2	8.2			8.6	8.6	.6	3.1	9.1	10.3		3.7
6.00 " " 7.00	15.2	23.4			15.3	23.9	11.4	14.5	7.3	17.6	12.9	16.6
7.00 " " 8.00	22.0	45.4	2.8	2.8	23.3	47.2	10.7	25.2	11.5	29.1	15.7	32.3
8.00 " " 9.00	9.9	55.3	2.8	5.6	10.4	57.6	13.8	39.0	12.2	41.2	17.6	49.9
9.00 " " 10.00	14.0	69.2	8.3	13.9	14.7	72.3	17.6	56.6	11.5	52.7	19.5	69.4
10.00 " " 11.00	9.3	78.5	19.4	33.3	8.0	80.3	14.5	71.1	9.1	61.8	12.1	81.4
11.00 " " 12.00	2.3	80.8	11.1	44.4	2.5	82.8	3.8	74.9	8.5	70.3	3.8	85.2
12.00 and over	19.2	100.0	55.6	100.0	17.2	100.0	25.1	100.0	29.7	100.0	14.8	100.0
Median wage	\$8.47		Over \$12.00		\$8.27		\$9.62		\$9.78		\$9.01	
Mode	7.00				7.00		9.00		8.00		9.00	

In foundries and machine shops than one-half of them earned \$12.00 or more per week. The 165 boys in the same industry were well paid, receiving a median wage of \$9.78 per week. As apprentices they begin at \$5.00 or \$6.00 per week. The scale used by one large foundry in the Twin Cities during its 4-year apprenticeship period is \$6.00 for the first six months, \$7.50 for the next six months, \$9.00 for the second year, \$10.50 for the third year, and \$12.00 for the last year. The wages of male minors in the industry in consequence show considerable dispersion; 10 per cent of the total receive less than \$6.00 per week, but 30 per cent are paid \$12.00 or over.

The group "miscellaneous metal products" embraces the reports of 30 establishments. Only two of the industries included employ a considerable number of women or minors. The manufacture of tin cans reported 77 female In miscellaneous metal products factory operatives, 49 of whom receive under \$8.75 per week, and only 4 of whom earn \$12.00 or more. The highest wage paid male minors in the same industry is \$9.50 and the proportion earning less than the estimated subsistence wage is 70 per cent. The manufacture of coffee roasters and grocers' sundries reported 25 females, none of whom received more than \$7.00 per week. Both of these industries appear capable of paying better wages. Rates in the small establishments of the group range much higher, because of the larger proportion of office help included and because the greater versatility required of the two or three female helpers in a small concern must be

rewarded with a higher wage.

The group "printing and paper goods" (table 41) is not readily comparable with the "printing and publishing" of the census since the former includes in addition to 43 printing

and publishing establishments, 7 concerns Wages in printing and the manufacture of paper goods engaged in electrotyping, lithographing, or engraving, 2 in the manufacture of advertis-

ing novelties, 3 in the manufacture of envelopes, and 7 manufacturers of paper bags and boxes. The group is a very important one. "Printing and publishing" alone, according to the census,

ranks third among manufacturing industries in Duluth and in St. Paul, and fifth in Minneapolis, in number of wage earners. Wages both of boys and females in printing and paper goods as a whole

are lower than in most other manufacturing industries. In printing and book-binding, and in publishing, wages approach the level prevailing in manufacturing industry as a whole, but in

the manufacture of paper goods rates are relatively low. Thus the median wage of females employed in printing and book-binding is \$8.58, more than a dollar higher than that in the manufacture

of advertising novelties (\$7.14) and of envelopes (\$7.23). The proportion receiving less than \$8.75, the commission's estimated living wage, is in printing and book-binding, three-fifths; in

advertising novelties, 79.8 per cent; in envelope manufacturing, 77.8 per cent, and in the making of paper bags and boxes, 64.3 per cent. The highest wages in the group are paid in publishing,

in which the median weekly wage is \$9.06 for females and \$8.28

Table 41 a

Wages of females in printing and manufacture of paper goods
in cities of the first class as reported
by employers,- selected industries

Wage per week	Females											
	Total, printing and paper goods		Printing and book-binding		Publishing		Advertising novelties		Envelopes, plain and printed		Paper bags and boxes	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00												
3.00 and under 4.00												
4.00 " " 5.00	1.8	1.8	1.7	1.7			2.1	2.1	2.8	2.8	2.3	2.3
5.00 " " 6.00	8.4	10.2	2.6	4.3	2.9	2.9	14.8	16.9	13.0	15.8	8.8	11.1
6.00 " " 7.00	18.8	29.0	7.0	11.3	10.6	13.5	30.1	47.0	29.6	45.4	18.7	29.8
7.00 " " 8.00	18.7	47.7	19.5	30.8	13.1	26.6	22.5	69.5	21.3	66.7	19.5	49.3
8.00 " " 9.00	18.2	65.9	32.5	63.2	22.2	48.8	10.3	79.8	11.1	77.8	17.2	66.5
9.00 " " 10.00	12.4	78.3	13.0	76.2	17.3	66.1	7.8	87.6	9.3	87.1	15.4	81.9
10.00 " " 11.00	6.1	84.4	10.4	86.6	4.4	70.5	4.4	92.0	9.2	96.3	6.1	88.0
11.00 " " 12.00	2.0	86.4	3.0	89.6	1.9	72.4	.7	92.7			4.2	92.2
12.00 and over	13.6	100.0	10.4	100.0	27.6	100.0	7.3	100.0	3.7	100.0	7.9	100.0
Median wage	\$8.12		\$8.58		\$9.06		\$7.14		\$7.23		\$8.05	
Mode	6.00		8.00		8.00		6.00		6.00		7.00	

Table 41 b

Wages of male minors in printing and manufacture of paper goods
in cities of the first class as reported
by employers,- selected industries

	Male minors							
	Total, printing and paper goods		Printing and book-binding		Publishing		Advertising novelties	
	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent
Total, all wages	100.0		100.0		100.0		100.0	
Under \$3.00								
3.00 and under 4.00	.2	.2						
4.00 " " 5.00	2.4	2.6	4.5	4.5				
5.00 " " 6.00	10.3	12.9	10.3	14.8	12.9	12.9	13.0	13.0
6.00 " " 7.00	14.2	27.1	17.4	32.2	14.1	27.0	13.0	26.0
7.00 " " 8.00	21.1	48.2	21.3	53.5	18.8	45.8	23.4	49.3
8.00 " " 9.00	13.0	61.2	12.9	66.4	15.3	61.1	6.5	55.8
9.00 " " 10.00	10.6	71.8	13.6	80.0	7.1	68.2	3.9	59.7
10.00 " " 11.00	8.5	80.3	4.5	84.5	10.6	78.8	11.7	71.4
11.00 " " 12.00	4.3	84.6	3.9	88.4	5.9	84.7	5.2	76.6
12.00 and over	15.4	100.0	11.6	100.0	15.3	100.0	23.4	100.0
Median wage	\$8.15		\$7.83		\$8.28		\$8.10	
Mode	7.00		7.00		7.00		7.00	

for boys. The distribution of the wages of females employed in publishing exhibits 2 modes; the lower, occurring at \$8.00 at which point 22.2 per cent of the total are concentrated, represents semi-skilled operatives in the press rooms and bindery. A second mode occurs at \$12.00 or some point above, and represents office employees, proof-readers, and skilled clerical help. Twenty-eight per cent earn \$12.00 or more. The lowest wage paid in publishing is \$5.00 per week.

The commonest initial wage in printing plants appears to be \$5.00 or \$6.00, altho \$4.00 a week is paid in some establishments. Apprentices in engraving sometimes begin at even less.

The great group of textiles, so important in the country at large, is represented in Minnesota chiefly by knit goods. The classification as presented in Table 42 covers in addition to 3 knitting mills, 1 twine factory, 2 bag factories, 4 bedding factories, and 6 tent and awning factories. The 16 establishments employ in all 2,378 females and 173 male minors.

The median wages of male minors and females are almost identical, \$9.12 and \$9.15 respectively for the group as a whole. The highest wages in the group are paid by the knit-goods industry, with a median of \$9.24 for females and \$9.49 for male minors. The rates, for females at least, in this industry seem to be considerably higher than in any other important industry where most of the female help are employed in the factory proper rather than

Wages in the manufacture of textiles, bags, and bedding

Table 42.

Wages in the manufacture of textiles, bags, and bedding, in cities of the first class as reported by employers. Selected industries.

Wage per week	Females				Male minors					
	Total, textiles, bags and bedding		Knitting mills		Flour and meal bags		Total, textiles, bags and bedding		Knitting mills	
	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0	
Under \$3.00										
3.00 and under 4.00			.1	.1						
4.00 " " 5.00			.2	.3						
5.00 " " 6.00	.2	.2	9.6	9.9						
6.00 " " 7.00	7.4	7.6	11.9	21.8	19.3	19.3	1.2	1.2		
7.00 " " 8.00	12.9	20.5	13.8	35.6	18.6	37.9	11.6	12.8	14.0	14.0
8.00 " " 9.00	14.3	34.7	11.5	47.1	16.4	54.3	34.1	46.9	21.5	35.5
9.00 " " 10.00	13.2	47.9	12.6	59.6	15.7	70.0	23.7	70.6	29.0	64.5
10.00 " " 11.00	13.9	61.8	9.1	68.7	12.6	82.6	9.8	80.4	14.0	78.5
11.00 " " 12.00	10.1	71.9	9.2	77.9	7.8	90.4	8.7	89.1	8.6	87.1
12.00 and over	8.6	80.5	22.1	100.0	9.6	100.0	11.0	100.0	12.9	100.0
Median wage	\$9.15		\$9.24		\$8.75		\$9.12		\$9.49	
Mode	9.00				6.00		8.00		9.00	

in the shop. The higher median wages in the lumber and agricultural implement manufactures are, as already pointed out, due to a higher proportion of office employees. In one knitting mill in Minneapolis, which employs 1,571 females, and has the reputation among working people of paying very high wages, the median wage is \$9.30. Twenty-four per cent of all the female employees earn \$12.00 or over, and only 41 per cent receive less than the estimated living wage of \$8.75. This may be taken as an example of the highest rates that can be expected from the most generous and far sighted management in large establishments, which must compete with eastern manufacturers.

A second important industry in the group is the manufacture of flour sacks and meal bags to supply the great milling industry of Minneapolis. The rates prevailing in these bag factories are distinctly lower than in the knit-goods industry; indeed, this is to be expected because the skill required in bag manufacture is not great. The bag factories, however, pay no wage less than \$1.00 a day even to beginners. The median wage is \$8.75, exactly that of the clothing industry as a whole. The bag factories might logically have been included with the clothing industry; in both many of the employees operate power sewing machines. Less than 10 per cent of the employees of bag factories receive \$12.00 and over.

In the minor industries of this group, bedding and twine manufacturing, the numbers reported are scanty. The impression given by the returns received for bedding and mattresses is that the employees are largely experienced women, earning decent wages. No employee in the twine factories receive less than \$8.00 per week; on the other hand, few receive as high as \$12.00.

The clothing industries (Table 43) reported 2,409 female employees to the commission, a larger number than any other of the principal groups of manufacturing industries. The labor force in the group is dominantly female; only 65 male minors were employed by the 49 establishments reporting. In addition to the clothing factories proper, of which there were 24, engaged in the manufacture of shirts, pants, overalls, coats, cloth caps, uniforms, suspenders, mackinaws, waists, and house gowns, the group includes 11 merchant tailoring and dressmaking shops, 6 millinery factories, and 8 fur-garment factories.

Wages in the group as a whole are high in comparison with other manufacturing enterprises. For males, the median is \$8.66. For females it is \$8.75, the exact sum fixed upon by the commission as a living wage for "women and minors of ordinary ability in manufacturing in cities of the first class." Exactly one-half of the females employed in the clothing industry thus receive less than the estimated living wage. A wide variation exists between the several industries within the group. The highest median wage is paid in merchant tailoring and dressmaking establishments, (\$10.01). Of the 158 females employed in these 11 establishments, 36.1 per cent are reported as receiving over \$12.00 per week. The lowest median wage was \$6.98 reported for millinery manufacturing. In spite of the low median wage, the proportion earning \$12.00 or more was high (18.5 per cent). Between these extremes stand cloth and fur-garment factories,

Table 43. Wages in the manufacture of clothing in cities of the first class as reported by employers,- selected industries.

Wage per week	Females						Male Minors					
	Total, clothing manufacturing		Shirt, pant, over-all, and coat factories		Merchant tailoring and dress-making		Millinery		Fur making, garment making		Total, clothing manufacturing	
	Per cent of total	Cumulative per cent	Per cent of Total	Cumulative per cent	Per cent of total	Cumulative per cent	Per cent of Total	Cumulative per cent	Percent of Total	Cumulative per cent	Per cent of total	Cumulative per cent
Total, all wages	100.0		100.0		100.0		100.0		100.0		100.0	
Under \$3.00	.3	.3	.1	.1	.6	.6	1.0	1.0				
3.00 and under 4.00	.9	1.2	.4	.5	3.1	3.7	2.8	3.8	1.7	1.7	1.5	1.5
4.00 and under 5.00	4.9	6.1	3.5	4.0	3.8	7.5	11.2	15.0	8.7	10.4	4.6	6.1
5.00 and under 6.00	8.6	14.7	7.2	11.2	11.9	9.4	15.3	30.3	8.6	19.0	7.7	13.8
6.00 and under 7.00	12.3	27.0	10.8	22.0	7.0	16.4	19.9	50.3	8.6	31.2	29.3	43.1
7.00 and under 8.00	13.6	40.6	14.5	36.5	12.7	29.1	11.3	61.6	12.2	44.5	10.8	53.9
8.00 and under 9.00	12.6	53.2	14.8	51.3	10.8	39.9	5.5	67.1	13.3	57.8	10.8	64.7
9.00 and under 10.00	12.0	65.2	13.1	64.4	10.1	49.9	7.9	75.0	15.6	73.3	15.4	80.1
10.00 " under 11.00	11.5	76.7	13.8	78.2	10.2	60.1	4.7	79.7	10.9	84.2	15.4	95.5
11.00 " under 12.00	6.00	82.8	7.6	85.8	2.8	63.9	1.8	81.5	4.6	89.8	4.6	100.1
12.00 and over	17.2	100.0	14.2	100.0	36.1	100.0	18.5	100.0	24.3	100.0	4.6	100.0
Median wage	\$8.75		\$8.91		\$10.01		\$6.98		\$9.35		\$8.66	
Mode	7.00		8.00				6.00		9.00		7.00	

with medians of \$8.91 and \$9.35 respectively.

It is in the clothing industries that the problem of low initial wages is most pressing. One and two-tenths per cent of the female employees in the group as a whole receive less than \$4.00 per week, and all of the subdivisions except fur-garment manufacture report girls at less than \$3.00 per week. These extremely low wages are associated with the practice of paying by the piece which is widely current in this as in the textile industry. That some of these girls in the garment fac-

Initial wages in the clothing industry

tories earning less than \$4.50 per week are adrift in the world and wholly dependent upon themselves was brought out by the commission's

cost of living investigation. Whatever the minimum cost of living in Minnesota, it is obvious that no girl can subsist on a wage of \$4.00 per week without some outside income. On the other hand, from the employer's point of view it may well be true that she is worth no more to him than \$4.00 or even \$2.50 a week, measuring her productivity on a piece-rate scale which yields a thomly decent wage to an experienced worker. One of the first tasks of the commission if the injunction is lifted, should be to provide for the beginner in establishments where the piecerate system is the rule.

The group "all other manufacturing industries" (Table 44) includes 21 establishments not classified elsewhere employing 172 females and 75 male minors. The only industry of importance in the group is the manufacture of grass carpets, employing 126 women and girls

Wages in all other industries

Table 44.

Wages in all other manufacturing industries in cities
of the first class as reported
by employers,- selected industries.

Wage per week	Females		Grass carpets		Male minors	
	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent	Per cent of total	Cumu- lative per cent
Total, all wages	100.0		100.0		100.0	
Under \$3.00						
3.00 and under 4.00					2.7	2.7
4.00 " " 5.00					8.0	10.7
5.00 " " 6.00	6.4	6.4	7.1	7.1	8.0	18.7
6.00 " " 7.00	15.1	21.5	19.0	26.1	8.0	28.1
7.00 " " 8.00	10.5	32.0	11.9	38.0	9.3	38.7
8.00 " " 9.00	11.6	43.6	12.7	50.7	10.6	38.7
9.00 " " 10.00	18.6	62.2	22.2	72.9	22.7	61.4
10.00 " " 11.00	14.5	76.7	11.9	84.7	13.3	74.7
11.00 " " 12.00	7.0	83.7	7.4	92.1	5.3	80.0
12.00 and over	16.3	100.0	7.9	100.0	20.0	100.0
Median wage	\$9.35		\$8.95		\$9.50	
Mode	9.00		9.00		9.00	

at a median wage of \$8.75. The lowest wage paid in this industry was \$5.00. Rates in the other establishments in the group are relatively higher. For females the median weekly wage in the group as a whole is \$9.35, and for male minors \$9.50.

The relation between wage and age.

Of factors affecting the rate of wages we have now completed the study of sex, locality, and industry. The effects of the highly significant factors of occupation within the industry, hours worked per week, continuity of employment, and experience and training of the worker cannot be determined from the employers' wage returns. In the last named factor alone is there any means of analyzing, and that only indirectly. Length of experience is primarily a function of age and in regard to the relation of age and wage we have reliable information from the employees themselves in the cost of living schedules.

Wage as
affected
by age

The accompanying tables (Tables 4b and 48) present the wages of each age class of 5,601 female employees in the Twin Cities. The data from Duluth have not been included in this table because, while wages are slightly higher in Duluth, the ages reported by the Duluth employees are considerably lower, and hence it has been deemed desirable to eliminate the effect of the variable of locality.

In the Twin Cities two hundred and twenty-seven women, 3.9 per cent of the total included in the tabulation, failed to answer the question, or replied that they were "over 21" or "of legal age." It may be assumed that in almost every case these women were over 21 years, because of the proverbial reluctance of older women to

(132) The proportion of all employees reporting in Duluth who were under 21 is 51.8 per cent, as compared with 44.8 per cent in the Twin Cities.

Table 46

Ages of females employed in mercantile and manufacturing business in the Twin Cities as reported by themselves, by wage per week.

Age	Total all wages	Under \$4.50	Wage per week.				
			\$4.50 and under \$6.50	\$6.50 and under \$8.50	\$8.50 and under 10.50	\$10.50 and under 12.50	\$12.50 and over
Total schedules	5,828	84	1,450	1,794	1,373	555	572
Total answering *	5,601	82	1,436	1,743	1,320	518	502
Under 16 years old	37	19	15	3			
16 and under 18	707	42	451	159	43	10	2
18 " " 20	1,302	8	499	508	223	44	20
20 " " 21	570	3	132	235	123	51	26
21 " " 25	1,470	4	200	495	473	163	135
25 " " 30	802	3	68	190	249	142	150
30 " " 35	321		22	69	100	44	86
35 " " 40	186		23	43	47	32	41
40 " " 45	91	1	10	12	30	16	22
45 " " 50	67		7	17	16	13	14
50 " " 55	29	2	3	8	11	1	4
55 " " 60	14		4	4	5	1	
60 and over	5		2			1	2

* Two hundred twenty-seven, or 39 per cent of the total failed to answer the question. The proportion who did not answer was much higher among the better paid employees.

disclose their ages, a reluctance which seems to have been operative even under the protection of anonymity. Confirmation of this assumption is found in the proportion of each wage class who failed to answer the question.

Table 47.

	All wages	Under \$4.50	\$4.50 and under \$6.50	\$6.50 and under \$8.50	\$8.50 and under \$10.50	\$10.50 and under \$12.50	\$12.50 and over
Per cent failing to answer question as to age	3.9	2.4	1.0	2.8	3.9	6.7	12.2

Only 1.0 per cent of all those earning under \$6.50 per week failed to reply; of those earning \$12.50 or over, a class in which only two girls under 18 years of age were reported, the proportion was 12.2 per cent. The numbers given in Table 48 for each wage group of age classes above 21 years are therefore probably too small, while those for ages under 21 should be approximately correct. On the basis of this assumption the age distribution of each wage class is as follows:

Table 48.

Per cent of female wage-earners under and over 21 by wage.

Age	Wage per week.						
	Total, all wages	Under \$4.50	\$4.50 and under \$6.50	\$6.50 and under \$8.50	\$8.50 and under \$10.50	\$10.50 and under \$12.50	\$12.50 and over
Number, all ages*	5,828	84	1,450	1,794	1,373	555	572
Cumulative per cent:							
Under 16 years old	.6	22.6	1.0	.2			
" 18 " "	12.7	72.6	32.1	9.1	3.3	1.8	.3
" 20 " "	35.0	82.1	66.5	37.4	19.5	9.7	3.8
" 21 " "	44.8	85.7	75.6	50.5	28.5	18.9	8.3
Per cent of total who were 21 and over	55.2	14.3	24.4	49.5	71.5	81.1	91.7

* Percentages calculated on the basis of the total number of schedules, not on those answering the question.

The outstanding fact in Table 48 is the large proportion of young girls among the female wage-earners of the Twin Cities.

One-eighth of all the females employed in stores and factories are (133)

Age distribu-
tion of female
employees

"minors" as defined by the statute, and three-sevenths are under 21 years of age. Girls under 18 constitute the great majority earning less

than \$4.50 per week; and about one-third of those earning from \$4.50 to \$6.50. Of those earning over the \$9.00 minimum wage they form an insignificant fraction. These proportions furnish food for thought when it is remembered that the statute contemplated no lower minimum wage for inexperienced minors than for experienced adult workers, unless justified by a possible difference in the cost of living. Had the commission obeyed the injunction of the law, establishing a minimum for mercantile and manufacturing of say \$8.50 per week, 57.1 per cent of the working women in the industries affected would have had their wages raised from \$0.50 to \$4.50 per week, but of these more than a fifth (20.7 per cent) would have been girls under 18 years of age, and almost two-thirds (62.2 per cent) would have been less than 21 years of age and of consequently limited experience. In view of these facts amendment of the provisions of the law in regard to the minimum wage for learners appears a necessity. One encouraging fact emerges from a study of Table 48: the 37 girls under 16 reported constitute only 0.6 per cent of the total. The problem of child labor, therefore, seems

(133) Minnesota, Laws of 1913, chap. 547, sec. 20, clause 5, "The term 'minor' shall mean a male person under the age of twenty-one years, or a female person under the age of eighteen years."

adequately regulated in the Twin Cities.

Table 49, with its cumulative percentages of each age class earning under specified wage rates, shows clearly the increase of wage with age and experience. The failure mentioned above of many adult women to report their age should in no way invalidate these percentages since the chance of a woman of 32 earning \$16.00 a week withholding her age should be no greater than that of a woman of equal age earning \$6.00. It will be seen that no girl under 16 earns as much as \$8.50 per week, and that over nine-tenths of those from 16 to 18 fall below this figure. The proportion of that increasingly important class of the female working population entering industry during the interim between school and marriage, and becoming later the mothers of the race, who are earning less than a subsistence wage is thus high: nine-tenths of those between 16 and 18, and even one-third of those from 25 to 30 years, receive less than the estimated minimum. By the age of thirty most women have acquired sufficient experience to support themselves in decency. Nevertheless, the entrance at a mature age of widows and impoverished spinsters into the ranks of the breadwinners swells the proportion of women from 30 to 35 years who earn less than \$8.50 to 38.4 per cent. After the age of forty-five the proportion below the level of subsistence increases, becoming 36 per cent at from 45 to 50, 45 per cent at from 50 to 55, and 53 per cent at the age of 55 or more. Of all the reports sent to the commission perhaps the most pathetic came from these middle-aged and elderly women suddenly deprived of support and thrust into the swirl of modern industrial life at an age when their physical strength was

Wages at different ages

Table 49.

Median weekly wage and cumulative per cent of each age group of females employed in trade and manufacturing in the Twin Cities earning less than specified wage per week.

Age	Per cent earning per week:						Median wage per week
	Under \$4.50	Under \$6.50	Under \$8.50	Under \$10.50	Under \$12.50	\$12.50 and over	
Under 16 years old	51.4	91.9	100.0				\$4.42
16 and under 18	5.9	69.7	92.2	98.3	99.7	.3	5.88
18 " " 20	.6	39.0	78.0	95.1	98.5	1.5	7.08
20 " " 21	.5	23.7	64.9	86.5	95.5	4.5	7.77
21 " " 25	.3	13.9	47.5	79.7	90.8	9.2	8.67
25 " " 30	.4	8.9	32.5	63.6	81.3	18.7	9.62
30 " " 35		6.9	28.4	59.5	73.2	26.8	9.86
35 " " 40		12.4	35.5	60.8	78.0	22.0	9.63
40 " " 45	1.1	12.1	25.3	58.2	75.8	24.2	10.00
45 " " 50		10.4	35.8	59.7	79.1	20.9	9.70
50 " " 55	6.9	17.2	44.8	82.7	86.2	13.8	8.79
55 and over		31.6	52.7	79.0	89.5	10.5	8.33

on the decline and the thorough mastery of a new occupation next to impossible. One-twelfth of all those who reported a weekly wage of less than \$4.50 were over 40 years of age.

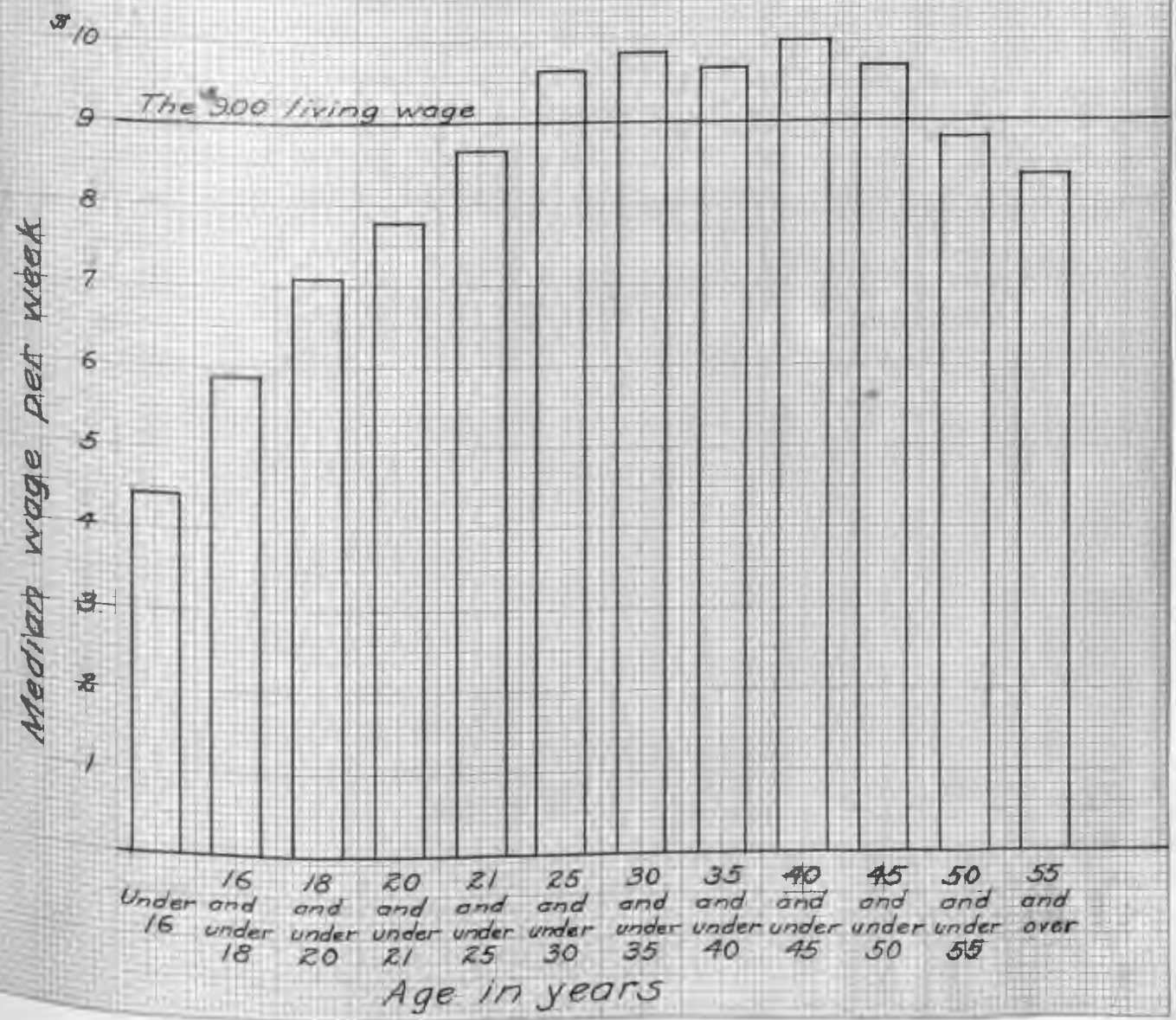
The bar diagram of Plate 20 shows the fluctuation of the median wage with age. Beginning at a little under \$4.50 per week for girls under 16, the median rises rapidly to \$9.62 at the age of from 25 to 30, increases then slowly to a maximum of \$10.00 at at from 40 to 45, and thereafter rapidly declines. While the median for any age group is depressed by the recent entrance into industry

Wage expectation with advancing age

of inexperienced women of that age, yet up to the age of 25, maturity and better education in the late beginner may more than compensate for the lack of specific experience in industry. The median furnishes therefore a rough measure of the wage to be expected with increasing age by the ordinary girl entering shop or factory in her 'teens. A beginner just escaped from the domain of the compulsory education law may expect about \$4.00 per week. By the age of 18 she should be receiving between \$6.00 and \$7.00, and at 21, something over \$8.00; not until she reaches the age of 25 is she likely to be earning what the duly constituted organ of the state has determined on as the "minimum wages sufficient for living wages." If she is not called from industry to domestic life, her wage prospect rises by the age of 30 to a little less than \$10.00, where it remains fairly constant, reaching a maximum of \$10.00 at 45. Thereafter it probably declines tho not as sharply as in the diagram. During 25 years of life, from the ages of 25 to 50, the median wage is above the \$9.00 level of subsistence, but at no time is the surplus more than one-ninth of the wage.

PLATE 20

Median weekly wages of females employed in mercantile and manufacturing business in the Twin Cities, by age group



Were it all saved and wisely invested, were none of it spent to pay debts contracted during the ten-year period of dependence, were there no intervals of unemployment, the surplus at the age of 50 would suffice to support the worker at the most for but four years. The difficulties of saving any considerable portion of this surplus must be apparent to the most thrifty.

Wages of female employees as
reported by themselves.

The two succeeding tables present the wages incidentally reported to the commission by the female employees in their cost of living schedules. Frequent reference has been made to them as a means of checking the accuracy of the wage returns made by the employers, with which in the main they closely agree. They are also valuable because they are the only source of information as to the distribution of wages of women earning \$12.00 per week or over. It will be remembered that thru an error in drafting the employees' schedule, no data were elicited as to the exact wages of employees earning over this amount. An idea of the approximate frequencies at wage rates above \$12.00 may be obtained from these figures. (Cf. Plates 1, 2, and 3). In calculating the average wages reported by the employers, the women earning \$12.00 or over have been weighted with the average wage reported by these employees who received \$12.00 or more.

Table 50 gives wage frequencies, with derivative average, median, mode, and percentages, cumulative and non-cumulative, for

6,543 female employees in Minneapolis, St. Paul, Duluth, and Winona. The Winona returns are inadequate and hence should be accepted as suggestive not as typical.

Table 51 gives similar information by mercantile and manufacturing industry for the three first-class cities.

Table 50.

Weekly wages of females employed in mercantile and manufacturing establishments in the Twin Cities, Duluth and Winona, as reported by employees.*

	Total			Twin Cities			Duluth			Winona		
	Number	% of Total	Cumulative Per Cent Ages	Number	% of Total	Cumulative Per Cent Ages	Number	% of Total	Cumulative Per Cent Ages	Number	% of Total	Cumulative Per Cent ages
Total	6,542	100.0	.....	5,828	100.0	.....	621	100.0	.....	93	100.0	.....
Earning under \$4.00	30	.5	.5	18	.3	.3	11	1.8	1.8	1	1.1	1.1
\$4.00 and under \$5.00	224	3.4	3.9	145	2.5	2.8	58	9.3	11.1	21	22.6	23.7
5.00 and under 6.00	610	9.3	13.2	552	9.5	12.3	50	8.0	19.1	8	8.6	32.3
6.00 and under 7.00	1,069	16.3	29.5	986	16.9	29.2	65	10.5	29.6	18	19.4	51.7
7.00 and under 8.00	1,042	15.9	45.4	937	16.1	45.3	87	14.0	43.6	18	19.4	71.1
8.00 and under 9.00	938	14.3	59.7	862	14.8	60.1	65	10.5	54.1	11	11.8	82.9
9.00 and under 10.00	691	10.6	70.3	614	10.5	70.6	74	11.9	66.0	3	3.2	86.1
10.00 and under 11.00	707	10.8	81.1	640	11.0	81.6	64	10.3	76.3	3	3.2	89.3
11.00 and under 12.00	221	3.4	84.5	205	3.5	85.1	14	2.3	78.6	2	2.1	91.4
12.00 and under 13.00	386	5.9	90.4	341	5.9	91.0	43	6.9	85.5	2	2.1	93.5
13.00 and under 14.00	101	1.5	91.9	80	1.4	92.4	21	3.4	88.9	.....	.....	.....
14.00 and under 15.00	81	1.2	93.1	70	1.2	93.6	11	1.8	90.7	.....	.....	.....
15.00 and under 16.00	187	2.9	96.0	153	2.6	96.2	31	5.0	95.7	3	3.2	96.7
16.00 and under 17.00	44	.7	96.7	41	.7	96.9	3	.5	96.2	.....	.....	.....
17.00 and under 18.00	40	.6	97.3	34	.6	97.5	5	.8	97.0	1	1.1	97.8
18.00 and under 19.00	55	.8	98.1	50	.9	98.4	4	.6	97.6	1	1.1	98.9
19.00 and under 20.00	11	.2	98.3	8	.1	98.5	3	.5	98.1	.....	.....	.....
20.00 and under 21.00	40	.6	98.9	32	.5	99.0	8	1.3	99.4	.....	.....	.....
21.00 and under 22.00	5	.1	99.0	4	.1	99.1	1	.2	99.6	.....	.....	.....
22.00 and under 23.00	8	.1	99.1	8	.1	99.2	.....	.....	.....	.....	.....	.....
23.00 and under 24.00	4	.1	99.2	4	.1	99.3	.....	.....	.....	.....	.....	.....
24.00 and under 25.00	4	.1	99.3	4	.1	99.4	.....	.....	.....	.....	.....	.....
25.00 and under 26.00	23	.4	99.7	19	.3	99.7	3	.5	100.0	1	1.1	100.0
Over \$25.00	21	.3	100.0	21	.4	100.0	.....	.....	.....	.....	.....	.....

Average wage	\$8.77	\$8.76	\$8.96	\$7.29
Median wage	8.32	8.32	8.61	6.92
Mode; actual	6.00	6.00	7.00	4.00
Mode, calculated	6.63	6.63	7.50	4.89

* Clipped from First biennial report of the Minnesota Minimum Wage Commission, 21, for which it was prepared by the author.

Table 51.

Weekly wages of females employed in cities of the first class as reported by employees, by mercantile and manufacturing industry.

	Total, mercantile and manufacturing					Mercantile			Manufacturing						
	Number	Per cent	Cumulative per cent	Twin Cities Number	Duluth Number	Number	Per cent	Cumulative per cent	Twin Cities Number	Duluth Number	Number	Per cent	Cumulative per cent	Twin Cities Number	Duluth Number
Total, all wages	6,449	100.0		5,828	621	2,504	100.0		2,189	315	3,945	100.0		3,639	
Under \$4.00	29	.4	.4	18	11	14	.5	.5	5	9	15	.4	.4	13	2
4.00 and under 5.00	203	3.2	3.6	145	58	118	4.7	5.2	91	27	85	2.2	2.6	54	31
5.00 " " 6.00	602	9.3	12.9	552	50	249	10.0	15.2	226	23	353	9.0	11.6	326	27
6.00 " " 7.00	1,051	16.3	29.2	986	65	435	17.4	32.6	398	37	616	15.6	27.2	588	28
7.00 " " 8.00	1,024	15.9	45.1	937	87	372	14.8	47.4	325	47	652	16.5	43.7	612	40
8.00 " " 9.00	927	14.4	59.4	862	65	320	12.8	60.2	290	30	607	15.4	59.0	572	35
9.00 " " 10.00	688	10.7	70.1	614	74	214	8.5	68.8	174	40	474	12.0	71.0	440	34
10.00 " " 11.00	704	10.9	81.0	640	64	236	9.4	78.2	200	36	468	11.9	82.9	440	28
11.00 " " 12.00	219	3.4	84.4	205	14	67	2.7	80.9	61	6	152	3.8	86.7	144	8
12.00 " " 13.00	384	6.0	90.4	341	43	155	6.2	87.1	135	20	229	5.8	92.5	206	23
13.00 " " 14.00	101	1.6	92.0	80	21	36	1.4	88.5	29	7	65	1.6	94.1	51	7
14.00 " " 15.00	81	1.3	93.3	70	11	46	1.8	90.3	42	4	35	.9	95.0	28	17
15.00 " " 16.00	184	2.9	96.2	153	31	104	4.1	94.4	90	14	80	2.0	97.0	63	
16.00 " " 17.00	44	.7	96.9	41	3	20	.8	95.2	17	3	24	.6	97.6	24	2
17.00 " " 18.00	39	.6	97.5	34	5	20	.8	96.0	17	3	19	.5	98.1	17	2
18.00 " " 19.00	54	.8	98.3	50	4	34	1.4	97.4	32	2	20	.5	98.6	18	1
19.00 " " 20.00	9	.1	98.4	8	1	4	.2	97.6	4		5	.1	98.7	4	2
20.00 " " 21.00	39	.6	99.0	32	7	28	1.1	98.7	23	5	11	.3	99.0	9	3
21.00 " " 22.00	8	.1	99.1	4	4	4	.2	98.9	3	1	4	.1	99.1	1	
22.00 " " 23.00	8	.1	99.2	8		5	.2	99.1	5		3	.1	99.2	3	
23.00 " " 24.00	4	.1	99.3	4				99.1			4	.1	99.3	4	
24.00 " " 25.00	4	.1	99.4	4		3	.1	99.2	3		1	.1	99.4	1	2
25.00 " " 26.00	22	.3	99.7	19	3	10	.4	99.6	9	1	12	.3	99.7	10	
Over 26.00	21	.3	100.0	21		10	.4	100.0	10		11	.3	100.0	11	
Average		\$8.79		\$8.76	\$8.96	\$8.92		\$8.93	\$8.85	\$8.70			\$8.68	\$9.05	
Median		8.34		8.32	8.61	8.20		8.17	8.48	8.41			8.40	8.71	
Mode, actual		6.00		6.00	7.00	6.00		6.00	7.00	7.00			7.00	7.00	
Mode, calculated		6.63		6.63	7.50	6.60		6.59	7.45	7.50			7.49	7.56	

Table 52.

Number of establishments in Duluth which reported wages to the Minimum Wage Commission.

Reference to Table 63 by number of section	Industry	Establish- ments re- porting
(1)	Total manufacturing and mercantile	75
(2)	Total mercantile	32
(3)	Retail mercantile	25
(4)	Five and ten cent stores	1
(5)	Department stores	5
(6)	Clothing stores	3
(7)	Dry goods	2
(10)	Drug stores	3
(11)	Milling stores	1
	Meat markets	1
(12)	Groceries and confectionery stores	6
	Miscellaneous retail	3
(18)	Wholesale mercantile	7
(20)	Other food products, liquors and tobacco	3
	Glass, paints and building material	2
(13)	Hardware, agricultural implements and machinery	2
(25)	Total manufacturing	43
(30)	Food products, liquors and tobacco	11
(31)	Bakeries	3
(32)	Confectionery and crackers	4
(35)	Brewing and bottling	1
(36)	Cigars and tobacco	2
(37)	Meat packing	1
(39)	Leather and rubber goods	3
(40)	Harness and saddlery	3
(41)	Shoe manufacturing	1
(43)	Lumber and furniture industries	7
(44)	Saw and planing mills	1
(45)	Sash, door, moulding and mill work	2
(46)	Cabinet and pattern making	3
(4E)	Wooden boxes and baskets	1

Table 52, continued.

Reference to Table 63 by number of section	Industry	Establish- ments re- porting
(53)	Metal products	5
(54)	Foundry and machine shops	1
(56)	Other metal goods	4
(57)	Printing and paper goods	6
(58)	Printing and book-binding	5
(63)	Paper bags and boxes -	1
(64)	Textiles, bags and bedding	4
(65)	Knitting mills	1
(68)	Bedding and mattresses	2
(69)	Tents and awnings	1
(70)	Clothing industries	4
(71)	Clothing factories	1
(72)	Merchant tailoring and dressmaking	2
(74)	Fur making	1
(75)	All other manufacturing industries	3

Table 53.

Number of establishments in the Twin Cities which reported wages to the Minimum Wage Commission.

Reference to Table 63 by number of section	Industry	Establish- ments re- porting
(1)	Total manufacturing and mercantile	442
(2)	Total mercantile	162
(3)	Total retail	112
(4)	Five and ten cent stores	3
(5)	Department stores	11
(6)	Clothing stores	12
(7)	Dry goods stores	8
(8)	Shoe stores	5
(9)	Furniture stores and carpet stores	6
(10)	Drug stores	9
(11)	Retail millinery stores	9
	Meat markets	3
(12)	Grocery and confectionery stores	15
(13)	Hardware stores	5
(14)	Art goods, music, books and stationery stores	6
(15)	Jewelry stores	6
	Miscellaneous stores	6
(16)	Automobiles and supplies	5
	Wood and coal, retail	3
(18)	Wholesale mercantile	50
(19)	Seeds	2
(20)	Groceries	5
(20)	Other food products, liquors, tobacco	8
(21)	Dry goods, clothing, shoes	7
	Glass, paints and building material	4
(22)	Wholesale mercantile, general merchandise, and mail order houses	2
(23)	Hardware, agricultural implements, and machinery	11
	Miscellaneous(all others).	11
(25)	Total manufacturing	280
(26)	Drugs, paints, oils, and chemicals	8
(27)	Drugs, Pharmaceuticals, and patent medicines	5
(28)	Paints and oils	2
(29)	Soap	1

Table 53, continued.

Reference to Table 63 by number of section	Industry	Establish- ments re- porting
(30)	Food products, liquors, and tobacco	19
(31)	Bakeries	16
(32)	Confectionery and crackers	7
(33)	Flour and cereals	5
(34)	Stock food	1
(35)	Brewing and bottling	2
(36)	Cigars and tobacco	10
(38)	Miscellaneous food products	8
(39)	Leather and rubber goods	14
(40)	Leather spectacles	1
(40)	Fanning	1
(40)	Belting	3
(40)	Harness and saddlery	4
(41)	Shoe manufacturing	4
(42)	Glove manufacturing	1
(43)	Lumber and furniture industries	39
(44)	Saw and planing mills	5
(45)	Sash, door, and mill work	7
(46)	Cabinet and pattern making	14
(47)	Furniture factories	9
(48)	Wooden boxes and baskets	4
(49)	Agricultural implements and vehicles	10
(50)	Agricultural implements	5
(51)	Automobiles	3
(52)	Wagons and carriages	2
(53)	Metal products	28
(55)	Iron beds	2
(56)	Other metal goods	26
(57)	Printing and paper goods	56
(58)	Printing and book-binding	32
(59)	Publishing	6
(60)	Advertising novelties	2
(61)	Envelopes, plain and printed	3
(62)	Electrotyping, lithographing, and engraving	7
(63)	Paper bags and boxes	6
(64)	Textiles, bags, and bedding	13
(65)	Knitting mills	2
(66)	Twine factories	1
(67)	Flour and meal bags	2
(68)	Bedding and mattresses	3
(69)	Tents and awnings	5

Table 53, continued.

Reference to Table 63 by number of section	Industry	Establish- ments re- porting
(70)	Clothing industries	45
(71)	Clothing factories	23
(72)	Merchant tailoring and dressmaking	9
(73)	Millinery	6
(74)	Fur garment making	7
(75)	All other manufacturing industries	18
(76)	Glass, paint, and decorating materials	4
(77)	Brick, tile, and building materials	3
(78)	Grass carpets	1
	All other	10

Table 54

Weekly wages of females employed in cities of the first class, as reported by employers, by mercantile and manufacturing industry

	Total Mercantile and manufacturing			Total mercantile			Retail mercantile			Wholesale mercantile			Total manufacturing		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total employees	33,362	3,081	30,281	11,967	1,364	10,603	8,680	873	7,807	3,287	491	2,796	21,395	1,717	19,678
Males	19,045	2,126	16,919	6,027	723	5,304	3,474	334	3,140	2,553	389	2,164	13,018	1,403	11,615
Females	14,317	955	13,362	5,940	641	5,299	5,206	539	4,667	734	102	632	8,377	314	8,063
Number of females earning per week															
Under \$2.00	1		1	1		1	1		1						7
Total \$2.00 and under 3.00	10		10	3		3	3		3				7		7
2.00	9		9	3		3	3		3				6		6
2.25															
2.50															1
2.75	1		1										1		1
Total 3.00 and under 4.00	82	22	60	55	15	40	55	15	40				27	7	20
3.00	30	11	19	23	7	16	23	7	16				7	4	3
3.25													18	1	17
3.50	46	9	37	28	8	20	28	8	20				2	2	
3.75	6	2	4	4		4	4		4				2		
Total 4.00 and under 5.00	448	70	378	259	42	217	253	42	211	6		6	189	28	161
4.00	208	44	164	109	24	85	107	24	83	2		2	99	20	79
4.25	12		12	10		10	10		10				2		2
4.50	204	26	178	122	18	104	118	18	100	4		4	82	8	74
4.75	24		24	18		18	18		18				6		6
Total 5.00 and under 6.00	13,421	103	1,238	582	64	518	568	64	504	14		14	759	39	720
5.00	851	88	763	529	57	472	520	27	463	9		9	322	31	291
5.25	32	1	31	1		1	1		1			1	31	1	30
5.50	286	13	273	49	7	42	47	7	40	2		2	237	6	231
5.75	172	1	171	3		3	1		1	2		2	169	1	168
Total 6.00 and under 7.00	2,198	114	2,084	987	74	913	884	74	810	103		103	1,211	40	1,171
6.00	1,696	96	1,600	928	66	862	831	66	765	97		97	768	30	738
6.25	87	4	83	7	4	3	6	4	2	1		1	80		80
6.50	375	12	363	51	4	47	47	4	43	4		4	324	8	316
6.75	40	2	38	1		1				1		1	39	2	37

Table 54, continued.

Weekly wages of females employed in cities of the first class, as reported by employers, by mercantile and manufacturing industry.*

Number of females earning per week	Total, mercantile and manufacturing			Total mercantile			Retail mercantile			Wholesale mercantile			Total manufacturing		
	Total	Duluth	Twin cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total \$7.00 and under 8.00	2,090	135	1,955	862	76	786	788	67	721	74	9	65	1,228	59	1,169
7.00	1,486	111	1,375	791	68	723	726	59	667	65	9	56	695	43	652
7.25	88	10	78	7	3	4	7	3	4			9	81	4	74
7.50	426	13	413	64	5	59	55	5	50	9			362	8	354
7.75	90	1	89										90	1	89
Total 8.00 and under 9.00	1,856	102	1,734	770	68	702	655	56	599	115	12	103	1,086	34	1,052
8.00	1,304	90	1,214	720	64	656	629	52	577	91	12	79	584	26	558
8.25	99	5	94	3	3		3	3					96	2	94
8.50	309	5	304	39	1	38	18	1	17	21			270	4	266
8.75	144	2	142	8		8	5		5	3			136	2	134
Total 9.00 and under 10.00	1,616	104	1,512	581	77	504	478	62	416	108	15	88	1,035	27	1,008
9.00	1,051	78	973	478	62	416	435	62	373	43			43	16	557
9.25	172	15	157	39	14	25	3		3	36	14		22	1	132
9.50	217	4	213	39		39	38		38	1			1	4	174
9.75	176	7	169	25	1	24	2		2	23	1		22	6	145
Total 10.00 and under 11.00	1,506	95	1,411	595	78	517	503	61	442	92	17	75	911	17	894
10.00	1,032	73	959	535	62	473	490	61	429	45	1		44	11	486
10.25	99	16	83	20	16	4	1		1	19	16		3	3	79
10.50	274	3	271	20		20	12		12	8			8	3	251
10.75	101	3	98	20		20				20			20	3	78
Total 11.00 and under 12.00	685	31	654	180	29	151	127	10	117	53	19	34	505	2	503
11.00	401	8	393	126	7	119	110	7	103	16			16	1	274
11.25	69	2	67	7	2	5	6	2	4	1			1	1	62
11.50	149	20	129	44	19	25	10		10	34	19		15	1	104
11.75	66	1	65	3	1	2	1	1		2			2		63
12.00 and over	2,484	179	2,305	1,065	118	947	891	88	803	174	30	144	1,419	61	1,358

* Summarized with percentages in Table 29, p. 184.

Table 55.

Weekly wages of females employed in principal groups of mercantile and manufacturing industries in Minneapolis and St. Paul, as reported by employers.

	Total mer- cantile & manufac- turing	Total mer- cantile	Retail mer- cantile	Whole sale mer- cantile	Total manu- factur- ing	Drugs and chemicals manufac- turing	Food pro- ducts, li- quors & tobacco	Leather & rubber goods manu- facturing	Lumber & furniture manu- facturing	Agricul- tural im- plements & vehicles	Metal pro- ducts	Printing and paper manu- facturing	Textiles, bags, and bedding	Clothing manu- facturing	All other manu- facturing
Total number of employees	30,281	10,603	7,807	2,796	19,678	207	3,530	1,201	2,220	1,608	700	3,091	3,132	2,698	1,291
Number of males	16,919	5,304	3,140	2,164	11,615	142	2,157	1,003	2,133	1,566	564	1,752	795	382	1,121
21 and over	14,600	4,466	2,611	1,855	10,134	125	1,934	870	1,900	1,481	461	1,366	626	322	1,049
Under 21	2,319	838	529	309	1,481	17	223	133	233	85	103	386	169	60	72
Number of females	13,362	5,209	4,667	632	8,063	65	1,373	198	87	42	136	1,339	2,337	2,316	170
Number of females earning per week															
Under \$2.00	1	1	1											7	
Total at 2.00 and under 3.00	10	3	3		7									6	
2.00	9	3	3		6										1
2.25															
2.50															
2.75	1				1									17	
Total at 3.00 and under 4.00	60	40	49		20		2							2	
3.00	19	16	16		3		1								
3.25													1	15	
3.50	37	20	20		17		1								
3.75	4	4	4												
Total at 4.00 and under 5.00	378	217	211	6	161	3	17	3				18	4	116	
4.00	164	85	83	2	79		3	2				5		68	
4.25	12	10	10		2		1								
4.50	178	104	100	4	74	3	11	1				13		45	
4.75	24	18	18		6		2							3	
Total at 5.00 and under 6.00	1,238	518	504	14	720	20	165	29	4		2	114	172	203	11
5.00	763	472	463	9	291	1	85	6			1	52	4	141	1
5.25	31	1		1	30			3					4	5	
5.50	273	42	40	2	231	8	77	17			1	60	5	53	10
5.75	171	3	1	2	168	11	3	3	4			2	141	4	

Table 55, continued.

Weekly wages of females employed in principal groups of mercantile and manufacturing industries in Minneapolis and St. Paul, as reported by employers.

	Total mercantile & manufacturing	Total mercantile	Retail mercantile	Wholesale mercantile	Total manufacturing	Drugs and chemicals manufacturing	Food products, liquors & tobacco	Leather & rubber goods manufacturing	Lumber & furniture manufacturing	Agricultural implements & vehicles	Metal products	Printing and paper goods manufacturing	Textiles, bags, and bedding	Clothing manufacturing	All other manufacturing
Total at 6.00 and under 7.00	2,084	913	810	103	1,171	15	244	23	5	1	21	255	293	288	26
6.00	1,600	862	765	97	738	11	202	14	5	1	19	185	78	212	11
6.25	83	3	2	1	80		5	1				2	63	9	
6.50	363	47	43	4	316	4	34	6			1	68	137	53	13
6.75	38	1		1	37		3	2			1		15	14	2
Total at 7.00 and under 8.00	1,955	786	721	65	1,169	8	193	23	10	1	28	247	325	316	18
7.00	1,375	723	667	56	652	6	109	9	4		26	148	159	186	5
7.25	78	4	4		74		14	4				12	17	24	3
7.50	413	59	50	9	354	2	56	8	4	1	2	81	111	80	9
7.75	89				89		14	2	2			6	38	26	1
Total at 8.00 and under 9.00	1,754	802	599	103	1,052	6	114	27	16	2	16	248	311	292	20
8.00	1,214	656	577	79	558	5	52	8	8	1	13	164	120	179	8
8.25	94				94	1	8	4	1		2	13	33	25	7
8.50	304	38	17	21	266		46	12	5		1	43	96	61	2
8.75	142	8	5	3	134		8	3	2			28	62	27	3
Total at 9.00 and under 10.00	1,512	504	416	88	1,008	5	141	18	16	1	23	166	326	280	32
9.00	973	416	373	43	557	3	104	8	6	1	21	117	121	165	11
9.25	157	25	3	22	132	1	3	1			1	19	63	36	8
9.50	213	39	38	1	174	1	19	5	9		1	20	57	54	8
9.75	169	24	2	22	145		15	4	1			10	85	25	5
Total at 10.00 and under 11.00	1,411	517	442	75	894	5	225	21	7	5	15	82	238	271	25
10.00	959	473	429	44	486	4	115	14	3		12	59	109	157	8
10.25	83	4	1	3	79		8	2	1		3	4	31	27	3
10.50	271	20	12	8	251	1	98	3	3			11	62	65	8
10.75	98	20		20	78		4	2				8	36	22	6
Total at 11.00 and under 12.00	654	151	117	34	503	1	93	10	6	4	4	27	204	143	11
11.00	393	119	103	16	274		67	3	5		4	19	82	87	5
11.25	67	5	4	1	62		4	3				7	37	14	2
11.50	129	25	10	15	104	1	12	2	1			1	51	26	4
11.75	65	2		2	63		10	2					34	16	
12.00 and over	2,305	947	803	144	1,358	2	179	44	23	28	27	182	463	383	27

Table 56.

Per cent of females employed in principal groups of mercantile and manufacturing industries in Minneapolis and St. Paul earning under specified weekly wages, as reported by employers.

Weekly Wage	Total, mercantile and manufacturing		Total, Mercantile	Retail Mercantile	Wholesale Mercantile	Total, Manufacturing	Drugs and Chemicals Manufacturing	Food Products, Liquor and Tobacco Manufacturing
Under 2.00			.1	.1	.1			
2.00 and under 3.00			.1	.1	.1	.1		.1
3.00 " " 4.00			.5	.8	.9	.3		1.3
4.00 " " 5.00			3.3	5.0	5.3	2.4	4.0	13.3
5.00 " " 6.00			12.5	14.9	16.1	11.4	35.7	31.0
6.00 " " 7.00			28.1	32.1	33.4	26.0	58.8	45.1
7.00 " " 8.00			42.8	46.9	48.9	40.5	71.1	53.5
8.00 " " 9.00			56.0	60.2	61.8	53.6	80.3	63.8
9.00 " " 10.00			67.4	69.7	70.7	66.1	87.8	80.2
10.00 " " 11.00			77.9	79.5	80.3	77.1	95.5	87.0
11.00 " " 12.00			82.8	82.3	82.8	83.4	97.0	100.0
12.00 and over			100.0	100.0	100.0	100.0	100.0	

Weekly wage	Leather and rubber goods manufacturing	Lumber and Furniture manufacturing	Agricultural Implements and vehicles	Metal Products	Printing and Paper goods manufacturing	Textiles, bags, and bedding	Clothing manufacturing	All other manufacturing
Under 2.00								
2.00 and under 3.00							.3	
3.00 and " 4.00						.1	1.0	
4.00 " " 5.00	1.5				1.4	.4	6.0	6.5
5.00 " " 6.00	16.1	4.6		1.5	9.9	7.7	14.8	21.8
6. and under 7.00	27.8	10.3	2.4	16.9	28.9	20.2	27.3	32.3
7.00 " " 8.00	39.4	21.8	4.8	37.5	47.4	34.2	41.0	44.1
8.00 " " 9.00	53.0	40.2	9.6	49.3	65.9	47.3	53.6	62.9
9.00 " " 10.00	62.1	58.6	12.0	66.2	78.2	61.2	65.7	77.6
10.00 " " 11.00	72.7	66.6	23.9	77.2	84.3	71.4	77.4	84.1
11.00 " " 12.00	77.8	73.5	33.4	80.1	86.3	80.2	83.6	100.0
12.00 and over	100.00	100.00	100.00	100.0	100.0	100.0	100.0	

Table 57.

Weekly wages of females employed in selected retail mercantile businesses in the Twin Cities as reported by employers.

Weekly wage	Total retail mercantile	5 & 10 cent stores	Department stores	Clothing stores	Dry goods stores	Shoe Stores	Furniture & Hardware stores	Drug and jewelry stores	Retail millinery stores	Groceries and Confectionery stores	Art goods music books	Miscellaneous
Total all wages	4667	111	3459	278	595	8	33	23	33	48	32	46
Under \$2.00	1								1			
2.00	3		2	1								
2.25												
2.50												
2.75												
3.00	16		16									
3.25												
3.50	20		19		1							
3.75	4		4									
4.00	83		62	2	18							1
4.25	10				10							
4.50	100		94		6							
4.75	18		2		15							1
5.00	463	28	387	12	34				1		1	
5.25												
5.50	40	11	27		1							1
5.75	1											1
6.00	765	30	646	32	49			4		2	2	
6.25	2				1							1
6.50	43	15	24	1	3							
6.75												
7.00	667	16	557	20	55	2	2	3	3	4	2	3
7.25	4	1			1			1			1	
7.50	50		36	2	6					1		5
7.75												
8.00	577	3	465	27	58		2	4	4	11	1	4
8.25												
8.50	17		10	1	5					1		
8.75	5				4							1
9.00	373	2	257	30	65	1	3	4	2	6	1	2
9.25	3						2					1
9.50	38		25		9						4	
9.75	2								1		1	
10.00	429	5	271	41	84	3	6	2	7	2	2	6
10.25	1										1	
10.50	12		1	3	6							2
10.75												
11.00	103		74	8	13		1				4	2
11.25	4				4							
11.50	10		1	1	4					1		3
11.75												
12.00 or over	803		481	97	143	2	17	5	14	20	12	12

Table 58.

Weekly wages of females employed in principal groups of mercantile and manufacturing industries in Duluth as reported by employers.

	Total industries	Total mercantile	Retail mercantile	Wholesale mercantile	Total manufacturing	Food products, liquors & tobacco	Leather and rubber goods	Lumber and furniture	Metal products	Printing and paper goods	Textiles, bags, bedding	Clothing
Total employees	3081	1364	873	491	1717	212	168	613	331	126	66	115
Males	2126	723	334	389	1403	152	124	609	295	92	25	22
21 or over	1790	590	273	317	1200	126	91	563	239	62	21	17
Under 21	336	133	61	72	203	26	33	46	56	30	4	5
Females	955	641	539	102	314	60	44	4	36	34	41	93
Females earning per week												
Under \$3.00												
3.00	11	7	7		4							4
3.25												
3.50	9	8	8		1							
3.75	2				2							2
4.00	44	24	24		20	7	7			3		3
4.25												
4.50	26	19	18		8	2	2			3		1
4.75												
5.00	86	57	57		31	7	8		12	2		2
5.25	1				1							1
5.50	13	7	7		5	2					3	1
5.75	1				1							1
6.00	96	66	66		30	5	6		5	1	8	5
6.25	4	4	4									
6.50	12	4	4		8		1				4	3
6.75	2				2					2		
7.00	111	68	59	9	43	8	3		10	4	13	5
7.25	10	3	3		7					6		1
7.50	13	5	5		8	1	1				3	3
7.75	1											1
8.00	90	64	52	12	26	14	1	1	1	2	2	5
8.25	5	3	3		2							2
8.50	5	1	1		4		1			1	1	2
8.75	2				2							2
9.00	78	62	62		16	2	4			4	3	3
9.25	15	14		14	1							1
9.50	4				4		1		1			2
9.75	7	1		1	6					2		4
10.00	73	62	61	1	11	5	2		1		2	1
10.25	16	16		16								
10.50	3				3	1						2
10.75	3				3							3
11.00	8	7	7		1							
11.25	2	2	2									
11.50	20	19		19	1							
11.75	1	1	1									
12.00 and over	179	118	88	30	61	6	7	3	6	4	2	32

Table 59

Weekly wages of male minors employed in cities of the first class, as reported by employers, by mercantile and manufacturing industry.

	Total, all industries			Total mercantile			Retail mercantiles			Wholesale mercantile			Total manufacturing		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total male employees	19,045	2,126	16,919	6,027	723	5,304	3,474	334	3,140	2,553	389	2,164	13,018	1,403	11,615
21 or over	16,390	1,790	14,600	5,056	590	4,466	2,884	273	2,611	2,172	317	1,855	11,334	1,200	10,134
Under 21	2,655	336	2,319	971	133	838	590	61	529	381	72	309	1,684	203	1,481
Number of male minors earning per week															
Total \$2.00 and under 3.00	1		1										1		1
2.00															
2.25															
2.50													1		1
2.75	1		1												
Total 3.00 and under 4.00	3		3										3		3
3.00	1		1										1		1
3.25													2		2
3.50	2		2												
3.75															
Total 4.00 and under 5.00	49	9	40	27	4	23	20	4	16	7		7	22	5	17
4.00	21	6	15	16	2	14	12	2	10	4		4	5	4	1
4.25	1		1										1		1
4.50	25	3	22	9	2	7	6	2	4	3		3	16	1	15
4.75	2		2	2		2	2		2						
Total 5.00 and under 6.00	185	28	157	93	13	80	64	11	53	29	2	27	92	15	77
5.00	143	27	116	82	13	69	58	11	47	24	2	22	61	14	47
5.25	5		5	1		1	1		1				4		4
5.50	21	1	20	2		2	2		2				19	1	18
5.75	16		16	8		8	3		3	5		5	8		8
Total 6.00 and under 7.00	329	61	268	157	29	128	124	22	102	33	7	26	172	32	140
6.00	275	44	231	140	25	115	108	18	90	32	7	25	135	19	116
6.25	17	6	11	10	3	7	9	3	6	1		1	7	3	4
6.50	26	9	17	5	1	4	5	1	4				21	8	13
6.75	11	2	9	2		2	2		2				9	2	7

Table 59, continued.

Weekly wages of male minors employed in cities of the first class as reported by employers, by mercantile and manufacturing industry.

Number of male minors earning per week	Total, all industries			Total mercantile			Retail mercantile			Wholesale mercantile			Total manufacturing		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total 7.00 and under 8.00	459	49	410	156	16	140	80	6	74	16	10	66	303	33	270
7.00	305	14	291	130	4	126	70	4	66	60		60	175	10	165
7.25	3		3	1		1	1		1			6	115	22	93
7.50	140	34	106	25	12	13	9	2	7	16	10		11	1	10
7.75	11	1	10												
Total 8.00 and under 9.00	386	23	363	172	8	164	108	7	101	64	1	63	214	15	199
8.00	294	17	277	146	7	139	100	6	94	46	1	45	148	10	138
8.25	26	2	24	16	1	15	1	1		15		15	10	1	9
8.50	37	2	35	4		4	4		4			3	33	2	31
8.75	29	2	27	6		6	3		3	3			23	2	21
Total 9.00 and under 10.00	391	40	351	97	16	81	41	1	40	56	15	41	294	24	270
9.00	271	35	236	85	16	69	38	1	37	47	15	32	186	19	167
9.25	67	1	66	8		8	1		1	7		7	59	1	58
9.50	34	4	30									2	34	4	30
9.75	19		19	4		4	2		2	2			15		15
Total 10.00 and under 11.00	297	35	262	108	12	96	62	2	60	46	10	36	189	23	166
10.00	192	12	180	89	3	86	56	2	54	33	1	32	103	9	94
10.25	17	2	15	7	2	5	1		1	6	2	4	10		10
10.50	76	20	56	12	7	5	5		5	7	7		64	13	51
10.75	12	1	11										12	1	11
Total 11.00 and under 12.00	134	18	116	39	10	29	18	3	15	21	7	14	95	8	87
11.00	97	10	87	20	4	16	13	2	11	7	2	5	77	6	71
11.25	15	3	12	10	1	9	5	1	4	5		5	5	2	3
11.50	17	5	12	8	5	3				1		1	9		9
11.75	5		5	1		1							4		4
12.00 and over	421	73	348	122	25	97	73	5	68	49	20	29	299	48	251

Table 60.

Weekly wages of male minors employed in principal groups of mercantile and manufacturing industries in Minneapolis and St. Paul as reported by employers.

	Total, all industries	Total mercantile	Retail mercantile	Wholesale mercantile	Total manufacturing	Drugs and chemicals manufacturing	Food products, liquors and tobacco	Leather & rubber goods manufacturing	Lumber & furniture manufacturing	Agricultural implements & vehicles	Metal products	Printing and paper manufacturing	Textile manufacturing	Clothing manufacturing	All other manufacturing
Total male employees	16,919	5,304	3,140	2,164	11,615	142	2,157	1,003	2,133	1,566	564	1,752	795	382	1,121
21 or over	14,600	4,466	2,611	1,855	10,134	125	1,934	870	1,900	1,481	461	1,366	626	322	1,049
Under 21	2,319	838	529	309	1,481	17	223	133	233	85	103	386	169	60	72
Number of male minors earning per week															
Under \$2.00					1										
Total 2.00 and under 3.00	1														
2.00															
2.25															
2.50					1										
2.75	1														
Total 3.00 and under 4.00	3				3										
3.00	1				1										
3.25															
3.50	2				2										
3.75															
Total 4.00 and under 5.00	40	23	16	7	17			3	2	1	2	6		1	2
4.00	15	14	10	4	1			1			1	6		1	2
4.25	1				1										
4.50	22	7	4	3	15			2	2					3	5
4.75	2	2	2												
Total 5.00 and under 6.00	157	80	53	27	77	2	14	6	4	4		39		1	1
5.00	116	69	47	22	47		14	6	4	4		39		1	1
5.25	5	1	1		4		9	5	2	2		27		1	4
5.50	20	2	2		18							1		1	
5.75	16	8	3	5	8	2	5					11		1	
Total 6.00 and under 7.00	268	128	102	26	140		19	15	22	9	10	53	2	5	5
6.00	231	115	90	25	116		19	15	22	9	10	53	2	5	5
6.25	11	7	6	1	4							11		1	
6.50	17	4	4		13									5	4
6.75	9	2	2		7									5	4
							18	15	17	4	6	45	2	5	1
							1		1	3	4	7			
									4	2		1			

Table 60, continued.

Weekly wages of male minors employed in principal groups of mercantile and manufacturing industries in Minneapolis and St. Paul as reported by employers.*

	Total, all industries	Total mercantile	Retail mercantile	Wholesale mercantile	Total manufacturing	Drugs and chemicals manufacturing	Food products, liquors and tobacco	Leather & rubber goods manufacturing	Lumber & furniture manufacturing	Agricultural implements & vehicles	Metal products	Printing and paper manufacturing	Textile manufacturing	Clothing manufacturing	All other manufacturing
Total 7.00 and under 8.00	410	140	74	66	270	1	36	18	63	7	17	84	20	17	7
7.00	291	126	66	60	165	1	19	15	33		6	64	6	17	4
7.25	3	1	1		2						2		8		3
7.50	106	13	7	6	93		15	3	30	5	9	20	6		
7.75	10				10		2			2					
Total 8.00 and under 9.00	363	164	101	63	199	3	22	17	9	3	20	52	59	7	7
8.00	277	139	94	45	138	3	21	12	4	2	8	39	38	5	6
8.25	24	15		15	9				4			4	1		
8.50	35	4	4		31			4			10	9	5	2	1
8.75	27	6	3	3	21		1	1	1	1	2		15		
Total 9.00 and under 10.00	351	81	40	41	270	9	38	22	63	7	21	41	39	13	7
9.00	236	69	37	32	167	3	30	20	37	7	18	34	10	6	2
9.25	66	8	1	7	58	3	6	1	1		1	4	21	7	14
9.50	30				30		1	1	22		2	2	1		1
9.75	19	4	2	2	15	3	1		3			1	7		
Total 10.00 and under 11.00	262	96	60	36	166	1	26	20	34	5	13	33	16	8	10
10.00	180	86	54	32	94		19	15	8	1	8	27	8	7	1
10.25	15	5	1	4	10		4		2		2	2	8		
10.50	56	5	5		51	1	1	5	24	4	3	1	5	1	6
10.75	11				11		2					3	3		3
Total 11.00 and under 12.00	116	29	15	14	87		30	5	9		5	16	15	3	4
11.00	87	16	11	5	71		29	5	5		3	15	7	3	4
11.25	12	9	4	5	3				1			1	2		
11.50	12	3		3	9		1				1	1	6		
11.75	5	1		1	4				3		1				
12.00 or over	348	97	68	29	251	1	38	27	25	49	14	61	11	3	15

* Summarized with percentages in Table 30, p. 188.

Table 61.

Weekly wages of male minors employed in selected mercantile businesses in the Twin Cities as reported by employers.

	Total retail mercantile	Department stores	Clothing stores	Dry goods stores	Drug stores	Grocery and confectionery stores	All other retail stores	Total wholesale mercantile	Wholesale dry goods	Wholesale hardware etc.*	Mail order houses	All other wholesale
Total males	3140	1880	272	344	45	117	482	2164	376	680	418	690
21 or over	2611	1560	230	272	22	102	425	1855	316	596	315	628
Under 21	529	320	42	72	23	15	57	309	60	84	103	62
Minors earning per week												
\$4.00	10	4		5			1	4		4		
4.25												
4.50	4	1		1			2	3		2		1
4.75	2						2					
5.00	47	12	3	25	4		3	22	8	8	3	3
5.25	1						1					
5.50	2		1				1					
5.75	3				3			5			3	2
6.00	90	61	15	8	4		2	25	10	4	7	4
6.25	6			5			1	1				1
6.50	4			1			3					
6.75	2		2									
7.00	66	47	3	7	2	3	4	60	12	23	20	5
7.25	1		1									
7.50	7	1		3	1		2	6	2	1	1	2
7.75												
8.00	94	79	4	3	3	3	2	45	9	20	12	4
8.25								15			15	
8.50	4	1		2	1							
8.75	3			3								
9.00	37	28	2			2	5	32	8	2	13	9
9.25	1					1		7		2	5	
9.50												
9.75	2							2			1	1
10.00	54	36	6	4	4	2	2	32	6	4	11	11
10.25						1	4	4			4	
10.50	5	1										
10.75												
11.00	11	6			1		6	5	1		2	2
11.25	4			4				5			2	3
11.50								3		3		
11.75								1			1	
12.00 and over	68	43	5	1		3	16	29	3	11	3	12

* Including also agricultural implements and machinery.

Table 62.

Weekly wages of male minors employed in principal groups of mercantile and manufacturing industries in Duluth, as reported by employers.

	Total all industries	Total mercantile	Retail mercantile	Wholesale mercantile	Total manufacturing	Food products, liquor and tobacco	Leather and rubber goods	Lumber & furniture manufacturing	Iron and steel products	Printing and paper goods manufacturing	Textile manufacturing	Clothing manufacturing	All other manufacturing
Total male employees	2,126	723	334	389	1,403	152	124	609	295	92	25	22	84
21 or over	1,790	590	273	317	1,200	126	91	563	239	62	21	17	81
Under 21	336	133	61	72	203	26	33	46	56	30	4	5	3
Number of male minors earning per week													
Under \$4.00													
Total 4.00 and under 5.00	9	4	4		5				1	4			
4.00	6	2	2		4				1	3			
4.25													
4.50	3	2	2		1					1			
4.75													
Total 5.00 and under 6.00	28	13	11	2	15	1	5	3	1	4			1
5.00	27	13	11	2	14	1	5	2	1	4			1
5.25													
5.50	1				1			1					
5.75													
Total 6.00 and under 7.00	61	29	22	7	32	1	10	6	8	6			1
6.00	44	25	18	7	19	1	6	6		5			1
6.25	6	3	3		3				3	1			
6.50	9	1	1		8		4		3				
6.75	2				2				2				
Total 7.00 and under 8.00	49	16	6	10	33	4	5	18		4		2	
7.00	14	4	4		10	3	4			3			
7.25													
7.50	34	12	2	10	22	1	1	17		1		2	
7.75	1				1								1
Total 8.00 and under 9.00	23	8	7	1	15	2	5	3	2	2			1
8.00	19	7	6	1	10	2	4	1		2			
8.25	2	1	1		1			1					
8.50	2				2		1	1					
8.75	2				2				2				

Table 62 continued.

Weekly wages of male minors employed in principal groups of mercantile and manufacturing industries in Duluth, as reported by employers.

Number of male minors earning per week		Total all industries	Total mercantile	Retail mercantile	Whole-sale mercantile	Total manufacturing	Food products, liquors and tobacco	Leather and rubber goods	Lumber & furniture manufacturing	Iron and steel products	Printing and paper goods manufacturing	Textile manufacturing	Clothing manufacturing	All other manufacturing
Total	9.00 and under 10.00	40	16	1	15	24	4	2	5	7	3	2	1	
	9.00	35	16	1	15	19	3	2	3	5	3	2	1	
	9.25	1				1				1				
	9.50	4				4	1		2	1				
	9.75													
Total	10.00 and under 11.00	35	12	2	10	23	3	3	2	10	2	1	2	
	10.00	12	3	2	1	9	2	2		3	2		1	
	10.25	2	2		2									
	10.50	20	7		7	13	2	1	2	6		1	1	
	10.75	1				1				1				
Total	11.00 and under 12.00	18	10	3	7	8		3	2	1	2			
	11.00	10	4	2	2	6		3	1		2			
	11.25	3	1	1		2			1	1				
	11.50	5	5		5									
	11.75													
	12.00 and over	73	25	5	20	48	11		7	26	3	1		

Table 63.

Weekly wage rates of females and male minors in Minnesota in cities of the first class.

(1.) Total, manufacturing and mercantile.

Weekly wage	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	14317	955	13362	2655	336	2319
Under \$3.00	11		11	1		1
3.00 and under 3.50	30	11	19	1		1
3.50 " " 4.00	52	11	41	2		2
4.00 " " 4.50	220	44	176	22	6	16
4.50 " " 5.00	228	26	202	27	3	24
5.00 " " 5.50	883	89	794	148	27	121
5.50 " " 6.00	458	14	444	37	1	36
6.00 " " 6.50	1783	100	1683	292	50	242
6.50 " " 7.00	415	14	401	37	11	26
7.00 " " 7.50	1574	121	1453	308	14	294
7.50 " " 8.00	516	14	502	151	35	116
8.00 " " 8.50	1403	95	1308	320	19	301
8.50 " " 9.00	453	7	446	66	4	62
9.00 " " 9.50	1223	93	1130	338	36	302
9.50 " " 10.00	393	11	382	53	4	49
10.00 " " 10.50	1131	89	1042	209	14	195
10.50 " " 11.00	375	6	369	88	21	67
11.00 " " 11.50	470	10	460	112	13	99
11.50 " " 12.00	215	21	194	22	5	17
12.00 and over	2484	179	2305	421	73	348

Table 63, continued.

Weekly wage rates of females and male minors in Minnesota
in cities of the first class

2. All mercantile establishments.

Weekly wage	Females			Male minors		
	Total	Duluth	Twin cities	Total	Duluth	Twin cities
Total, all wages	5,940	641	5,299	971	133	838
Under \$3.00	4		4			
3.00 and under 3.50	23	7	16			
3.50 " " 4.00	32	8	24			
4.00 " " 4.50	119	24	95	16	2	14
4.50 " " 5.00	140	18	122	11	2	9
5.00 " " 5.50	530	57	473	83	13	70
5.50 " " 6.00	52	7	45	10		10
6.00 " " 6.50	935	70	865	150	28	122
6.50 " " 7.00	52	4	48	7	1	6
7.00 " " 7.50	798	71	727	131	4	127
7.50 " " 8.00	64	5	59	25	12	13
8.00 " " 8.50	723	67	656	162	8	154
8.50 " " 9.00	47	1	46	-10		10
9.00 " " 9.50	517	76	441	93	16	77
9.50 " " 10.00	64	1	63	4		4
10.00 " " 10.50	555	78	477	96	5	91
10.50 " " 11.00	40		40	12	7	5
11.00 " " 11.50	133	9	124	30	5	25
11.50 " " 12.00	47	20	27	9	5	4
12.00 and over	1065	118	947	122	25	97

Table 63, continued.

Weekly wage rates of females and male minors in Minnesota in cities of the first class

3. Retail mercantile establishments, total

Weekly wage	Females			Male Minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	5206	539	4667	590	61	529
Under \$3.00	4		4			
3.00 and under 3.50	23	7	16			
3.50 " " 4.00	32	8	24			
4.00 " " 4.50	117	24	93	12	2	10
4.50 " " 5.00	136	18	118	8	2	6
5.00 " " 5.50	520	57	463	59	11	48
5.50 " " 6.00	48	7	41	5		5
6.00 " " 6.50	837	70	767	117	21	96
6.50 " " 7.00	47	4	43	7	1	6
7.00 " " 7.50	733	62	671	71	4	67
7.50 " " 8.00	55	5	50	9	2	7
8.00 " " 8.50	632	55	577	101	7	94
8.50 " " 9.00	23	1	22	7		7
9.00 " " 9.50	438	62	376	39	1	38
9.50 " " 10.00	40		40	2		2
10.00 " " 10.50	491	61	430	57	2	55
10.50 " " 11.00	12		12	5		5
11.00 " " 11.50	116	9	107	18	3	15
11.50 " " 12.00	11	1	10			
12.00 and over	891	88	803	73	5	68

Table 63, continued.

4. Retail mercantile establishments, -
five and ten cent stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	160	49	111	10	4	6
Under \$4.00						
4.00 and under 4.50				1		1
4.50 " " 5.00	15	15				
5.00 " " 5.50	38	10	28			
5.50 " " 6.00	18	7	11			
6.00 " " 6.50	39	9	30	1	1	
6.50 " " 7.00	17	2	15			
7.00 " " 7.50	18	1	17			
7.50 " " 8.00						
8.00 " " 8.50	4	1	3	1	1	
8.50 " " 9.00						
9.00 " " 9.50	3	1	2	1		1
9.50 " " 10.00						
10.00 " " 10.50	6	1	5	2		2
10.50 " " 11.00						
11.00 " " 11.50	1	1		3	1	2
11.50 " " 12.00						
12.00 and over	1	1		1	1	

Table 63, continued.

5. Retail mercantile establishments,-
Department Stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	3881	422	3459	357	37	320
Under \$3.00	2		2			
3.00 and under 3.50	23	7	16			
3.50 " " 4.00	31	8	23			
4.00 " " 4.50	86	24	62	6	2	4
4.50 " " 5.00	97	1	96	3	2	1
5.00 " " 5.50	431	44	387	22	10	12
5.50 " " 6.00	27		27			
6.00 " " 6.50	700	54	646	72	11	61
6.50 " " 7.00	25	1	24	1	1	
7.00 " " 7.50	612	55	557	49	2	47
7.50 " " 8.00	39	3	36	2	1	1
8.00 " " 8.50	508	45	463	83	4	79
8.50 " " 9.00	11	1	10	1		1
9.00 " " 9.50	301	44	258	29	1	28
9.50 " " 10.00	25		25			
10.00 " " 10.50	321	50	271	37	1	36
10.50 " " 11.00	1		1	1		1
11.00 " " 11.50	82	8	74	7	1	6
11.50 " " 12.00	1		1			
12.00 and over	558	77	481	44	1	43

Table 63 continued.

6. Retail mercantile establishments,-
Clothing stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	298	20	278	49	7	42
Under \$3.00	1		1			
3.00 and under 3.50						
3.50 " " 4.00						
4.00 " " 4.50	2		2			
4.50 " " 5.00						
5.00 " " 5.50	12		12	3		3
5.50 " " 6.00				1		1
6.00 " " 6.50	32		32	20	5	15
6.50 " " 7.00	1		1	2		2
7.00 " " 7.50	24	4	20	5	1	4
7.50 " " 8.00	2		2			
8.00 " " 8.50	28	1	27	5	1	4
8.50 " " 9.00	1		1			
9.00 " " 9.50	37	7	30	2		2
9.50 " " 10.00						
10.00 " " 10.50	44	3	41	6		6
10.50 " " 11.00	3		3			
11.00 " " 11.50	8		8			
11.50 " " 12.00	2	1	1			
12.00 and over	101	4	97	5		5

Table 63, continued.

7. Retail mercantile establishments,-
dry goods stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	622	27	595	74	2	72
Under \$3.00						
3.00 and under 3.50						
3.50 " " 4.00	1		1			
4.00 " " 4.50	28		28	5		5
4.50 " " 5.00	23	2	21	1		1
5.00 " " 5.50	36	2	34	25		25
5.50 " " 6.00	1		1			
6.00 " " 6.50	55	5	50	15	2	13
6.50 " " 7.00	3		3	1		1
7.00 " " 7.50	57	1	56	7		7
7.50 " " 8.00	7	1	6	3		3
8.00 " " 8.50	63	5	58	3		3
8.50 " " 9.00	9		9	5		5
9.00 " " 9.50	72	7	65			
9.50 " " 10.00	9		9			
10.00 " " 10.50	85	1	84	4		4
10.50 " " 11.00	6		6			
11.00 " " 11.50	17		17	4		4
11.50 " " 12.00	4		4			
12.00 and over	146	3	143	1		1

Table 63, continued.

Retail mercantile establishments.

Wage per week	(8.) Shoe stores Twin Cities*		(9.) Furniture, stove, and carpet stores Twin Cities*	
	Females	Male Minors	Females	Male minors
Total, all wages	8	8	28	6
Under \$5.00				
5.00 and under 5.50		1		
5.50 " " 6.00		1		
6.00 " " 6.50				
6.50 " " 7.00		2		1
7.00 " " 7.50	2	1	2	
7.50 " " 8.00		1		1
8.00 " " 8.50			2	
8.50 " " 9.00				
9.00 " " 9.50	1	1	2	
9.50 " " 10.00				
10.00 " " 10.50	3		5	
10.50 " " 11.00				2
11.00 " " 11.50			1	
11.50 " " 12.00				
12.00 and over	2	1	16	2

* No establishments reported from Duluth

Table 63, continued.

10. Retail mercantile establishments,-
drug stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	22	4	18	27	4	23
Under \$5.00						
5.00 and under 5.50				5	1	4
5.50 " " 6.00				3		3
6.00 " " 6.50	5	1	4	6	2	4
6.50 " " 7.00	1	1				
7.00 " " 7.50	4	1	3	3	1	2
7.50 " " 8.00				1		1
8.00 " " 8.50	1		1	3		3
8.50 " " 9.00				1		1
9.00 " " 9.50	5	1	4			
9.50 " " 10.00						
10.00 " " 10.50	1		1	4		4
10.50 " " 11.00						
11.00 " " 11.50				1		1
11.50 " " 12 .00						
12.00 and over	5		5			

Table 63, continued.

11. Retail mercantile establishments,-
retail millinery stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	38	5	33	1		1
Under \$3.00	1		1			
3.00 and under 3.50						
3.50 " " 4.00						
4.00 " " 4.50						
4.50 " " 5.00						
5.00 " " 5.50	2	1	1	1		1
5.50 " " 6.00						
6.00 " " 6.50	1	1				
6.50 " " 7.00						
7.00 " " 7.50	3		3			
7.50 " " 8.00	1	1				
8.00 " " 8.50	5	1	4			
8.50 " " 9.00						
9.00 " " 9.50	2		2			
9.50 " " 10.00	1		1			
10.00 " " 10.50	8	1	7			
10.50 " " 11.00						
11.00 " " 11.50						
11.50 " " 12.00						
12.00 and over	14		14			

Table 63, continued.

12. Retail mercantile establishments,-
grocery and confectionery stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages						
Under \$5.00						
5.00 and under \$5.50						
5.50 " " 6.00						
6.00 " " 6.50	2		2			
6.50 " " 7.00						
7.00 " " 7.50	4		4	3		3
7.50 " " 8.00	1		1	1	1	
8.00 " " 8.50	13	2	11	4	1	3
8.50 " " 9.00	1		1			
9.00 " " 9.50	8	2	6	3		3
9.50 " " 10.00						
10.00 " " 10.50	4	2	2	3		3
10.50 " " 11.00						
11.00 " " 11.50				1	1	
11.50 " " 12.00	1		1			
12.00 and over	23	3	20	3		3

Table 63, continued.

Retail mercantile establishments.

Wage per week	(13) Hardware stores		(14) Art goods, music, books and stationery stores.	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	5	3	32	10
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00			1	4
5.00 " " 5.50				1
5.50 " " 6.00				
6.00 " " 6.50			2	
6.50 " " 7.00				
7.00 " " 7.50			3	
7.50 " " 8.00				
8.00 " " 8.50		2	1	
8.50 " " 9.00				
9.00 " " 9.50	3		1	1
9.50 " " 10.00			5	2
10.00 " " 10.50	1		3	
10.50 " " 11.00				
11.00 " " 11.50			4	
11.50 " " 12.00				
12.00 " over	1	1	12	2

*No establishments reported from Duluth.

Table 63, continued.

Retail mercantile establishments.

(14) Art goods, music, books and stationary stores.

(15) Hardware stores

Twin Cities*

Twin Cities*

Females Male minors

Females Male minors

32 10

5 3

Wage per week	Total, all wages
Under \$4.00	
4.00 and under 4.50	1
4.50 " 5.00	4
5.00 " 5.50	1
5.50 " 6.00	2
6.00 " 6.50	3
6.50 " 7.00	1
7.00 " 7.50	1
7.50 " 8.00	2
8.00 " 8.50	
8.50 " 9.00	
9.00 " 9.50	3
9.50 " 10.00	1
10.00 " 10.50	
10.50 " 11.00	
11.00 " 11.50	4
11.50 " 12.00	12
12.00 " over	2

*No establishments reported from Duluth.

Table 63 continued.

17. Retail mercantile establishments,-
all other retail stores.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	38	3	35	11	1	10
Under \$4.00						
4.00 and under 4.50	1		1			
4.50 " " 5.00						
5.00 " " 5.50	1		1			
5.50 " " 6.00	1		1			
6.00 " " 6.50	1		1	1		1
6.50 " " 7.00						
7.00 " " 7.50	3		3	1		1
7.50 " " 8.00	5		5			
8.00 " " 8.50	4		4			
8.50 " " 9.00	1		1			
9.00 " " 9.50	1		1	1		1
9.50 " " 10.00						
10.00 " " 10.50	7	3	4	1	1	
10.50 " " 11.00						
11.00 " " 11.50	2		2	2		2
11.50 " " 12.00						
12.00 and over	11		11	5		5

Including meat markets, 3 wood and coal companies, 1 ice company, 1 piano store, 1 phonograph store, 1 retail feed store, 1 costume company, 1 premium store, and 1 gun and curio shop, 1 general store, and 1 establishment dealing in builders' supplies.

Table 63 continued

Weekly wage rates of females and male minors in Minnesota in cities of the first class.

18. Wholesale mercantile establishments
total

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	734	102	632	381	72	309
Under \$4.00						
4.00 and under \$4.50	2		2	4		4
4.50 " " 5.00	4		4	3		3
5.00 " " 5.50	10		10	24	2	22
5.50 " " 6.00	4		4	5		5
6.00 " " 6.50	98		98	33	7	26
6.50 " " 7.00	5		5			
7.00 " " 7.50	65	9	56	60		60
7.50 " " 8.00	9		9	16	10	6
8.00 " " 8.50	91	12	79	61	1	60
8.50 " " 9.00	24		24	3		3
9.00 " " 9.50	79	14	65	54	15	39
9.50 " " 10.00	24	1	23	2		2
10.00 " " 10.50	64	17	47	39	3	36
10.50 " " 11.00	28		28	7	7	
11.00 " " 11.50	17		17	12	2	10
11.50 " " 12.00	36	19	17	9	5	4
12.00 and over	174	30	144	49	20	29

Table 63, continued.

(19) Wholesale mercantile establishments,-
seeds,

Wage per week	Twin Cities*	
	Females	Male minors
Total, all wages	87	7
Under \$4.00		
4.00 and under 4.50		
4.50 " " 5.00	2	
5.00 " " 5.50	3	
5.50 " " 6.00	2	
6.00 " " 6.50	37	2
6.50 " " 7.00		
7.00 " " 7.50	7	
7.50 " " 8.00	1	1
8.00 " " 8.50	10	
8.50 " " 9.00		
9.00 " " 9.50	5	1
9.50 " " 10.00		
10.00 " " 10.50	6	3
10.50 " " 11.00	1	
11.00 " " 11.50	3	
11.50 " " 12.00		
12.00 and over	10	

*No establishments reported from Duluth.

Table 63 continued.

20. Wholesale mercantile establishments:-
Groceries and other food products, and liquors and tobacco.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	81	11	70	25	6	19
Under \$4.00						
4.00 and under 4.50						
4.50 " " 5.00				1		1
5.00 " " 5.50	2		2			
5.50 " " 6.00	2		2	2		2
6.00 " " 6.50	5		5	1		1
6.50 " " 7.00	1		1			
7.00 " " 7.50	10	4	6	1		1
7.50 " " 8.00						
8.00 " " 8.50	7	2	5	3	1	2
8.50 " " 9.00						
9.00 " " 9.50	6	1	5	3	1	2
9.50 " " 10.00						
10.00 " " 10.50	7	1	6	3	1	2
10.50 " " 11.00	1		1			
11.00 " " 11.50	1		1	1		1
11.50 " " 12.00	5	1	4			
12.00 and over	34	2	32	10	3	7

Table 63, continued.

Wholesale mercantile establishments.

Wage per week	(21) Dry goods, clothing and shoes		(22) General merchandize and mail order houses.	
	Twin Cities *		Twin Cities *	
	Females	Male minors	Females	Male minors
Total, all wages	62	60	219	103
Under \$5.00				
5.00 and under 5.50	1	8	2	3
5.50 " " 6.00				3
6.00 " " 6.50	3	10	48	7
6.50 " " 7.00				
7.00 " " 7.50	5	12	32	20
7.50 " " 8.00		2	6	1
8.00 " " 8.50	9	9	46	27
8.50 " " 9.00	2	1	1	
9.00 " " 9.50	11	8	31	18
9.50 " " 10.00			2	1
10.00 " " 10.50	8	6	16	15
10.50 " " 11.00			1	
11.00 " " 11.50	4	1	8	4
11.50 " " 12.00			7	1
12.00 and over	19	3	19	3

*No establishments reported from Duluth.

Table 63 continued

23. Wholesale mercantile establishments,-
Hardware, agricultural implements, and machinery

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	224	90	134	148	64	84
Under \$4.00						
4.00 and under 4.50	2		2	4		4
4.50 " " 5.00	2		2	2		2
5.00 " " 5.50	2		2	10	2	8
5.50 " " 6.00						
6.00 " " 6.50	4		4	11	7	4
6.50 " " 7.00	4		4			
7.00 " " 7.50	5	5		23		23
7.50 " " 8.00	1		1	11	10	1
8.00 " " 8.50	14	10	4	20		20
8.50 " " 9.00	21		21			
9.00 " " 9.50	20	13	7	18	14	4
9.50 " " 10.00	21	1	20			
10.00 " " 10.50	17	16	1	6	2	4
10.50 " " 11.00	22		22	7	7	
11.00 " " 11.50						
11.50 " " 12.00	24	18	6	8	5	3
12.00 and over	65	27	38	28	17	11

Table 63 continued.

24. Wholesale mercantile establishments,-
all other.*

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	61	1	60	38	2	36
Under \$3.00						
3.00 and under 3.50				3		3
3.50 " " 4.00						
4.00 " " 4.50						
4.50 " " 5.00						
5.00 " " 5.50						
5.50 " " 6.00						
6.00 " " 6.50	1		1	2		2
6.50 " " 7.00	6		6	4		4
7.00 " " 7.50	1		1	1		1
7.50 " " 8.00	5		5	2		2
8.00 " " 8.50				2		2
8.50 " " 9.00	6		6	6		6
9.00 " " 9.50	1		1	1		1
9.50 " " 10.00	10		10	6		6
10.00 " " 10.50	3		3			
10.50 " " 11.00	1		1	6	2	4
11.00 " " 11.50						
11.50 " " 12.00						
12.00 and over	27	1	26	5		5

* Including the following wholesale or jobbing establishments: finished lumber, 1; building materials, 1; sash and doors, 2; paints, 1; glass, 1; paper goods, 2; chemicals, 1; photographers' supplies, 1; chairs, 1; broom corn, 1.

Table 63 continued.

Weekly wage rates of females and male minors in cities of the first class.

25. Manufacturing industries, total.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	8377	314	8063	1684	203	1481
Under \$3.00	7		7	1		1
3.00 and under 3.50	7	4	3	1		1
3.50 " " 4.00	20	3	17	2		2
4.00 " " 4.50	101	20	81	6	4	2
4.50 " " 5.00	88	8	80	16	1	15
5.00 " " 5.50	353	32	321	65	14	51
5.50 " " 6.00	406	7	399	27	1	26
6.00 " " 6.50	848	30	818	142	22	120
6.50 " " 7.00	363	10	353	30	10	20
7.00 " " 7.50	776	50	726	177	10	167
7.50 " " 8.00	452	9	443	126	23	103
8.00 " " 8.50	680	28	652	158	11	147
8.50 " " 9.00	406	6	400	56	4	52
9.00 " " 9.50	706	17	689	245	20	225
9.50 " " 10.00	329	10	319	49	4	45
10.00 " " 10.50	576	11	565	113	9	104
10.50 " " 11.00	335	6	329	76	14	62
11.00 " " 11.50	337	1	336	82	8	74
11.50 " " 12.00	168	1	167	13		13
12.00 and over	1419	61	1358	299	48	251

Table 63, continued.

Manufacturing,-
Drugs, paints, oils and chemicals.

(26) Total

(27) Drugs, including
pharmaceuticals and
patent medicines.

Wage per week	Twin Cities *		Twin Cities *	
	Females	Male minors	Females	Male minors
Total, all wages	65	17	31	9
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00	3		1	
5.00 " " 5.50	1		11	2
5.50 " " 6.00	19	2	2	
6.00 " " 6.50	11			
6.50 " " 7.00	4		4	1
7.00 " " 7.50	6	1	1	
7.50 " " 8.00	2		5	3
8.00 " " 8.50	6	3		
8.50 " " 9.00		6		3
9.00 " " 9.50	4	6		
9.50 " " 10.00	1	3	1	
10.00 " " 10.50	4		4	
10.50 " " 11.00	1	1	1	
11.00 " " 11.50				
11.50 " " 12.00	1		1	
12.00 and over	2	1		

* No establishments reported from Duluth.

Table 63, continued.

Manufacturing,
drugs, paints, oils, and chemicals.

Wage per week	(28) Paints and oils		(29) Soap	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	20	4	14	4
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00	3			
5.00 " " 5.50				
5.50 " " 6.00			8	
6.00 " " 6.50	7		2	
6.50 " " 7.00			4	
7.00 " " 7.50	2			
7.50 " " 8.00	1			
8.00 " " 8.50	1			
8.50 " " 9.00				
9.00 " " 9.50	4			3
9.50 " " 10.00		3		
10.00 " " 10.50				
10.50 " " 11.00				1
11.00 " " 11.50				
11.50 " " 12.00				
12.00 and over	2	1		

* No establishments reported from Duluth.

Table 63 continued.

30. Manufacturing, - food products, liquors, and tobacco.

Total

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	14354	60	1373	249	26	223
Under \$3.00						
3.00 and under 3.50	1		1			
3.50 " " 4.00	1		1			
4.00 " " 4.50	11	7	4			
4.50 " " 5.00	15	2	13			
5.00 " " 5.50	92	7	85	10	1	9
5.50 " " 6.00	82	2	80	5		5
6.00 " " 6.50	212	5	207	20	1	19
6.50 " " 7.00	37		37			
7.00 " " 7.50	131	8	123	22	3	19
7.50 " " 8.00	71	1	70	18	1	17
8.00 " " 8.50	74	14	60	23	2	21
8.50 " " 9.00	54		54	1		1
9.00 " " 9.50	109	2	107	39	3	36
9.50 " " 10.00	34		34	3	1	2
10.00 " " 10.50	128	5	123	24	1	23
10.50 " " 11.00	103	1	102	5	2	3
11.00 " " 11.50	71		71	29		29
11.50 " " 12.00	22		22	1		1
12.00 and over	185	6	179	49	11	38

Table 63 continued.

31. Manufacturing,- food products, liquors, and tobacco.
Bakeries

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	99	13	86	29	3	26
Under \$6.00						
6.00 and under 6.50	9	1	8	1		1
6.50 " " 7.00						
7.00 " " 7.50	18	1	17			
7.50 " " 8.00	6		6	3		3
8.00 " " 8.50	20	6	14	1	1	
8.50 " " 9.00	1		1			
9.00 " " 9.50	17		17	2		2
9.50 " " 10.00	1		1			
10.00 " " 10.50	10	3	7	9		9
10.50 " " 11.00	2	1	1			
11.00 " " 11.50	4		4	1		1
11.50 " " 12.00	1		1			
12.00 and over	10	1	9	12	2	10

Table 63 continued.

32. Manufacturing,- food products, liquors, and tobacco.
Confectionery and crackers.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	515	39	476	102	9	93
Under \$4.00						
4.00 and under 4.50	6	6				
4.50 " " 5.00	7	2	5			
5.00 " " 5.50	28	7	21	3		3
5.50 " " 6.00	48	2	46			
6.00 " " 6.50	111	4	107	9	1	8
6.50 " " 7.00	15		15			
7.00 " " 7.50	33	6	27	14	3	11
7.50 " " 8.00	15		15	5		5
8.00 " " 8.50	24	8	16	14	1	13
8.50 " " 9.00	40		40			
9.00 " " 9.50	66	2	64	29	1	28
9.50 " " 10.00				2	1	1
10.00 " " 10.50	77	1	76	12	1	11
10.50 " " 11.00	4		4			
11.00 " " 11.50	12		12	3		3
11.50 " " 12.00						
12.00 " over	29	1	28	11	1	10

Table 65, continued.

Manufacturing,-
food products, liquors, and tobacco.

Wage per week	(33) Flour and cereals		(34) Stock food.	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	155	4	174	14
Under \$5.00				
5.00 and under 5.50			4	
5.50 " " 6.00				
6.00 " " 6.50		1	50	2
6.50 " " 7.00				
7.00 " " 7.50	1		9	
7.50 " " 8.00			11	9
8.00 " " 8.50	1		12	
8.50 " " 9.00			4	
9.00 " " 9.50			9	1
9.50 " " 10.00	18		10	
10.00 " " 10.50	2	1	18	
10.50 " " 11.00	91		3	2
11.00 " " 11.50	35		12	
11.50 " " 12.00	1		10	
12.00 and over	6	2	22	

* No establishments reported from Duluth.

Table 63 continued.

35. Manufacturing,- food products, liquors, and tobacco.
Brewing and bottling

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	20	1	19	39	4	35
Under \$8.00						
8.00 and under 8.50				1		1
8.50 " " 9.00						
9.00 " " 9.50				2	1	1
9.50 " " 10.00						
10.00 " " 10.50						
10.50 " " 11.00	1		1			
11.00 " " 11.50				25		25
11.50 " " 12.00						
12.00 and over	19	1	18	11	3	8

Table 63, continued.

36. Manufacturing, - food products, liquors, and tobacco.
Cigars and tobacco.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total , all wages	268	5	263	24	1	23
Under \$3.00						
3.00 and under 3.50	1		1			
3.50 " " 4.00	1		1			
4.00 " " 4.50	5	1	4			
4.50 " " 5.00	9		9			
5.00 " " 5.50	13		13	7	1	6
5.50 " " 6.00	8		8			
6.00 " " 6.50	23		23	7		7
6.50 " " 7.00	9		9			
7.00 " " 7.50	45	1	44	2		2
7.50 " " 8.00	15	1	14			
8.00 " " 8.50	17		17			
8.50 " " 9.00	6		6	1		1
9.50 " " 10.00	9		9			
10.00 " " 10.50	23	1	22	2		2
10.50 " " 11.00	7		7			
11.00 " " 11.50	5		5			
11.50 " " 12.00	4		4			
12.00 and over	63	1	62	3		3

Table 63, continued

Manufacturing,-
food products, liquors and tobacco.

Wage per week	(37) Meat packing		(38) Miscellaneous food products	
	Duluth*		Twin Cities	
	Females	Male minors	Females	Male minors
Total, all wages	2	9	200	28
Under \$5.00				
5.00 and under 5.50		.	49	
5.50 " " 6.00			26	5
6.00 " " 6.50			20	
6.50 " " 7.00			14	
7.00 " " 7.50			26	6
7.50 " " 8.00		1	25	
8.00 " " 8.50			1	8
8.50 " " 9.00			3	
9.00 " " 9.50		1	14	3
9.50 " " 10.00			1	1
10.00 " " 10.50			5	1
10.50 " " 11.00		2		1
11.00 " " 11.50			5	
11.50 " " 12.00			6	1
12.00 and over	2	5	5	2

* No establishments reported from the Twin Cities

No establishments reported from Duluth.

Table 63, continued.

39. Manufacturing, - leather and rubber goods

Total

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	242	44	198	166	33	133
Under \$4.00						
4.00 and under 4.50	9	7	2	1		1
4.50 " " 5.00	3	2	1	2		2
5.00 " " 5.50	17	8	9	11	5	6
5.50 " " 6.00	20		20			
6.00 " " 6.50	21	6	15	21	6	15
6.50 " " 7.00	9	1	8	4	4	
7.00 " " 7.50	16	3	13	19	4	15
7.50 " " 8.00	11	1	10	4	1	3
8.00 " " 8.50	13	1	12	16	4	12
8.50 " " 9.00	16	1	15	6	1	5
9.00 " " 9.50	13	4	9	23	2	21
9.50 " " 10.00	10	1	9	1		1
10.00 " " 10.50	18	2	16	17	2	15
10.50 " " 11.00	5		5	6	1	5
11.00 " " 11.50	6		6	8	3	5
11.50 " " 12.00	4		4			
12.00 and over	51	7	44	27		27

Table 63, continued.

(40) Manufacturing,- leather and rubber goods.
 Harness and saddlery, leather specialties, leather
 belting and tanning

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	19		19	43	6	37
Under \$4.00						
4.00 and under 4.50				1		1
4.50 " " 5.00				2		2
5.00 " " 5.50				3		3
5.50 " " 6.00						
6.00 " " 6.50	3		3	4	1	3
6.50 " " 7.00				2	2	
7.00 " " 7.50				6		4
7.50 " " 8.00						
8.00 " " 8.50	2		2	5	1	4
8.50 " " 9.00	3		3	2		2
9.00 " " 9.50	1		1	6		6
9.50 " " 10.00				1		1
10.00 " " 10.50	1		1	4		4
10.50 " " 11.00				1		1
11.00 " " 11.50	1		1	1		1
11.50 " " 12.00						
12.00 and over	8		8	5		5

Table 63, continued.

(41) Manufacturing, - leather and rubber goods.
Boots and shoes

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	172	44	128	123	27	96
Under \$4.00						
4.00 and under 4.50	9	7	2			
4.50 " " 5.00	3	2	1			
5.00 " " 5.50	12	8	4	8	5	3
5.50 " " 6.00	17		17			
6.00 " " 6.50	12	6	6	17	5	12
6.50 " " 7.00	6	1	5	2	2	
7.00 " " 7.50	15	3	12	13	2	11
7.50 " " 8.00	5	1	4	4	1	3
8.00 " " 8.50	9	1	8	11	3	8
8.50 " " 9.00	9	1	8	4	1	3
9.00 " " 9.50	11	4	7	17	2	15
9.50 " " 10.00	7	1	6			
10.00 " " 10.50	11	2	9	13	2	11
10.50 " " 11.00	5		5	5	1	4
11.00 " " 11.50	3		3	7	3	4
11.50 " " 12.00	3		3			
12.00 and over	35	7	28	22		22

Table 63, continued.

(42) Manufacturing,- leather and rubber goods.
Gloves

Wage per week	Twin Cities*	
	Females	Male minors
Total, all wages	51	
Under \$5.00		
5.00 and under 5.50	5	
5.50 " " 6.00	3	
6.00 " " 6.50	6	
6.50 " " 7.00	3	
7.00 " " 7.50	1	
7.50 " " 8.00	6	
8.00 " " 8.50	2	
8.50 " " 9.00	4	
9.00 " " 9.50	1	
9.50 " " 10.00	3	
10.00 " " 10.50	0	
10.50 " " 11.00		
11.00 " " 11.50	2	
11.50 " " 12.00	1	
12.00 and over	8	

* No establishments reported from Duluth.

Table 63, continued.

(43) Manufacturing, - lumber and furniture.

Total.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	91	4	87	279	46	233
Under \$3.00				1		1
3.00 and under 3.50				1		1
3.50 " " 4.00						
4.00 " " 4.50				2		2
4.50 " " 5.00				4	2	2
5.00 " " 5.50				3	1	2
5.50 " " 6.00	4		4	23	6	17
6.00 " " 6.50	5		5	5		5
6.50 " " 7.00	4		4	33		33
7.00 " " 7.50	6		6	48	18	30
7.50 " " 8.00	6		6	10	2	8
8.00 " " 8.50	10	1	9	2	1	1
8.50 " " 9.00	7		7	41	3	38
9.00 " " 9.50	6		6	27	2	25
9.50 " " 10.00	10		10	10		10
10.00 " " 10.50	4		4	26	2	24
10.50 " " 11.00	3		3	8	2	6
11.00 " " 11.50	5		5	3		3
11.50 " " 12.00	1		1	32	7	25
12.00 and over	26	3	23			

Table 63, continued.

(44.) Manufacturing,- Lumber and furniture.
Saw and planing mills.

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	5		5	14	2	12
Under \$5.00						
5.00 and under 5.50				1	1	
5.50 " " 6.00				2	1	1
6.00 " " 6.50						
6.50 " " 7.00				4		4
7.00 " " 7.50						
7.50 " " 8.00						
8.00 " " 8.50				1		1
8.50 " " 9.00				1		1
9.00 " " 9.50						
9.50 " " 10.00				1		1
10.00 " " 10.50				1		1
10.50 " " 11.00						
11.00 " " 11.50						
11.50 " " 12.00	1		1			
12.00 and over	4		4	3		3

Table 63, continued.

(45) Manufacturing, - lumber and furniture,
sash, doors, mouldings, and millwork.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	26	1	25	72	17	55
Under \$5.00						
5.00 and under 5.50				1	1	
5.50 " " 6.00						
6.00 " " 6.50	2		2			
6.50 " " 7.00						
7.00 " " 7.50						
7.50 " " 8.00	1		1	26	13	13
8.00 " " 8.50				2	1	1
8.50 " " 9.00	4		4			
9.00 " " 9.50				13		13
9.50 " " 10.00	8		8	2		2
10.00 " " 10.50	2		2	3		3
10.50 " " 11.00	2		2	11		11
11.00 " " 11.50	3		3			
11.50 " " 12.00						
12.00 and over	4	1	3	14	2	12

Table 63, continued.

(46) Manufacturing,- lumber and furniture.
Cabinet work and pattern making

Wage per week	Total	Females		Total	Male minors	
		Duluth	Twin Cities		Duluth	Twin Cities
Total, all wages	30	3	27	63	5	58
Under \$3.00				1		1
3.00 and under 3.50				1		1
3.50 " " 4.00				1		1
4.00 " " 4.50				1		1
4.50 " " 5.00				1		1
5.00 " " 5.50						
5.50 " " 6.00						
6.00 " " 6.50	1		1	4		4
6.50 " " 7.00				1		1
7.00 " " 7.50	2		2	29		29
7.50 " " 8.00				1		1
8.00 " " 8.50	7	1	6	4		4
8.50 " " 9.00	2		2			
9.00 " " 9.50	3		3	1		1
9.50 " " 10.00	2		2	3	2	1
10.00 " " 10.50	1		1	2		2
10.50 " " 11.00	1		1	3		3
11.00 " " 11.50	1		1	7	2	5
11.50 " " 12.00				3		3
12.00 and over	10	2	8	2	1	1

Table 63, continued..

(47) Manufacturing,- lumber and furniture.
Furniture factories.

Wage per week	Twin Cities*	
	Females	Male minors
Total, all wages	22	53
Under \$5.00		
5.00 and under 5.50		2
5.50 " " 6.00	4	
6.00 " " 6.50		4
6.50 " " 7.00		
7.00 " " 7.50		4
7.50 " " 8.00	5	9
8.00 " " 8.50	1	2
8.50 " " 9.00	1	
9.00 " " 9.50	3	11
9.50 " " 10.00		1
10.00 " " 10.50	1	1
10.50 " " 11.00		10
11.00 " " 11.50	1	1
11.50 " " 12.00		
12.00 and over	6	8

* No establishments reported from Duluth.

Table 63, continued.

(48) Manufacturing,- lumber and furniture.
wooden boxes and baskets

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages Under \$4.00	8		8	77	22	55
4.00 and under 4.50						
4.50 " " 5.00				1		1
5.00 " " 5.50						
5.50 " " 6.00				1		1
6.00 " " 6.50	2		2	15	6	9
6.50 " " 7.00						
7.00 " " 7.50	2		2			
7.50 " " 8.00				12	5	7
8.00 " " 8.50	2		2	1	1	
8.50 " " 9.00				1	1	
9.00 " " 9.50				16.		
9.50 " " 10.00				20	3	13
10.00 " " 10.50				3		20
10.50 " " 11.00				2		3
11.00 " " 11.50					2	
11.50 " " 12.00						
12.00 and over	2		2	5	4	1

Table 63, continued.

Manufacturing,-
Agricultural implements and vehicles.

Wage per week	(49) Total		(50) Agricultural implements	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	42	85	23	20
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00		1		1
5.00 " " 5.50		4		4
5.50 " " 6.00				
6.00 " " 6.50	1	7	1	3
6.50 " " 7.00		2		2
7.00 " " 7.50				
7.50 " " 8.00	1	7	1	2
8.00 " " 8.50	1	2	1	2
8.50 " " 9.00	1	1	1	1
9.00 " " 9.50	1	7		
9.50 " " 10.00				
10.00 " " 10.50	5	1	3	1
10.50 " " 11.00		4		1
11.00 " " 11.50	4		2	
11.50 " " 12.00				
12.00 and over	28	49	14	3

* No establishment reported from Duluth.

Table 63, continued.
 Manufacturing,-
 Agricultural implements and vehicles.

Wage per week	(51) Automobiles		(52) Wagons and carriages	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	15	60	4	5
Under \$6.00				
6.00 and under 6.50		4		
6.50 " " 7.00				
7.00 " " 7.50				
7.50 " " 8.00		5		
8.00 " " 8.50				
8.50 " " 9.00				
9.00 " " 9.50	1	6		1
9.50 " " 10.00				
10.00 " " 10.50	1		1	
10.50 " " 11.00		3		
11.00 " " 11.50			2	
11.50 " " 12.00				
12.00 and over	13	42	1	4

* No establishments reported from Duluth.

Table 63, continued .

(53.) Manufacturing, - metal products

Total

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	172	36	136	159	56	103
Under \$3.00						
3.00 and under 3.50				1		1
3.50 " " 4.00						
4.00 " " 4.50				2	1	1
4.50 " " 5.00				1		1
5.00 " " 5.50	13	12	1	1	1	
5.50 " " 6.00	1		1			
6.00 " " 6.50	24	5	19	9	3	6
6.50 " " 7.00	2		2	9	5	4
7.00 " " 7.50	36	10	26	8		8
7.50 " " 8.00	2		2	9		9
8.00 " " 8.50	16	1	15	8		8
8.50 " " 9.00	1		1	14	2	12
9.00 " " 9.50	22		22	25	6	19
9.50 " " 10.00	2	1	1	3	1	2
10.00 " " 10.50	16	1	15	13	3	10
10.50 " " 11.00				10	7	3
11.00 " " 11.50	4		4	4	1	3
11.50 " " 12.00				2		2
12.00 and over	33	6	27	40	26	14

Table 63, continued.

(54.) Manufacturing, - metal products.
Foundry and machine shops

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	36	5	31	165	37	128
Under \$4.00						
4.00 and under 4.50				2		2
4.50 " " 5.00				4	1	3
5.00 " " 5.50				11		11
5.50 " " 6.00				9	3	6
6.00 " " 6.50				3		3
6.50 " " 7.00				3		3
7.00 " " 7.50	1		1	16		16
7.50 " " 8.00				10		10
8.00 " " 8.50	1		1	10	2	8
8.50 " " 9.00				10		9
9.00 " " 9.50	3		3	7	3	7
9.50 " " 10.00				5	1	4
10.00 " " 10.50	3	1	2	10	5	5
10.50 " " 11.00	4		4	10	1	9
11.00 " " 11.50	1		1	4		4
11.50 " " 12.00	3		3	49	21	28
12.00 and over	20	4	16			

Table 63, continued.

(55) Manufacturing, - metal products.
Iron beds.

Wage per week	Twin Cities*	
	Females	Male minors
Total, all wages	4	14
Under \$6.00		
6.00 and under 6.50		1
6.50 " " 7.00	1	
7.00 " " 7.50		
7.50 " " 8.00		
8.00 " " 8.50		1
8.50 " " 9.00		
9.00 " " 9.50		4
9.50 " " 10.00		
10.00 " " 10.50	2	1
10.50 " " 11.00		3
11.00 " " 11.50		1
11.50 " " 12.00		
12.00 and over	1	3

* No establishments reported from Duluth.

Table 63, continued.

(56.) Manufacturing, - metal products.
All other metal goods

Wage per week	Females			Male minors		
	Total	Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	163	31	132	108	19	89
Under \$3.00						
3.00 and under 3.50				1		1
3.50 " " 4.00						
4.00 " " 4.50				2	1	1
4.50 " " 5.00				1		1
5.00 " " 5.50	13	12	1			
5.50 " " 6.00	1		1			
6.00 " " 6.50	24	5	19	5		5
6.50 " " 7.00	1		1	9	5	4
7.00 " " 7.50	36	10	26	8		8
7.50 " " 8.00	2		2	9		9
8.00 " " 8.50	16	1	15	7		7
8.50 " " 9.00	1		1	12		12
9.00 " " 9.50	22		22	18	3	15
9.50 " " 10.00	2	1	1	3	1	2
10.00 " " 10.50	13		13	11	2	9
10.50 " " 11.00				2	2	
11.00 " " 11.50	4		4	2		2
11.50 " " 12.00				2		2
12.00 and over	28	2	26	16	5	11

Including establishments manufacturing cans, 1; chandeliers and electric fixtures, 3; checking systems, 1; dental metals, 1; dies, 1; grocer's sundries, 1; heat regulators, 1; lubricators, 1; metal specialties, 2; shears and grates ; sheet metal, 4; stamps and stencils, 3; tags, 1; tools, 1; valves, 1; and water carbonaters, 1.

Table 63, continued.

(57.) Manufacturing, - printing and paper goods

Total.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	1373	34	1339	416	30	386
Under \$3.00						
3.00 and under 3.50						
3.50 " " 4.00				1		1
4.00 " " 4.50	8	3	5	3	3	
4.50 " " 5.00	16	3	13	7	1	6
5.00 " " 5.50	54	2	52	32	4	28
5.50 " " 6.00	62		62	11		11
6.00 " " 6.50	188	1	187	50	5	45
6.50 " " 7.00	70	2	68	9	1	8
7.00 " " 7.50	170	10	160	67	3	64
7.50 " " 8.00	87		87	21	1	20
8.00 " " 8.50	179	2	177	45	2	43
8.50 " " 9.00	72	1	71	9		9
9.00 " " 9.50	140	4	136	41	3	38
9.50 " " 10.00	30		30	3		3
10.00 " " 10.50	65	2	63	31	2	29
10.50 " " 11.00	19		19	4		4
11.00 " " 11.50	19		19	17	2	15
11.50 " " 12.00	8		8	1		1
12.00 and over	186	4	182	64	3	61

Table 63, continued.

(58.) Manufacturing, printing and paper goods.
Printing and book-binding

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	231	27	204	155	29	126
Under \$4.00						
4.00 and under 4.50	3	3		3	3	
4.50 " " 5.00	1	1		4	1	3
5.00 " " 5.50	4	2	2	13	4	9
5.50 " " 6.00	2		2	3		3
6.00 " " 6.50	11	1	10	23	5	18
6.50 " " 7.00	5		5	4	1	3
7.00 " " 7.50	34	10	24	25	3	22
7.50 " " 8.00	11		11	8	1	7
8.00 " " 8.50	42	2	40	16	2	14
8.50 " " 9.00	33		33	4		4
9.00 " " 9.50	20	3	17	19	3	16
9.50 " " 10.00	10		10	2		2
10.00 " " 10.50	18	2	16	4	1	3
10.50 " " 11.00	6		6	3		3
11.00 " " 11.50	4		4	6	2	4
11.50 " " 12.00	3		3			
12.00 and over	24	3	21	18	3	15

Table 63, continued.
 Manufacturing,-
 printing and paper goods.

Wage per week	(59) Publishing		(60) Advertising novelties	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	369	85	426	77
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00			9	
5.00 " " 5.50	2	7	42	8
5.50 " " 6.00	9	4	21	2
6.00 " " 6.50	36	7	89	10
6.50 " " 7.00	3	5	39	
7.00 " " 7.50	36	12	63	13
7.50 " " 8.00	12	4	33	5
8.00 " " 8.50	61	9	35	5
8.50 " " 9.00	21	4	9	
9.00 " " 9.50	58	5	31	3
9.50 " " 10.00	6	1	2	
10.00 " " 10.50	11	8	18	9
10.50 " " 11.00	5	1	1	
11.00 " " 11.50	4	4	3	4
11.50 " " 12.00	3	1		
12.00 and over	102	13	31	18

* No establishments reported from Duluth.

Table 63, continued.
 Manufacturing,-
 printing and paper goods.

Wage per week	(61) Envelopes, plain and printed		(62) Electrotyping, lithographing and engraving	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	108	9	24	26
Under \$3.00				
3.00 and under 3.50				
3.50 " " 4.00				1
4.00 " " 4.50	2			
4.50 " " 5.00	1		3	3
5.00 " " 5.50	3		3	4
5.50 " " 6.00	11			2
6.00 " " 6.50	21	1	1	4
6.50 " " 7.00	11		2	
7.00 " " 7.50	12	1	2	3
7.50 " " 8.00	11		1	
8.00 " " 8.50	9	1	1	1
8.50 " " 9.00	3			1
9.00 " " 9.50	7	1		3
9.50 " " 10.00	3			
10.00 " " 10.50	9	2	2	
10.50 " " 11.00	1			
11.00 " " 11.50			1	1
11.50 " " 12.00				
12.00 and over	4	3	8	3

* No establishments reported from Duluth.

Table 63, continued.

(63.) Manufacturing, - printing and paper goods.
Paper bags and boxes.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	215	7	208	64	1	63
Under \$4.00						
4.00 and under 4.50	3		3			
4.50 " " 5.00	2	2				
5.00 " " 5.50						
5.50 " " 6.00	19		19			
6.00 " " 6.50	30		30	5		5
6.50 " " 7.00	10	2	8			
7.00 " " 7.50	23		23	13		13
7.50 " " 8.00	19		19	4		4
8.00 " " 8.50	31		31	13		13
8.50 " " 9.00	6	1	5			
9.00 " " 9.50	24	1	23	10		10
9.50 " " 10.00	9		9			
10.00 " " 10.50	7		7	8	1	7
10.50 " " 11.00	6		6			
11.00 " " 11.50	7		7	2		2
11.50 " " 12.00	2		2			
12.00 and over	17	1	16	9		9

Table 63, continued.

(64.) Manufacturing, - textiles, bags, and bedding.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	2378	41	2337	173	4	169
Under \$3.00						
3.00 and under 3.50						
3.50 " " 4.00	1		1			
4.00 " " 4.50	2		2			
4.50 " " 5.00	2		2			
5.00 " " 5.50	26		26			
5.50 " " 6.00	149	3	146			
6.00 " " 6.50	149	8	141	2		2
6.50 " " 7.00	156	4	152			
7.00 " " 7.50	189	13	176	6		6
7.50 " " 8.00	152	3	149	14		14
8.00 " " 8.50	155	2	153	39		39
8.50 " " 9.00	159	1	158	20		20
9.00 " " 9.50	187	3	184	33	2	31
9.50 " " 10.00	142		142	8		8
10.00 " " 10.50	142	2	140	8		8
10.50 " " 11.00	98		98	9	1	8
11.00 " " 11.50	119		119	9		9
11.50 " " 12.00	85		85	6		6
12.00 and over	465	2	463	19	1	18

Table 63, continued.

(65) Manufacturing, - textiles, bags, and bedding.
Knitting mills.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	1809	30	1779	93		93
Under \$3.00						
3.00 and under 3.50	1		1			
3.50 " " 4.00						
4.00 " " 4.50	2		2			
4.50 " " 5.00	2		2			
5.00 " " 5.50	26		26			
5.50 " " 6.00	149	3	146			
6.00 " " 6.50	145	8	137			
6.50 " " 7.00	70	4	66			
7.00 " " 7.50	116	13	103	1		1
7.50 " " 8.00	134	2	132	12		12
8.00 " " 8.50	101		101	3		3
8.50 " " 9.00	107		107	17		17
9.00 " " 9.50	110		110	20		20
9.50 " " 10.00	118		118	7		7
10.00 " " 10.50	84		84	8		8
10.50 " " 11.00	80		80	5		5
11.00 " " 11.50	87		87	4		4
11.50 " " 12.00	79		79	4		4
12.00 and over	398		398	12		12

Table 65, continued.
 Manufacturing,-
 textiles, bags, and bedding.

Wage per week	(66) Twine factories.		(67) Flour and meal bags.	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	48	13	446	56
Under \$6.00				
6.00 and under 6.50			86	
6.50 " " 7.00			69	5
7.00 " " 7.50			14	1
7.50 " " 8.00			42	35
8.00 " " 8.50	2	1	31	2
8.50 " " 9.00	13	1	56	4
9.00 " " 9.50	14	5	14	
9.50 " " 10.00	9	1	45	
10.00 " " 10.50	6		11	2
10.50 " " 11.00	2	1	30	3
11.00 " " 11.50		2	5	
11.50 " " 12.00		2	43	4
12.00 and over	2			

* No establishments reported from Duluth.

Table 63, continued.

(68.) Manufacturing,- textiles, bags, and bedding.
Bedding and mattresses

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	46	5	41	8	4	4
Under \$6.00						
6.00 and under 6.50	2		2	1		1
6.50 " " 7.00						
7.00 " " 7.50	3		3			
7.50 " " 8.00	1		1			
8.00 " " 8.50	6	1	5			
8.50 " " 9.00	1		1			
9.00 " " 9.50	5	1	4	4	2	2
9.50 " " 10.00						
10.00 " " 10.50	6	1	5			
10.50 " " 11.00	1		1	1	1	
11.00 " " 11.50	2		2			
11.50 " " 12.00						
12.00 " over	19	2	17	2	1	1

Table 63, continued

(69.) Manufacturing,- textiles, bags, and bedding.
Tents and awnings.

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	29	6	23	3		3
Under \$6.00						
6.60 and under 6.50	2		2	1		1
6.50 " " 7.00	1		1			
7.00 " " 7.50	3	1	2	1		1
7.50 " " 8.00	4	1	3			
8.00 " " 8.50	7	1	6			
8.50 " " 9.00	2	2				
9.00 " " 9.50	1		1			
9.50 " " 10.00	1					
10.00 " " 10.50	4	1	4			
10.50 " " 11.00	4					
11.00 " " 11.50	1		1			
11.50 " " 12.00	3		3	1		1
12.00 and over	3					

Table 63, continued.

(70.) Manufacturing, - clothing industries.

Wage per week	Total			Male minors		
	Total	Females Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	2409	93	2316	65	5	60
Under \$3.00	7		7			
3.00 and under 3.50	6	4	2			
3.50 " " 4.00	18	3	15			
4.00 " " 4.50	71	3	68			
4.50 " " 5.00	49	1	48	1		1
5.00 " " 5.50	149	3	146	1		1
5.50 " " 6.00	59	2	57	2		2
6.00 " " 6.50	226	5	221	5		5
6.50 " " 7.00	70	3	67			
7.00 " " 7.50	216	6	210	17		17
7.50 " " 8.00	110	4	106	2	2	
8.00 " " 8.50	211	7	204	5		5
8.50 " " 9.00	91	3	88	2		2
9.00 " " 9.50	205	4	201	14	1	13
9.50 " " 10.00	85	6	79			
10.00 " " 10.50	185	1	184	8	1	7
10.50 " " 11.00	92	5	87	2	1	1
11.00 " " 11.50	101		101	3		3
11.50 " " 12.00	43	1	42			
12.00 and over	415	32	383	3		3

Table 63, continued.

(71.) Manufacturing, - clothing industries.
Clothing factories, (including shirt, pant, overall, jacket,
mackinaw, and sheepskin coat factories.)

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	1586	56	1530	52	3	49
Under \$3.00	1		1			
3.00 and under 3.50	1	1				
3.50 " " 4.00	4	2	2			
4.00 " " 4.50	42	1	41			
4.50 " " 5.00	14		14	1		1
5.00 " " 5.50	78	2	76	1		1
5.50 " " 6.00	37	2	35	2		2
6.00 " " 6.50	113	4	109	4		4
6.50 " " 7.00	59	3	56			
7.00 " " 7.50	144	1	143	14		14
7.50 " " 8.00	85	2	83	1	1	
8.00 " " 8.50	157	3	154	5		5
8.50 " " 9.00	78	2	76			
9.00 " " 9.50	139	1	138	11	1	10
9.50 " " 10.00	69	4	65			
10.00 " " 10.50	132		132	6		6
10.50 " " 11.00	87	5	82	2	1	1
11.00 " " 11.50	84		84	3		3
11.50 " " 12.00	37	1	36			
12.00 and over	225	22	203	2		2

Table 63, continued.

(72.) Manufacturing, - clothing industries.
Merchant tailoring and dress-making

Wage per week	Total	Females		Male minors		
		Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	158	32	126	2		2
Under \$3.00	1		1			
3.00 and under 3.50	4	3	1			
3.50 " " 4.00	1	1				
4.00 " " 4.50	3	2	1			
4.50 " " 5.00	3	1	2			
5.00 " " 5.50	3	1	2			
5.50 " " 6.00						
6.00 " " 6.50	8	1	7	1		1
6.50 " " 7.00	3		3			
7.00 " " 7.50	17	5	12	1		1
7.50 " " 8.00	3	1	2			
8.00 " " 8.50	15	4	11			
8.50 " " 9.00	2		2			
9.00 " " 9.50	13	3	10			
9.50 " " 10.00	3	2	1			
10.00 " " 10.50	14		14			
10.50 " " 11.00	2		2			
11.00 " " 11.50	6		6			
11.50 " " 12.00						
12.00 and over	57	8	49			

Table 63, continued.

(73) Manufacturing,- clothing industries
Millinery

			Twin Cities*	
Wage per week			Females	Male minors
Total, all wages			492	7
Under \$3.00			5	
3.00 and under 3.50			1	
3.50 " " 4.00			13	
4.00 " " 4.50			26	
4.50 " " 5.00			29	
5.00 " " 5.50			59	
5.50 " " 6.00			16	
6.00 " " 6.50			94	
6.50 " " 7.00			4	
7.00 " " 7.50			45	1
7.50 " " 8.00			11	
8.00 " " 8.50			27	
8.50 " " 9.00				2
9.00 " " 9.50			33	2
9.50 " " 10.00			6	
10.00 " " 10.50			22	1
10.50 " " 11.00			1	
11.00 " " 11.50			9	
11.50 " " 12.00				
12.00 and over			91	1

* No establishments reported from Duluth.

Table 63, continued.

(74.) Manufacturing, - clothing industries,
Fur-making

Wage per week	Total	Females		Male minors		
		Duluth	Twin cities	Total	Duluth	Twin Cities
Total, all wages	173	5	168	4	2	2
Under \$4.00						
4.00 and under 4.50			3			
4.50 " " 5.00			9			
5.00 " " 5.50			6			
5.50 " " 6.00			11			
6.00 " " 6.50			4			
6.50 " " 7.00			10			
7.00 " " 7.50		1	10	1		1
7.50 " " 8.00			12			
8.00 " " 8.50		1	10			
8.50 " " 9.00			20	1		1
9.00 " " 9.50			7			
9.50 " " 10.00			17	1	1	
10.00 " " 10.50			2			
10.50 " " 11.00			2			
11.00 " " 11.50			6			
11.50 " " 12.00			42	2		
12.00 and over						

Table 63, continued.

(75.) Manufacturing,- all other industries.*

Wage per week	Total			Male minors		
	Total	Females Duluth	Twin Cities	Total	Duluth	Twin Cities
Total, all wages	172	2	170	75	3	72
Under \$4.00						
4.00 and under 4.50				2		2
4.50 " " 5.00			1	2	1	1
5.00 " " 5.50	1		10	4		4
5.50 " " 6.00	10		11	5	1	4
6.00 " " 6.50	11		15	1		1
6.50 " " 7.00	15		8	4		4
7.00 " " 7.50	8		10	3		3
7.50 " " 8.00	10		15	7	1	6
8.00 " " 8.50	15		5	1		1
8.50 " " 9.00	5		19	16		16
9.00 " " 9.50	19		13	1		1
9.50 " " 10.00	13		11	1		1
10.00 " " 10.50	11		14	9		9
10.50 " " 11.00	14		7	4		4
11.00 " " 11.50	8	1	4			
11.50 " " 12.00	4		27	15		15
12.00 " over	28	1				

*Including establishments manufacturing: glass, paints and decorating, 4; brick, tile and building materials, 3; grass carpets, 1; cement laundry tubs, 1; artificial limbs, 1; asbestos pads, 1; sand paper, 1; stage settings, 1; illuminating gas, 1; brooms, 1.

Table 63, continued.

Manufacturing,-
all other industries

Wage per week	(76) Glass, paints, and decorating materials.		(77) Brick, tile and building materials.	
	Twin Cities*		Twin Cities*	
	Females	Male minors	Females	Male minors
Total, all wages	6	15	10	24
Under \$4.00				
4.00 and under 4.50				
4.50 " " 5.00		1		
5.00 " " 5.50		1		
5.50 " " 6.00				
6.00 " " 6.50		3		
6.50 " " 7.00				
7.00 " " 7.50		1		
7.50 " " 8.00		1	1	2
8.00 " " 8.50	1	2	1	
8.50 " " 9.00				
9.00 " " 9.50		1		10
9.50 " " 10.00			1	1
10.00 " " 10.50			4	1
10.50 " " 11.00		2	1	3
11.00 " " 11.50		2		
11.50 " " 12.00				
12.00 and over	5	1	2	7

* No establishments reported from Duluth.

Table 63, continued.

(78) Manufacturing,- all other industries.
Grass carpets.

Twin Cities*			
Wage per week		Females	Male minors
Total, all wages		126	10
Under \$5.00			
5.00 and under	5.50		
5.50	" "	9	4
6.00	" "	9	
6.50	" "	15	1
7.00	" "	6	
7.50	" "	9	
8.00	" "	11	
8.50	" "	5	
9.00	" "	16	
9.50	" "	12	
10.00	" "	7	
10.50	" "	8	
11.00	" "	7	2
11.50	" "	2	
12.00 and over		10	3

* No establishments reported from Duluth.

C H A P T E R IV

DEPENDENT AND INDEPENDENT WORKING WOMEN

1. Number of self-dependent women.

The need of a minimum wage for women in any community must depend in large measure upon the number of its women workers who must support themselves without assistance from relatives. While an industry which fails to pay its female employees a living wage must in all cases be considered parasitic, the social effects of the parasitism may be less disastrous if the deficiency between the wage received and a decent standard of living is drawn from male wage-earners rather than from the women workers' own reserve of physical stamina. The result of low wages to women when the underpaid workers live at home is to depress the standard of living of the working class as a whole. A minimum wage for women in this case can do no more than raise somewhat the general standard. When, however, the proportion of women who have no means of support other than their own efforts becomes considerable, a distinct class of women workers is created living below the standard prevailing among working people as a whole. The standard of this particular class can be reached by a minimum wage for women. In contemplating the enactment of a minimum wage law, it therefore becomes of the highest importance to ascertain the proportion of economically dependent and independent women.

The studies of the commission indicate that approximately

one-third of the females employed in mercantile and manufacturing industry in cities of the first class in Minnesota are dependent on themselves. The present chapter is devoted to a presentation of the evidence upon which this conclusion is based.

(1)
Question 3 of the employees' schedule read, "Do you live with your parents?" No schedules were tabulated which did not answer this fundamental question, and upon the replies to it the classification "at home" and "adrift" was based. So far as is known to the writer the term "adrift" was first applied to this class of working women in 1910 by the federal labor bureau's

Report on the Conditions of Woman and Child Wage-
(3)
Earners. As used by the bureau, the term "adrift"
"At home" and "adrift"

is defined as "practically without homes." It includes not only girls living in boarding and lodging houses and those boarding in private families, but a small proportion of girls and women living with a dependent parent or with young children from whom they could derive no support in case of need. The line of demarcation was found by the bureau in many instances difficult to draw. The guiding principle was that of economic dependence. If the home was so far disintegrated that in case of sickness or unemployment, the girl could obtain no assistance from the other members of the family, she was classed as "adrift." The term was used in the same sense by Miss Caroline J. Gleason in the initial

(1) Cf. Appendix IV, p. 576.

(2) U.S. Bureau of Labor Statistics, Report on condition of woman and child wage-earners in the United States, Vol. V, Wage-earning women in stores and factories, 10-12.

(3)

(4)

minimum wage investigations of Oregon and Washington.

This definition of the terms "at home" and "adrift" was adhered to in editing the commission's cost of living returns as closely as the limited information furnished by the replies to question 2 would permit. Girls reporting that they lived with one parent only were classed as "at home" unless, as sometimes happened, the schedule explained that the parent was so complete an invalid or so old as to be entirely dependent. Similarly girls living "with grandmother" or "with aunt and uncle" or "with married sister" were classed as "at home." The schedule made no provision for married women. Many of the replies volunteered the information "No; married;" these were classed as "at home." From the frequency of such replies it seemed probable that the greater number of women who were married had made note of the fact; but no means existed of determining how large the proportion who failed to do so may have been. The schedules of widows with young children were rejected if there was evidence that the living expenses of the children were included in their replies to the several questions; if they appeared to represent the expenditures of a single female, they were grouped as "adrift."

It is believed that the resulting classification "at home" and "adrift", as used in the commission's statistics, is substan-

(3) Oregon, Report of the Social Survey Committee of the Consumers' League on the Wages and cost of living of women wage-earners....., 21.

(4) Washington, Report of the Industrial Welfare Commission on the wages and cost of living of women wage-earners, 85.

Editing
question
2

tially that defined by the Bureau of Labor. Women "at home", therefore, while frequently supporting themselves entirely, have the assistance of the other members of their families to fall back upon in case of want or illness. Women "adrift", as enumerated by the commission, live neither with husband nor adult relative. Many of those adrift doubtless have family connections in the country, yet the support given by a distant father and mother can hardly be as effective as that received from day to day in the home.

The proportion reported by the commission living at home and adrift in the Twin Cities does not closely agree with that found by the Bureau of Labor, four years before. The bureau's

Accuracy of
the returns
for "at home"
and "adrift."

agents found that 27.7 per cent of 224 retail store employees were living adrift, as compared with 30.1 per cent of the 2,189 female mercantile employees reporting to the commission. For manu-

facturing the figures are 18.5 per cent of 322 females enumerated by the bureau and 36.0 per cent of 3,639 who reported to the wage commission. The bureau's figures, based upon less than one-twelfth

(5)

(5) U.S. Bureau of Labor Statistics, loc. cit., 15. Comparative figures for Boston, Chicago, New York, Philadelphia and St. Louis, based upon scarcely greater numbers, show a wide variation. Thus the proportion of women adrift is given as 7.9 per cent for New York and 35.8 per cent for Boston. In the absence of any known cause for this extraordinary difference, one is forced to conclude that the bureau has been guilty of generalization on insufficient evidence.

as many instances must yield precedence to the later studies of the (6) commission.

As reported by 6,449 females in cities of the first class, of whom 5,828 were from Minneapolis and St. Paul, the proportion living adrift was exactly one-third.
Self-supporting women in the Twin Cities and Duluth

Table 64.

	Total, 1st class cities.	Duluth	Twin Cities
Total	100.0	100.0	100.0
At home	66.7	71.8	66.2
Adrift	33.3	28.2	33.8

If the smaller number of instances from Duluth (621 in all) be sufficient to typify the whole, the proportion of women living at home is greater (73 per cent) there than in the Twin Cities, (66.2 per cent). There is no reason for supposing a significant difference in the relative proportions in Minneapolis and St. Paul.

There appears to be little difference in the relative proportions of workers at home and adrift between the mercantile and manufacturing industries. In Duluth the proportion of girls adrift is slightly smaller among factory than among store employees.
In mercantile and manufacturing.

(6) The commission's proportion living adrift (33.8 per cent) is almost identical with that reported by the U.S. Census Bureau in the volume "Women's Work and Wages" which gives the proportion of women workers not living at home as 33.6 per cent in St. Paul and 31.2 per cent in Minneapolis. Quoted from Minnesota Bureau of Labor, Twelfth biennial report, 333, note (20).

Table 65.

<u>Per cent</u> Total, Duluth	<u>Mercantile</u> 100.0	<u>Manufacturing</u> 100.0
At home	70.2	73.5
Adrift	29.8	26.5

This was also the condition reported from the Twin Cities by the Bureau of Labor in 1910. ⁽⁷⁾ Conditions in a single establishment may depart widely from the normal. Thus in the Northwestern Knitting Company's great factory in Minneapolis, 50.6 per cent of the 1,018 female employees reporting were living away from their parents, while the proportion among 2,621 other women engaged in manufacturing was only 30.4 per cent. This last figure is almost identical with that for mercantile business.

Table 66.

Total, Twin Cities	<u>Mercantile</u> 100.0	<u>Manufacturing *</u> 100.0
At home	69.9	69.6
Adrift	30.1	30.4

* Excluding the schedules of the Northwestern Knitting Co. Including the Northwestern Knitting schedules the proportions become: at home 64.0 per cent, adrift 36.0 per cent.

(7) Proportion adrift for stores, 27.7 per cent; for factories, 18.5 per cent. The difference was reversed in other cities, probably again because of too few instances. U.S. Bureau of Labor Statistics, loc. cit., 15.

The relation of family connection and wage is shown in Plate 21. It will be seen that the proportion of self-supporting women increases from 7.1 per cent for those earning under \$4.50 to one-third (31.9 per cent) for the group \$6.50 to \$8.50, and 45.4 per cent at from \$10.50 to \$12.50. The slight decline in the proportion of women adrift in the group earning \$12.50 or more is due to a considerable number of married women in this wage class, living with their husbands or with children beyond the stage of complete dependence, who are therefore not without the potential assistance of relatives. Interest centers on the proportion of women earning less than the estimated living wage of \$8.50 to \$9.00. Of 3328 women and girls receiving under \$8.50 per week, 27.2 per cent are adrift and presumably dependent on themselves alone.

The following table shows the percentage of females in the Twin Cities living at home and adrift earning under the specified wage per week.

Table 67.

Per cent of total earning per week.

	Under \$4.50	Under 6.50	Under 8.50	Under 10.50	Under 12.50	\$12.50 and over
Total	1.4	26.3	57.1	80.7	90.2	9.8
At home	2.1	31.1	62.8	83.6	91.4	8.6
Adrift	.3	17.0	46.0	75.0	87.8	12.2

It will be seen from Table 67 that 46.0 per cent of the self-dependent women and girls are receiving less than \$8.50, the lowest figure recommended by any of the advisory boards as a minimum wage. Seventeen per cent are earning less than \$6.50 a week.

21. Family connections and wage of females
in Twin City stores and factories

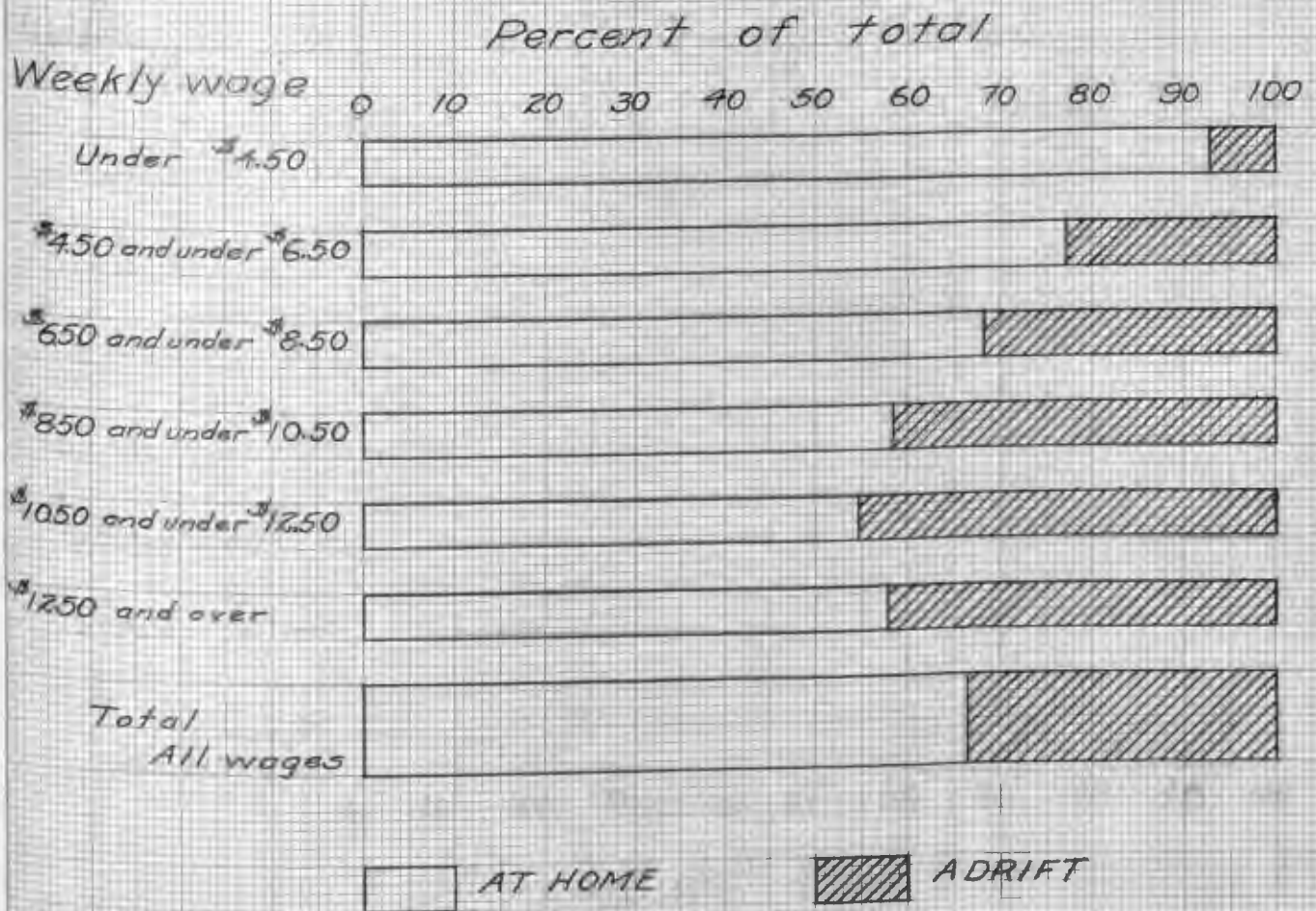


PLATE 21

and .3 per cent are attempting to live on less than \$4.50. The proportion of women living at home, who receive low wages, is very much greater: five-eighths of the total receive less than \$8.50 and nearly a third, less than \$6.50 a week.

The cause of the larger proportion of low-paid workers among women at home is not as has been popularly supposed a willingness to accept lower wages than the independent worker, but rather a pronounced difference in age.

Ages of women at home and adrift.

Table 68.

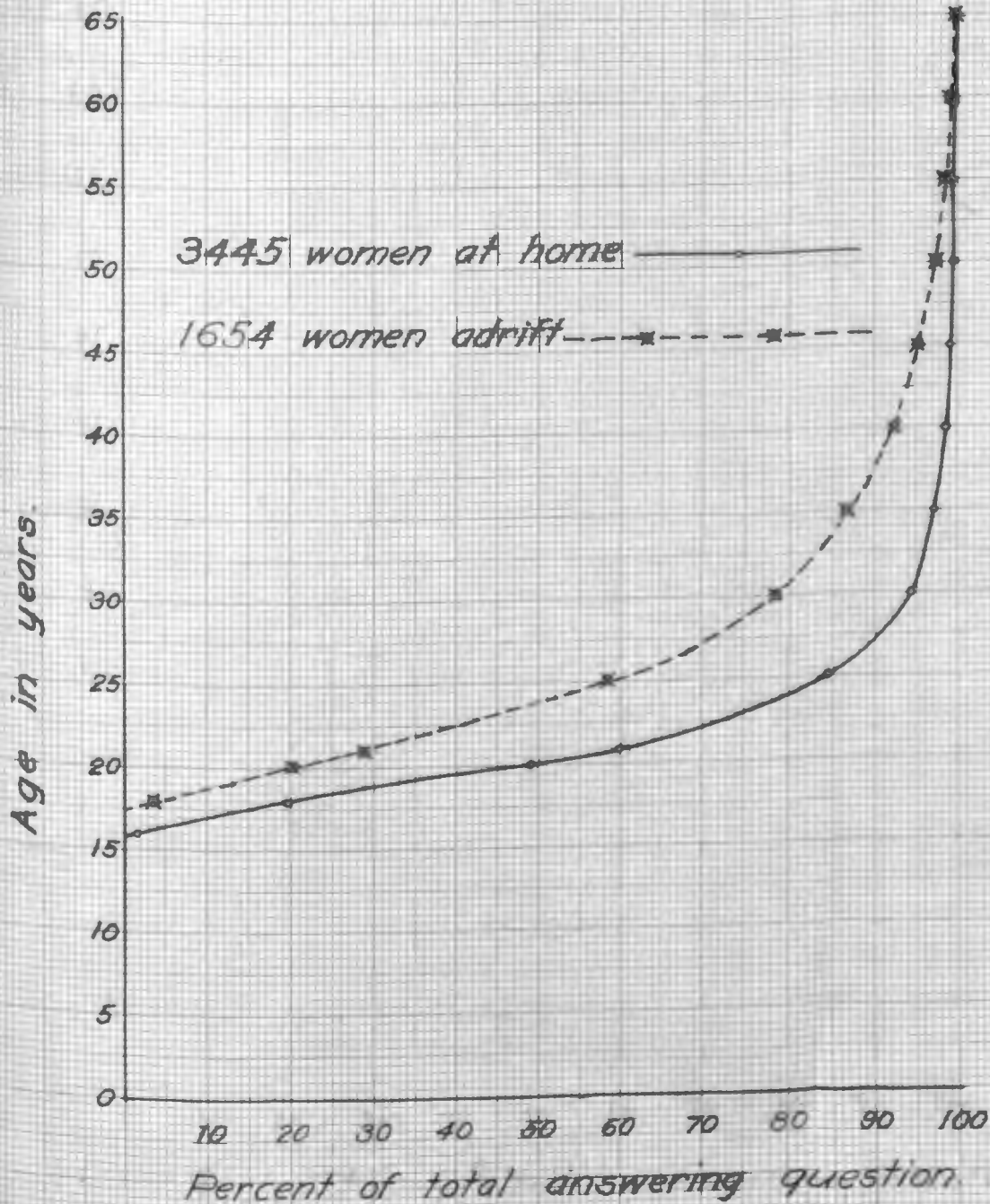
Ages of women in the Twin Cities at home and adrift earning less than \$12.50 per week.

	<u>At home</u> 3,445	<u>Adrift</u> 1,654
Number reporting age		
Per cent of total who were:		
Under 16 years	1.7	3.5
Under 18 years	19.5	20.1
Under 20 years	48.9	28.8
Under 21 years	62.0	58.5
Under 25 years	84.2	78.4
Under 30 years	94.1	86.6
Under 35 years	97.0	92.4
Under 40 years	98.5	95.1
Under 45 years	98.9	97.2
Under 50 years	99.4	98.7
Under 55 years	99.6	99.6
Under 60 years	99.9	.4
60 years and over	.1	

The same information is presented graphically in Plate 22. The medium age for females adrift is 23 years and nine months; for home-living women and girls it is 20 years and two months. The greater age of the women adrift, carrying with it greater experience, accounts for the smaller proportion of ill-paid workers in their number. The average wage of 423 girls between the ages 20 and 21 living at home was \$8.16. One hundred forty-eight girls

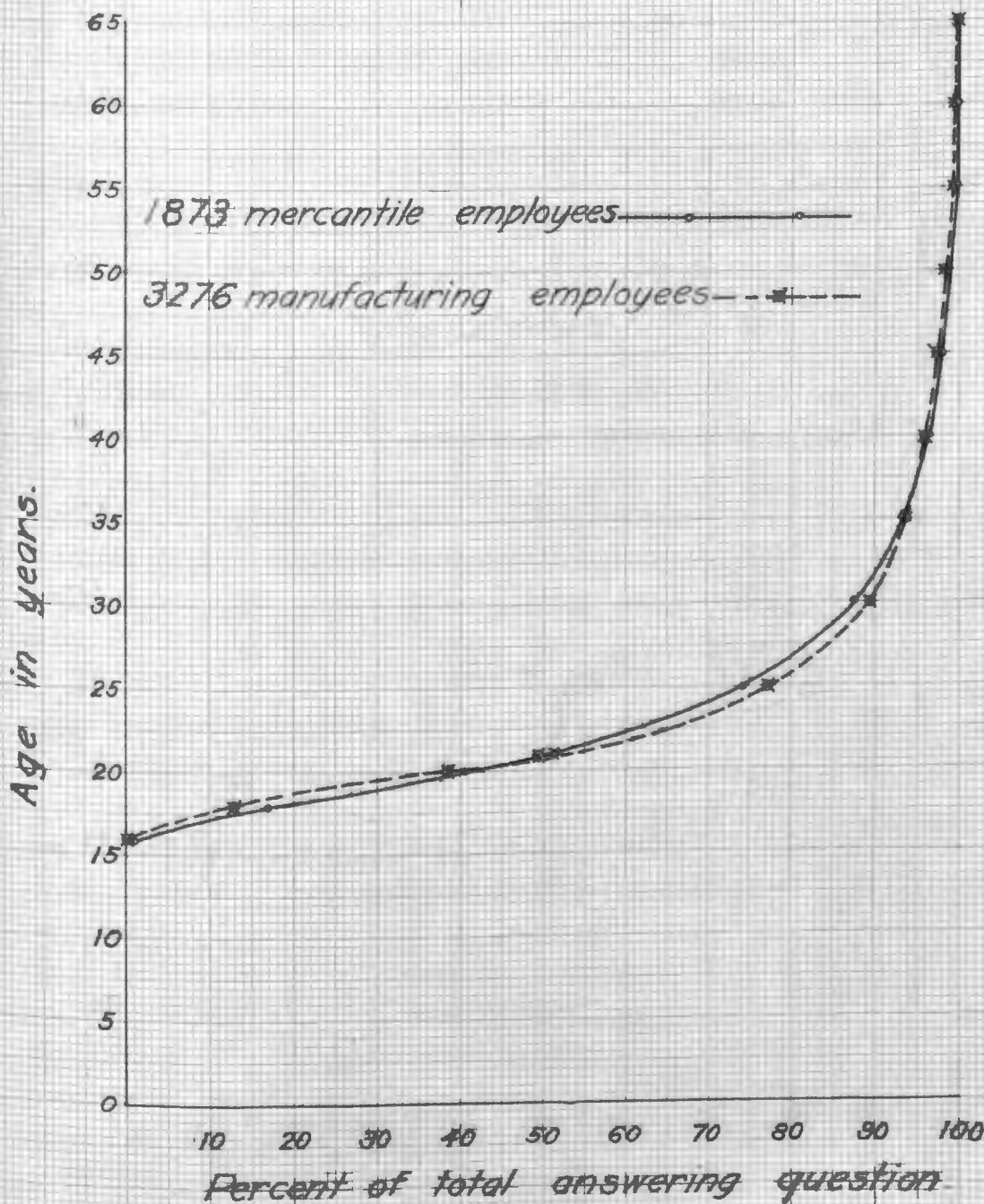
22. Comparative **AGES** of female employees living at home and adrift in the Twin Cities.

Total mercantile and manufacturing, earning less than \$12.50 per week



22-1 Comparative AGES of female employees in mercantile and manufacturing establishments in the Twin Cities.

Total at home and adrift, earning less than \$12.50 per week.



adrift of the same age were earning, on the average, \$8.37. Family connection, therefore, is a negligible factor in determining the wage.

A glance at Plate 33 will show that while nearly one-fifth of the females living at home are minors, the proportion of minors among self-supporting women is only 3.5 per cent. Five-eighths of girls at home are under voting age as against 38.8 per cent of those adrift.

It will be seen from the foregoing analysis that the number of economically self-dependent women in the cities of the state is so great as to constitute a distinct class of workers, a class

whose standard of living can be raised by a minimum wage, providing such a wage can be enforced. If the proportions of the 6000 or

Number of self-dependent women in the Twin Cities

more women enumerated are typical of the whole, there were in the Twin Cities in 1914, ⁽⁸⁾ in trade and manufacturing alone, approximately 7,700 girls and women who were not living with parents or relatives. Of these approximately 3,500 were receiving less than the estimated living wage of \$8.50. About 1300 of these were earning less than \$6.50 per week. A small proportion, how many it is impossible to estimate, but the number is probably reckoned in tens, are entering industry without the guidance and support of a family at less than \$4.50 per week. While these numbers are estimates only, they demonstrate beyond controversy the existence of a numerically

(8) Based upon the estimated totals for mercantile (9,700) and for manufacturing (13,010), as reported by the census of occupations. Supra., 85, 90.

important class of working girls with no family to render assistance, who are receiving wages less than the lowest estimates yet proposed as the minimum cost of living.

2. Economic condition of dependent women.

It will at once be asked, What is the condition of the remaining two-thirds of the female workers in stores and factories who are living at home? The great majority of them are contributing regularly a considerable part of their earnings to the family income. The popular impression that girls living at home enter industry to obtain "pin money" is amply disproved by the commission's statistics. Miss Gleason found that of 1,716 female employees living at home in the principal cities of Washington, 66.4 per cent contributed a definite amount of their earnings to the family income. (9) In the Twin Cities the proportion is higher.

As a consequence of living at home, the worker receives room and, with rare exceptions, at least two meals a day. In addition she almost always receives either part of her washing or the privilege of doing her washing on the premises, altho she may frequently send some part of it to a laundry or washerwoman. These she always receives, and often in addition other gifts of clothing, medical attention, vacation expense, or even pocket money. To determine with accuracy how completely she pays for what she re-

(9) Washington, Report of the Industrial Welfare Commission on wages, and cost of living of women wage-earners, 87.

ceives from the family, i.e., the extent to which she is self-supporting, is impossible unless the family keeps careful accounts. In extended statistical investigation it is wholly impossible. Nevertheless, the fact of a regular contribution to meet a part of the joint expenses of the family and its approximate magnitude can be ascertained, and are of great significance.

The conclusions presented in this chapter upon the nature of the economic relation between the working girl living at home and her family are based upon the replies to questions 4, 5, and 8

of the cost of living schedule. These inquiries were phrased:

Contributions to family income of girls living at home. Source of data.

- 4. What are you spending for room rent per month?
- 5. What are you spending for food per week?
- 6. How much do you spend for laundry per week?

Unfortunately, the schedule did not specifically ask for the amount contributed to the family income. It is believed, however, that in any given case the expenditures for these three items with possible deductions for lunches and laundry bills outside the home, will give the weekly amount paid in to the head of the family or what may be termed the gross contribution toward the expenses of the home. How closely this approximates the net contribution, after deducting gifts of clothing, medical attendance, vacation money, or other assistance from the family, the commission's statistics give no means of ascertaining.

Many schedules stated specifically the amount paid in, which ranged all the way from nothing to the entire wage. Of the schedules remaining it is obvious that expenditures reported for room rent, or for room and board combined, or for room, food, and

laundry combined, must have been paid directly into the family treasury.

Not all money reported as spent for food, however, as distinct from room rent and laundry, could be assumed as reaching the head of the family. Small weekly payments for food, between twenty-five cents and a dollar, are doubtless spent outside the home for noon lunches. A great many girls bring cold lunches from home, to be supplemented by an occasional purchase of coffee, fruit or candy. Others go regularly to a cafeteria or lunch room and spend from 10 to 25 cents for a hot meal. That relatively more girls living at home go back for lunch than of girls living adrift in boarding houses or private households is indicated by the higher expenditure for carfare reported by the former (Plate 31). The maximum expenditure for lunch alone, likely to be reported by a working girl at low wages, would seem to be \$1.50 per week. Only 207 out of 3,857 girls and women living at home (5.4 per cent) reported a separate expenditure for food of less than this amount. Separately reported expenditures for food in excess of \$1.50 would therefore go in part to pay the common expenses of the family.

While it is impossible even to estimate the average expenditure for lunches purchased away from home, a limit may be set which it probably does not exceed. Only 1188 out of 3,857 women and girls at home reported an expenditure for food separately from room and board. The remaining two-thirds, who reported no separate expenditure for food, were probably buying no lunches. This expenditure ranged from less than 50 cents to \$6.00 per week. Evidently many of these expenditures for food are in reality a weekly payment for room and board, all of which goes to the family.

Yet assuming that every one of these 1,188 women was buying six fifteen-cent lunches per week, the average expense for the group of women at home as a whole is only 28 cents. Apparently the average actually going into the pockets of restaurant proprietors is considerably less than 30 cents per week.

Separate expenditures for laundry were reported by only one-fourth of all the women and girls living at home. Doubtless in many cases this money was paid in to the family. In others, perhaps the majority, it was spent outside. It is, however, a relatively unimportant item. Had it all been paid to laundries and washerwomen it would have represented an average cost for all working women living at home of only 13¢ per week.

The weekly expenditure, therefore, for rent, food and laundry may be taken as a rough measure of the girls' contribution to the expenses of the home. From it two items should be deducted,

Expense for room, food, and laundry a measure of the contribution to the family.

laundry done outside the home, and meals purchased elsewhere. On the basis of the commission's statistics, expenditure for these two purposes cannot be isolated.

However, neither appears to constitute, on the average, a large proportion of the weekly expenditure for room, food, and washing. The average for those who indicate an expenditure for these three purposes, and specify its amount, is about \$4.00 per week, more than half the wage. The average for laundry outside the home certainly does not exceed 13 cents per week. The average for lunches is impossible to determine: such evidence as is at hand points to the conclusion that the expense per capita is less than \$.30 a week.

That the total weekly expenditure for room rent, food and laundry is an approximate index of the girls contribution toward the expenses of the home, even when her payments for lunches and washing outside have been deducted, is the conclusion warranted by the preceding analysis.

Having established a criterion by which to measure the contribution to the family income of women living at home, it is possible to determine what proportion make such a contribution, and to form some conception of the economic relation existing between the family and the woman worker.

Table 69

Economic relation to their families of working
women living at home.

	<u>Number</u>	<u>Per cent of total</u>
Total reporting to the commission, all wages.	3,857	100.0
Probably paying in nothing to the family, receiving board and lodging gratis.	469	12.2
Reporting that nothing was spent for room, food, and laundry	107	2.8
Not answering question as to room and food, presumably spending nothing for these purposes.	254	6.6
Spending less than \$1.50 per week, probably all for lunch and washing outside.	108	2.8
Paying something for room and board.	3,389	87.8
Declaring a contribution to the family income in exchange for food, room, and laundry, but not specifying how much.	126	3.3
Paying entire wage.	187	4.8
Reporting a definite weekly expenditure of over \$1.50, most of which is undoubtedly paid to family.	3,075	79.7

The numbers in Table 69 are not presented as accurate. The 254 schedules which failed to answer the question as to room and food have been classified as not contributing only by inference.

Accuracy of the statistics on economic relation to family.

The arbitrary line of demarcation of \$1.50 in the weekly expenditure for room, food and washing, below which it is assumed the

money goes entirely into the pockets of outsiders, and above which, at least some contribution to the family is assumed, has been fixed by inference. Nevertheless, the question of contributing and non-contributing women is of such importance that any light upon the relative proportions of the two classes is highly significant. So far as known to me, no other data is available for Minnesota on the economic relation of wage-earning women and their families.

For convenience in discussion let us confine ourselves to that class of wage-earning women - by far the most numerous - which consists of daughters living at home with one or both parents.

The relation is necessarily a personal one and therefore an elastic one. Even when a definite understanding has been entered into as to the sum to be contributed by the daughter, she will not

The relation a personal one

be turned out of the house if she fails to pay it. In time of sickness or unemployment the remaining members of the family will share

with her their own earnings. Her standard is in the main that of the family. Rather than see her living below what appeals to the parents as decency they will make good the deficiency at the sacrifice of their own comforts. The food served to her is about the

same as that enjoyed by the other females in the family. She shares the sleeping quarters with her sisters. If her wardrobe becomes scantier than those of the others, gifts of old clothes or of new ones help her out. On the other hand, when her earning power is so increased that she can more than support herself, she will seldom resist the call of parents or sisters for assistance in time of need.

Some such spirit of interdependence is certain to be found wherever parents and children, sisters and brothers, dwell together in the family relation. What particular financial arrangement is entered into will depend in a given case on the habits and income

Contributing
and non-
contributing

of the family. The statistics of the commission indicate that, among female wage-earners in trade and manufacturing in the Twin Cities, about one-

eighth receive board and lodging gratis, presumably contributing nothing to the support of the family beyond their own expenses contracted outside the home. The remaining seven-eighths contribute something in exchange for the room and food they receive.

Of the class who presumably paid nothing to the head of the family, it will be seen (Table 69) that by far the largest group were those who failed to answer the questions on room and board. It assumed that the 254 girls filling out these schedules

Paying nothing
toward expense
at home.

could hardly be in the habit of contributing regularly, or they would have noted the fact.

Doubtless some of the failures to reply were due to neglect or to ignorance of the average amount contributed, but the great majority must represent cases where the girl lives as a guest in the home, receiving board and lodging as a gift. As the figures stand, this class constitutes 6.6 percent of the whole.

One hundred and seven girls, most of them earning less than \$8.50 per week, definitely stated that they paid nothing for room and board at home. They constituted 2.8 per cent of the whole. An equal number who were spending a specified sum for "room, food, and laundry" of less than \$1.50 per week, are believed also to have paid nothing toward the expenses of the home. Their small weekly expenditures probably went for lunches and extra laundry done outside the household. Of the whole number of female wage-earners living at home they formed only 2.8 per cent. The proportion of all three of these classes who are believed to pay nothing to the head of the family is very much greater among young girls and low-paid women workers than among those receiving living wages.

These three classes - in all, according to Table 69, 12.2 per cent of the whole - living at home, embrace the "pin money" workers. They come from families in circumstances sufficiently easy to render the daughter's entrance into industry a matter of choice rather than of need. The most that is asked of her is that she pay her personal expenses contracted outside the home. Her earnings are her own, to be spent for clothes, carfare, dentist's, doctor's and oculist's bills, music lessons, magazines, amusements, a trip in vacation time, or in many cases to be saved for the marriage for which she waits. If she cannot meet these outside expenses with the money she earns, there is perhaps an indulgent father to help her out. It is evident that on a wage of \$5.00 per week there is small room for extravagance on outside expenses alone, and that probably as she reaches maturity and her earnings increase, her position as guest in the house will terminate and she will be asked to pay her share toward the expenses

of the family.

Among the 87.8 per cent who contribute regularly toward the joint living expenses of the family, a variety of arrangements exists.

Sometimes there is no agreement as to a definite amount to be turned in to the family treasury by the daughter. One hundred and twenty-six girls, including many who were earning salaries of \$12.50 or more per week, reported that they were in the habit of contributing varying amounts according to the needs of the family and their own ability to pay. How substantial these irregular contributions are we have no means of ascertaining. The class is perhaps more important than the numbers reported (3.3 per cent of the total) would indicate: it is probable that many who set down a definite sum were attempting to average a series of payments varying in size, and did not intend to convey the impression that they were in the habit of paying a fixed sum each week.

A not uncommon agreement is to turn over the weekly pay envelope to the mother or father intact. One hundred and eighty-seven schedules (4.8 per cent of the total) reported this arrangement. Among young girls it is particularly common. It was reported by one-sixth of those earning less than \$4.50 per week, and by 7.9 per cent of the next higher wage class (\$4.50 and under \$6.50). Among mature women living at home it is rare; of women and girls earning as high as \$12.50 per week, only 1.5 per cent reported the contribution of their entire earnings.

This arrangement is a highly significant one in that it indicates how complete, in many cases, is the identification of

Contributing
an indefinite
amount.

Paying entire
wage to parent.

the wage-earning daughter's standard of living with that of the family as a group, an identification as complete as if she were not a wage-earner. Not only does she eat at the same table and share the same sleeping rooms with the rest of the family, but she is completely subject to her parent's direction as to the quality of clothing she shall wear or how often she shall go to the dentist or the moving pictures. Obviously an increase in her earnings effected by a minimum wage law will be absorbed by the home, elevating the family's standard of living a little, and incidentally raising her own.

By far the largest number of the wage-earning females living at home who reported to the commission appear to have been regularly contributing a fixed sum to the cost of maintaining the

Contributing
a definite sum
to maintenance
of the home

home. The approximate measure of this contribution we have seen to be the total weekly expenditure for room, food and laundry. Five-sixths of the schedules (82.5 per cent to be exact) reported

ed a definite expense for these purposes. Of these 3,183 schedules, 108 reported an expenditure of less than \$1.50 per week, and these have been assumed to be paying nothing toward the support of the home, since expenditures less than this figure are thought to represent lunches and in some cases washing done outside. The remaining 3,075, constituting 79.7 per cent of the total, are assumed to be turning into the family treasury at least a part of the expenditure reported. Obviously the possibility of error in this proposition is serious; nevertheless the figure is most suggestive. If the arbitrary line of division^{be} set at \$2.50 instead of \$1.50 there still remain 2,770 females (71.8 per cent of the total) regularly

Table 70.

Contributions to support of the home of female wage earners in the Twin Cities living at home, as indicated by their expenditures for food, room, and laundry.

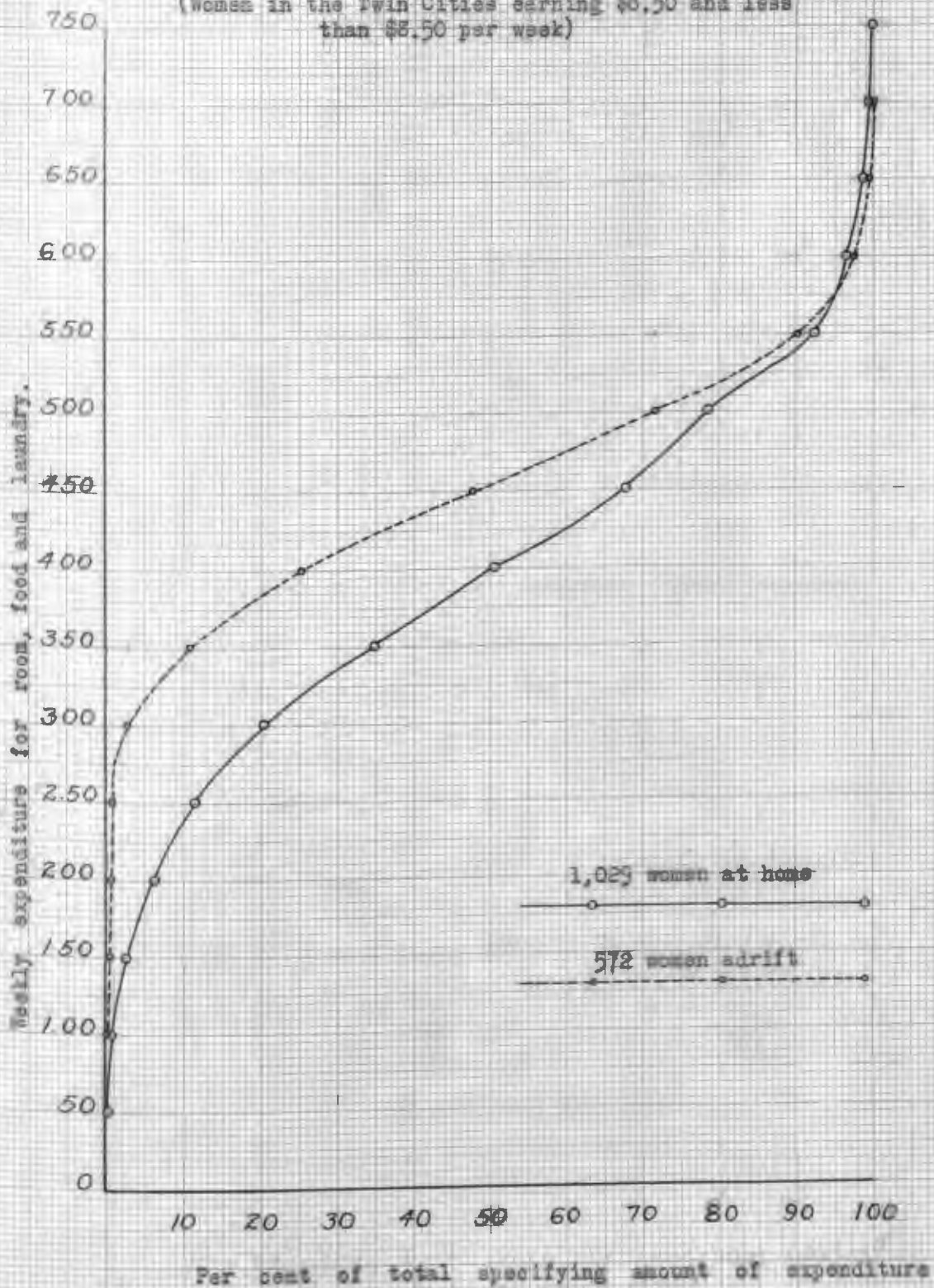
Female wage earners living at home.

Expenditure per week for room, food, and laundry	Total earning less than \$12.50		Earning \$6.50 and under \$8.50		Total earning over \$12.50	
	Number	Cumu- lative per cent	Number	Cumu- lative per cent	Number	Cumu- lative per cent
Schedules specifying ex- penditure for room, food, and laundry	2,901		1,029		282	
Expense less than \$.50	4	.1	1	.1	1	.3
\$.50 and under \$1.00	42	1.5	8	.8	1	.7
1.00 " " 1.50	59	3.5	18	2.5	1	1.1
1.50 " " 2.00	120	7.6	39	6.3	2	1.8
2.00 " " 2.50	177	13.7	50	11.2	6	3.9
2.50 " " 3.00	273	23.1	96	20.5	6	6.0
3.00 " " 3.50	406	37.2	148	34.9	11	9.9
3.50 " " 4.00	384	50.4	159	50.3	10	13.4
4.00 " " 4.50	421	64.9	179	67.7	18	19.8
4.50 " " 5.00	301	75.3	111	78.5	27	29.4
5.00 " " 5.50	366	87.9	140	92.1	38	42.9
5.50 " " 6.00	139	92.7	45	96.5	21	50.4
6.00 " " 6.50	104	96.3	22	98.6	22	58.2
6.50 " " 7.00	52	98.1	9	99.5	19	64.9
7.00 " " 7.50	26	98.9	4	100.0	20	72.0
7.50 " " 8.00	8	99.2			16	77.7
8.00 and over	19	100.0			63	100.0

PLATE 23

Comparative weekly expenditures for room, food, and laundry of women adrift and of women at home who specified an expenditure

(Women in the Twin Cities earning \$6.50 and less than \$8.50 per week)



contributing something in payment for room and board. The conclusion is inescapable that, excluding those who turn in their entire wage, at least seven-tenths of the female wage-earners living at home in the Twin Cities contribute to the maintenance of the home. Of these probably not all pay fixed amounts, but at least they contribute under an agreement sufficiently exacting to enable them to report an average weekly expense.

If to this class be added the 4.8 per cent who turn in their entire wage, it will be seen that the proportion regularly helping in the support of the home is at least three-fourths of the whole, and probably somewhat higher. Including those who contribute irregularly as they are able, the proportion becomes eighty per cent.

The amount contributed is indicated by Table 70 which summarizes the reports of the 3,183 women at home who specified expenditures for room, food, and laundry. The expenditures for the same purposes of women at home earning \$6.50 and under \$8.50 are platted in Plate 23 alongside of those of 572 women adrift earning the same wage.

Amount of the contribution.

A study of Plate 23 shows that of the women at home specifying a definite expenditure for lodgings, board and washing, the median sum expended was a few cents under \$4.00. The average was somewhat less, \$3.88 per week. Only 20 per cent were spending

Contribution toward maintenance of home a substantial one.

under \$3.00, and a slightly greater number were spending over \$5.00. It will be remembered that from the gross expenditure for these three purposes, money spent for lunches and washing outside should, if possible, be deducted in order to get the actual contribution to the family treasury, and that the maximum deduction

possible is estimated as 13 cents for laundry and 30 cents for lunch. It may be confidently asserted that the median contribution of these 1,029 women must exceed \$3.50. This applies only to the women who reported a specific expenditure for room, food and laundry, and does not include the one-twentieth who were giving their entire wage, the one-eighth who probably gave nothing, and the one-thirtieth who gave but did not specify how much.

Comparison with the expenses of self-supporting women earning the same wage shows that the contribution of the daughter at work to the maintenance of the home falls considerably short of the value of the board and lodging she receives. Were the average

But less than the value of the board and lodging received.

quality of the food and accommodation received by her only equal to that obtained by the girl adrift, the girl at home would not come within 54 cents of paying for it.

Since the standard enjoyed by the girl at home in other comparable expenditures, such as clothing, is much higher than her sister's adrift - perhaps about one-seventh higher - it is apparent that the family on the average makes good a deficiency of perhaps \$1.00 per week between the standard she actually enjoys as a member of the family, and what she can afford to contribute toward it.

Probable effect of a minimum wage upon the standards of living of women at home and adrift.

The outstanding difference between the economic status of the self-supporting woman adrift and the girl at home is that the standard of living of the former is an individual standard while that of the latter is essentially a group standard, the standard of the other women in her family. Not

Standard of women at home a group standard; of women adrift an individual standard.

only do the other wage-earners of the family help the daughter entering industry to maintain the standard she has been accustomed to

as long as her earnings are insufficient to meet it, but when she begins to earn a good salary she is expected to contribute at least a part of her surplus earnings to the improvement of the economic-well-being of the family as a whole. This tendency is plainly exhibited in Plate 24, which compares the average yearly expenditures for clothing of women at home and adrift by wage classes.

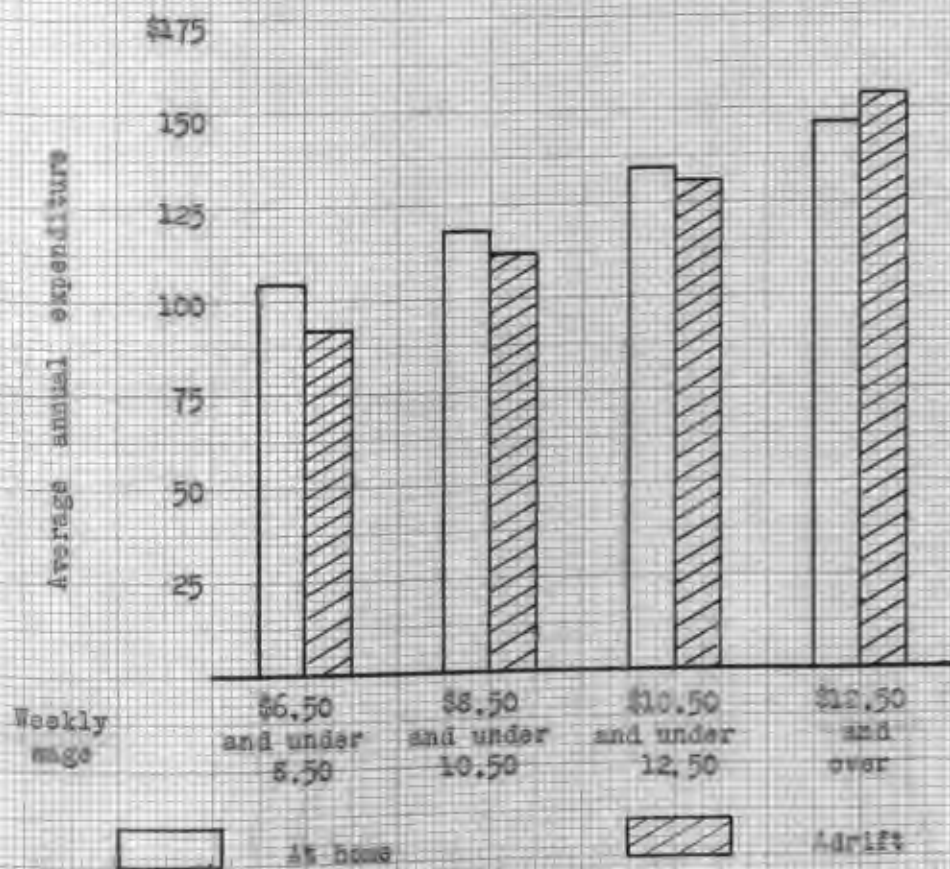
The white bars represent the average spent by women at home; the black bars, that by women adrift. While the expenditures of both classes increase steadily with wage, that of the women adrift is far more elastic. At the wage group \$6.50 and under \$8.50 the reported average expense of women at home is \$103, or \$11 greater

than that of women adrift. As the wages of women adrift increase

(10) These averages are calculated upon the replies furnished by the women without revision of improbable answers, because the margin of error is believed to have been the same in both classes. All probably exceed the average actually expended. See Chapter VII.

PLATE 24

Elasticity of the standards of living of women at home and adrift as exhibited in their expenditures for clothing



their clothing expenditures rapidly gain upon those of women at home, until for the wage class \$13.50 and over, the former exceed the latter by \$7.⁽¹¹⁾ The range exhibited by the expenditures of women adrift is \$61, nearly 50 per cent greater than \$43, that for women at home. The range for women at home would appear still smaller if allowance could be made for the cheaper cost of the clothing of young girls frequently made at home.

The interpretation of Plate 24 is plain. The increment of increased wage is in the case of a self-supporting woman absorbed entirely by her own standard of living. In the case of a dependent woman it is divided, in a manner analogous to the sliding scale for public utility rates, between her own standard and that of her family. The increase in her own standard is greater than in that of the family as a whole. Indeed advancing age carries with it certain added social duties which normally increase what may be termed "conventional expenditures:" the very fact of holding a more responsible position may, in mercantile and office employments, necessitate clothes of better quality and larger laundry bills. Nevertheless, at least a part of the increment in her wage is absorbed by the family. Through a larger weekly payment by the daughter for room and board or through her occasional gifts, the standard of living of the family as a group rises perceptibly.

(11) Even when allowance is made for the higher average wage of women adrift.

	<u>At home</u>	<u>Adrift</u>
Average wage, women earning \$13.50 and over	\$16.00	\$16.80

The effect of a minimum wage upon the two classes of dependent and self-supporting women will resemble that of a single increase in wages upon the individual. The increase in wages paid to self-dependent women as a class will be absorbed entirely by them, and result in a material improvement of their standards of living. The increase in wages paid to women living at home -

Effect of a minimum wage on standards at home and adrift.

which in toto will exceed, in Minnesota, that for independent women, both because of the smaller numbers and present higher wages of the latter - will be absorbed in part by the

families of the dependent women, tending to raise the standard of living, not of women workers only, but of all who live with them. But the families of these women whose common standard will be elevated by a minimum wage for females - including dependents of all ages and even male wage earners - constitute the stable portion of the working population, any improvement in whose condition means a rising standard of living for the great majority of the inhabitants of American cities. The condition of dependent wage-earning women as a class would, indeed, improve more rapidly than that of the working population from which they are drawn, but less rapidly than that of self-supporting women. Granted a sufficiently high minimum wage enforced without harm to business, the standard of self-supporting women would become higher than that of the dependent class including married women. Plate 24 indicates that a minimum wage of \$12 would bring about this condition in the Twin Cities in the item of clothing at least.

Since a minimum wage for women is designed to elevate the standard of such self-supporting women as may be existing below the

level of a "reasonable living," it is obvious that it would have served its purpose when the standard of self-supporting women approximated that of dependents of the same sex. To raise the wages of women above that point, if it were possible, would be placing a premium on the dissolution of family life, and invoking the special protection of the state in behalf of a class whose condition is already better than that of others. The problem of raising the general standard of living, if it is to be solved by the minimum wage, is one which must involve a minimum wage for men as well as for women.

The present chapter has attempted to demonstrate the importance of the class of self-supporting women in industry in Minnesota. One-third of the females employed in mercantile and manufacturing establishments in cities of the first class are living "adrift," presumably supporting themselves. The estimated number of women and girls adrift in trade and manufacturers in the Twin Cities is 7,700 of whom 3,500 are earning less than the lowest amount recommended by the advisory boards as a living wage. The class of dependent women, constituting two-thirds of the total, share in general the standard of living maintained by their families. Of these a small proportion only are "pin money" workers. At least eight-tenths, and probably more, contribute definite amounts to the maintenance of the home. The contribution made by them is substantial. The average contribution specified is perhaps \$3.50 per week, a sum which does not suffice to pay for the board, lodging and laundry received in the home. The deficiency is made up by the other wage earners in the family. An increase in the daughter's wage is

Summary
of
chapter

absorbed in part by the family and elevates by so much their common standard of living. An increase in the wage of an independent woman goes to raise her personal standard exclusively. A sufficiently great increase in wage may therefore elevate the standard of the independent woman above that of the dependent.

CHAPTER V

MEASURING THE COST OF LIVING

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The purpose of the present chapter is to outline the methods to be used in determining what constitutes a living wage. The writer at the outset disclaims any intention of entering upon a discussion of the wisdom of minimum wage legislation. His point of view is that of a member of an administrative commission, appointed to carry into effect the injunctions of the legislative arm of the government. This point of view assumes that the writer has already convinced himself of the economic feasibility of the minimum wage, and that his present purpose is concerned solely with the determination of a rate which, in the light of its probable consequences, will most nearly realize the aims of the legislators.

Purpose of chapter

Conclusion of the wage investigation

The commission's statistical study of wages demonstrates beyond question that a large proportion of the women and minors employed in the state receive less than a subsistence wage. The statute provides that a minimum must be fixed if the commission is of the opinion that one-sixth of the women or minors in a given occupation receive less than living wages. Even on the basis of \$7.50, the figure proposed as the minimum cost of living by the employers on the Twin City mercantile advisory board, 36 per cent of all the

(1) Obtained by graphic interpolation.

(2)

females and 30 per cent of the male minors in the stores and factories of the state are earning less than a living wage. The commission had therefore no option; the mandate of the law required the determination forthwith of "minimum wages sufficient for living wages for women and minors of ordinary ability and for learners and apprentices."

The task before the commission and its creatures, the advisory boards, was the determination of what constituted "living wages." We have seen in the analysis of the statute presented in

The next step -
determining the
cost of living

Chapter I that the cost of reasonable living was the sole consideration upon which the act intended the minimum to be based. No loop-hole was left the commission to have regard for the ability of the industry affected to pay the minimum. No variation in the minimum rates from industry to industry, or from place to place, or from experienced workers to inexperienced was permitted by the law except as based upon determinable differences in the cost of living. Altho the commission early realized that some of these provisions were of doubtful practicability, a conscientious effort was made to study the situation and to give the ideas of the framers of the law a fair trial.

While the statute gave the commissioners no discretion to temper the promulgated minima to the financial condition of the industry, a sense of the magnitude of their undertaking to raise at once the wages of all underpaid women should have induced them to fix as low an initial minimum as was consistent with the wording of the

A low initial
minimum advis-
able

357

law. Had the \$9 minimum which the commission subsequently fixed upon as the cost of living for "women and minors of ordinary ability in mercantile employments " been also applied, as the law seems to direct it should be, to learners and apprentices, the effect would have been to increase the charge for female labor in trade and manufacturing in the Twin Cities by about 15 per cent. While retail merchants could shift this burden to the public in the shape of higher prices, the increased labor cost to such enterprises as garment factories, competing directly with establishments in the East, might conceivably wipe out the margin of profit, and compel them to close doors. As it was the commission interpreted liberally the phrase "living wages." Had the minimum been set at a lower figure at the outset, opposition from the business men would have been far less active, and the inevitable readjustment less severe in its effects both upon employers and employed. If the enforcement of a low minimum rate had proved successful, to have raised it later would not have been difficult. In Chapters VI, VII, and VIII the writer has endeavored to determine a minimum subsistence wage, construing the language of the statute narrowly, in addition to criticising the minima allowed by the advisory boards conceived under a liberal construction of the statute.

"Living wages," said the act, "shall mean wages sufficient to maintain the worker in health and supply him with the necessary comforts and conditions of reasonable life." The task of expressing in money the wage necessary to meet these very general requirements of health and reasonableness was left by the law to the commission and the advisory boards. The authors of

the law seem to have felt that the determination of a reasonable living wage would be largely a matter of ascertaining prices and the cost of living. The difficult part of the task of the boards lay less in measuring the cost of living than in determining the kind of living the cost of which was to be measured; less in pricing a list of economic utilities than in deciding which of these utilities were necessary to reasonable life. Plainly, upon each existing standard of living a distinct answer to the question might be framed, and since no two persons have precisely the same standard, no administrative body, however disinterested, could reach an agreement except through compromise. In practice, the proceedings of the advisory bodies, in Minnesota at least, have disclosed a sharp divergence of opinion between the representatives of employers, employees, and public. The employers, mindful of the disturbing effect upon industry of the enforcement of a high minimum, have in many cases been entirely sincere in their assertions that the rates determined were above the cost of living. On the other hand, many of the women representing the employees and the public, in their zeal to alleviate the pitiable condition of the underpaid worker, have overlooked the practical obstacles in the way of enforcing the law. From their point of view the higher the minimum the board might be induced to recommend, the better. Out of this conflict of interest and opinion there could be evolved no coherent theory of how the living wage was to be fixed. The point at which the opposing forces came to equilibrium depended more than anything else upon the individual opinions of the board members holding the balance of power.

The orders of the commission itself were promulgated after careful consideration of a mass of data, and yet in the absence of more specific directions or of a consistent theory of wage determination, they must have been largely affected by the individual conceptions of the two members voting on the orders as to what constituted "reasonable living."

The principles by which minimum wage rates are to be fixed are as unsettled as were those of railroad rate regulation before the decision of Smyth vs. Ames. In the present chapter the writer has attempted to develop an ordered theory of determining what constitutes a living wage. The following propositions are advanced:

1. The fixing of a minimum living wage involves two distinct problems - the determination of a minimum standard of reasonable living and the determination of the cost of maintaining that standard.
2. The standard of living is in essence a complex of habits of consumption, varying widely between sexes, social classes, and races, neither more nor less reasoned than other habits, and changing in response to changing factors in the economic environment.
3. The factors of the environment may be divided into physical factors imposed by nature and factors imposed by convention.
4. Minimum allowances for physical needs may be determined by science. Minimum allowances for needs created by convention may be determined by reference to statistics of consumption.

In practice the demands of convention must largely control allowances for both kinds of needs since otherwise the requirements of health will be slighted to satisfy in part those of convention.

5. The minimum reasonable standard in needs dictated by convention is the lowest standard which may be called customary among the social class to which the minimum applies. For self-supporting working women in Minnesota, the minimum standard of respectability is that prevailing among dependent wage-earning women living at home with their families.

6. The minimum standard of reasonable living for self-supporting working women as a whole may not justly exceed that of dependent women wage earners.

7. To determine the lowest standard which may be called customary among dependent women wage-earners, it is first necessary to measure the standard of living among all dependent women wage-earners. This standard can be measured only through consumption statistics. In the Twin Cities, it is about one-seventh higher than that maintained by self-supporting working women earning the same wage.

8. The standard below which one-fourth of the dependent women wage-earners live may be arbitrarily assumed as the minimum standard of living sanctioned as reasonable by them as a class. A living wage for women should be just sufficient to meet this standard.

9. The cost of maintaining the minimum standard of reasonable living when the latter has been determined, may be ascertained (1) by means of statistics of consumption as measured in terms of

money and (2) by pricing in the open market the goods agreed upon as necessary to the maintenance of the minimum standard.

The task of a minimum wage commission is two-fold.

It is, first, to determine upon a minimum standard of reasonable living, and second, to price the goods necessary to the maintenance of that standard in the locality in which it is to apply. Theoretically the determination of the cost is a matter entirely distinct

1 Determining
a standard and
ascertaining
its cost

from that of the standard itself, yet in the case of many items of expenditure the only practical measure of the standard is the money that is spent in maintaining it. It is impossible, for

example, to set a minimum standard of medical attention in terms of visits of an attendant physician; such a standard can be fixed in the mass only by ascertaining the prevailing expenditure for doctors' bills of the class to whom the minimum applies. In practice, therefore, both the standard of living and the cost of maintaining it must often be expressed in terms of money, and can be measured at the same time. Briefly, two methods for measuring the minimum cost of living present themselves. The first is the testimony of authority, the critical judgment of experts, which applies chiefly to those items, such as food, expenditure for which is controlled by the laws of human physiology. The second measure of the cost of living is to be found in statistics of consumption enumerating the expenditures of the group to be studied for each item of the budget. It is upon consumption statistics that the chief reliance must be placed in determining the minimum allowance for those items, such as clothing, expenditures for which are dictated largely by convention.

The term "standard of living" is used in the literature of the day in two senses, - as an ideal of material living and as the store of economic goods necessary to its realization. "The

2. The standard of living is a social habit

number and character of the wants," says Ely,

"which a man considers more important than

marriage and family constitute his standard of

life. Whenever wages fall below a point where the standard of life

can be maintained for a family, the workman will do without the

family and maintain the standard for himself alone. (3)^m The content

of the much-used term "American standard of living," as ably

set forth by Mitchell, involves both the ideal and the material

378. (3) Ely, Richard T., Outline of economics, edition of 1910,

(4) things necessary to its attainment. Definitions of the phrase might be multiplied, but the two quoted will serve to show that in essence the standard of living is a bundle of habits of consumption. The standard of living of the individual is his peculiar complex of consumption habits. Whether he eats meat once or twice a day,

(4) John Mitchell, President of the United Mine Workers of American, in Organized Labor, 116-117, writes:

"In cities of five thousand to one hundred thousand inhabitants, the American standard of living should mean, to the ordinary unskilled workman with an average family, a comfortable house of at least six rooms. It should mean a bath-room, good sanitary plumbing, a parlor, dining room, kitchen, and sufficient sleeping room that decency may be preserved and a reasonable degree of comfort maintained. The American standard of living should mean to the unskilled workman, carpets, pictures, books, and furniture with which to make his home bright, comfortable and attractive for himself and his family, an ample supply of clothing suitable for winter and summer, and above all, a sufficient quantity of good, wholesome, nourishing food at all times of the year. The American standard of living, moreover, should mean to the unskilled workman, that his children be kept in school until they have attained the age of sixteen at least, and that he be enabled to lay by sufficient to maintain himself and his family in times of illness, or at the close of his industrial life, when age and weakness render further work impossible, and to make provision against premature death from accident or otherwise.

"This, or something like this, is the American standard of living, as it exists in the ideals of the unskilled workingman."

whether or not he goes to the professional baseball games, whether he prefers derby or soft hat, the frequency with which he changes his linen, if he wears linen at all, whether in time of sickness he calls a physician or not, - these and a thousand other little habits which depend for their exercise upon economic utilities enter into his standard of life.

Standard
of the
individual

In like manner, the standard of living of a social group is the composite of innumerable individual habits of consumption, and as great variations occur in the standards of individuals, so those of social groups may differ widely. Different standards prevail between the sexes, between social classes, between races. The Bulgarian peasant, as described by Dicey, ⁽⁵⁾ exists in health and in what to him is comfort on a plane which would seem intolerable to all but the poorest of the inhabitants of American cities. Nor is the standard of either the individual or of the group a fixed standard. The British working man no more thinks of spending money on the repair of his decayed teeth than of buying a motor car. Yet his children, emigrating to Australia, rise to the dignity of a plate, ⁽⁶⁾ and in Minnesota, as these studies show, expenditures for dentists' bills are a regular part of the budgets of the majority of working women, ⁽⁷⁾ even of those attempting to support themselves upon low wages.

Of the
group

(5) Quoted in H. Bosanquet, Standard of Life, 9.

(6) Reported to the writer by an American dentist practicing in Tasmania.

(7) *Infra.*, 474-9.

The standard of living of the group changes in response to changed conditions in the economic environment. As a habit it is neither more nor less reasoned than any other social habit, and at any one time may appear to depart widely from what a guiding intelligence would direct as wise. It is based upon human experience; upon a multitude of decisions made from day to day by the

3. Factors in the environment which determine the standard

individuals who compose the group, in the course of their efforts to adapt themselves to the environment in which they move. The factors of the economic environment are of two kinds;

physical conditions imposed by nature, over which man has little control, and conditions imposed by convention, which while the creatures of society are scarce less imperious in their demands upon the individual than the unalterable factors of climate and physiology.

It will be urged that there can be but one normal minimum standard of reasonable living because the physical conditions are of universal application; that except as human physiology may

The factors of convention may not be ignored

slowly change, what constitutes a minimum allowance of protein, fat, and carbohydrate for the worker of today will suffice for all men performing the same number of foot-pounds of work

under the same climatic conditions; and that the task of a minimum wage board is to determine a logical standard conforming to these physical wants. Such a standard, however, takes no account of the inexorable demands of custom. No one but a Diogenes could order his life in accordance with it. We must, at the outset banish the

idea of a fixed reasonable standard. While the physical limitations of the environment may not perceptibly change within a lifetime, the conditions imposed by convention are constantly in a state of flux, changing like all other human habits with the experience of the race and constantly imposing as they change new standards which the individual cannot choose but follow. No less essential to efficiency than physical well-being are the motives of hope and ambition which cannot exist without a sense of self-respect conditioned upon a decent observance of convention. Indeed it is a familiar fact that many people living near the margin of subsistence will sacrifice their physical needs to the requirements of custom. As long as a working woman prefers to eat insufficient food and sleep in a windowless room rather than wear clothing which excites comment, a minimum wage seeking adequately to provide for her physical wants must also enable her to satisfy the requirements of respectability in dress. Moreover, it is she, rather than a commission of experts, who decides what constitute the requirements of respectability.

The demands of convention, while they may not be ignored in determining a living wage, must not be followed blindly. Many prevalent consumption habits are of doubtful utility, and some, such as the use of drugs and intoxicants, are demonstrably harmful. Such habits of consumption are not, beyond social control, sometimes through prohibition, oftener through education.

Convention
must not be
followed
blindly

The studies of minimum wage commissions are among the important agencies at present educating working people in the wise expendi-

ture of their incomes. In view of the probable influence of the recommendations of a wage board upon the habits of working women, the wisdom of each expenditure required by convention should be challenged. In the prevailing economic philosophy of the day, there is a tendency to make increasing complexity the criterion of a rising standard of life and to regard the multiplication of wants as an end in itself. It is, however, quite conceivable that the mere increase in the number of economic goods which a given society considers necessary may work to its disadvantage in competition with other less sophisticated social groups, and the test of a reasonable standard of living must be in the last analysis its social utility. For the individual a logical minimum standard is that below which society out of self-protection will not tolerate that one of its members shall live.

A logical minimum standard must therefore meet the requirements of health and of convention. In the first place it must include satisfaction of the physical wants, for which

science can set a definite allowance.

4. Expert opinion
may determine
allowances for
physical wants

Among these are nourishing food, wholesome living quarters, a supply of pure

water, opportunity for exercise, and dental and medical attention. Provision for all of these items may be made according to a fixed minimum standard determined by experts.

The sufficiency of this expert testimony is, however, limited always by the knowledge of the class of persons to whom the proposed minimum standard is to apply. Obviously a sum

sufficient in the hands of a dietician to purchase a minimal allowance of protein, fats, and carbohydrates might be wholly inadequate to nourish a working woman eating at boarding house or cafeteria. Secondly, a minimum standard which meets the test of social utility must be sufficient to enable the worker to maintain a position of respectability. Recreation, including amusement and vacation, dress,

Consumption statistics must determine allowances for wants of respectability

subscriptions to the support of charity and church, these and all other things which regard for the opinion of one's fellows makes necessary must be provided for in a reasonable

standard of life no less than health and physical efficiency.

These "spiritual" wants cannot be determined by science. Allowance for them can best be made in accordance with the habitual expenditures for these purposes of the workers themselves, if possible by reference to consumption statistics. If no statistics of the budgets of working women are to be had, the matter must be left to the tug-of-war of compromise between the variant opinions and conflicting interests of a wage conference. In reality allowance for both spiritual and physical wants must be fixed by the compromise of conflicting opinions, because when once a minimum wage has been paid there is no string upon its disbursement, and it will be apportioned by the worker among the different items of expenditure in a manner dictated quite as much by convention as by the necessities of physical existence.

In determining the nature and magnitude of expenditures dictated by convention, consumption statistics are vastly preferable to the a priori estimates of a conference of employers and employees.

No matter how varied the experience of a member of such a board, his own opinion as to the normal expenditure of working women for such an item as club dues can be no more than a shrewd guess. Even a compromise between a dozen such guesses may be very wide of the mark.

Importance
of consumption
statistics

Of the many standards set by convention, which one shall be chosen as the minimum for self-supporting working women? Instead of leaving the determination of this question to the judgment of a limited number of persons constituting an advisory board, however disinterested their opinion, some measurable standard should be agreed upon. The opinions of writers dealing with the theory of minimum wage are of little practical value in the problem of fixing upon a definite sum as the minimum cost of living. It is to the common law that we must turn for a suggestion as to what the term "reasonable" implies. The courts have long interpreted as reasonable that which is customary. The writer suggests that the standard of reasonableness for self-supporting working women is the standard which is customary among dependent women of the same social position. The standard of convention for the social class of working women as a whole is that set by the dependent wage earners among them, whose standard as we have seen is that of their families, and therefore of the stable part of the working population. It was demonstrated statistically in Chapter IV that women and girls living at home share the income of other members of the family in such a way that their standard of life becomes a group standard, sharply

Which
standards are
"reasonable"

contrasted with the individual standard of the self-supporting worker. It was shown that girls receiving wages insufficient to maintain them on the standard recognized by their families as the

5. The reasonable standard is that enjoyed by dependent women wage-earners.

minimum of decency were subsidized by the rest of the family, and ^{that} upon reaching a wage more than sufficient to supply their individual needs on the accustomed standard,

these same workers contributed at least a part of their surplus earnings to the maintenance of the home. Since these dependent women constitute in the Twin Cities two-thirds of the female employees in store and factory, the standard in dress, in amusements, and in other expenditures dictated by convention, which prevails among them, becomes the standard recognized as customary for working women as a class and to which self-supporting women must conform. The minimum reasonable allowance for self-supporting women in all expenses dictated by convention is the minimum regarded as decent among dependent women and girls. An allowance for dress which does not permit the independent woman to clothe herself in what her wage-earning sisters with family connections regard as respectable is not "reasonable." The expenditures of dependent wage earners as a class constitute a definite criterion for the determination of a minimum standard of reasonable living in all consumption habits where convention is the determining factor.

Not only does the standard of life of the class of dependent wage-earning women furnish a lower limit below which the standard of independent women may not be regarded as reasonable, but it also sets an upper limit beyond which a minimum wage may

not be fixed. Obviously self-supporting women as a class have no just claim to a standard of living higher than that enjoyed by their dependent sisters who live at home with relatives. The very

6. Living wage may not exceed the standard of dependent women

idea of a minimum wage for women is based, as we have seen, upon the presence of a class of self-supporting females who are compelled to live on a plane so low as to be regarded by

society as a menace to its own continued existence. If the condition of self-supporting women were on the whole as good or better than that of dependent women there might be need of a minimum wage for males to enable them better to support their families, but there would be no justification for singling out independent women as the recipients of the proceeds of a tax on industry in the shape of a minimum wage.

Yet such must be the result if the enforcement of a sufficiently high minimum wage be postulated. The increment attending a rise in wage in the case of a self-supporting woman goes exclusively to elevate her own standard of living; in the case of a dependent woman sharing her wage with her family, it is absorbed in part by the standard of the other members of the family. If the prevailing rate of women's wages were raised high enough, the tendency would be for the standard of these self-supporting women to exceed that of dependent women living at home, unless indeed the earnings of male wage earners increased in equal ratio during the same time. We have further seen that, as indicated by the comparative expenditures for clothing of women at home and adrift, if the prevailing level of women's wages in the Twin Cities were

elevated to above \$12.00 a week this condition would have been reached; self-supporting women would be economically better off than dependent women earning the same wages who were compelled to share their earnings with other members of their families. Such a condition places a premium on the disruption of family life. The standard, therefore, of the dependent woman wage-earner living at home sets a maximum beyond which a wage commission may not rightly fix minimum wage rates. It may be urged that an administrative commission is extremely unlikely to fix a minimum so high as to bring about this condition. It appears probable, however, that the minimum allowance of \$5.40 made by the Minnesota advisory boards for room, food, and laundry was at least equal to the average value of the accommodations received by wage-earning women living at home.⁽⁸⁾

If the suggestion of the writer be accepted that the minimum reasonable standard in conventional expenditures is to be determined not by opinions of wage conferences but by the actual expenditures of dependent wage-earning women living at home with

7. Measuring
the standard
of dependent
women

their families, the task of a minimum wage commission becomes one of statistical investigation. The problem is to measure the minimum standard of dependent women wage-earners and

then to price it when maintained by a self-supporting woman.

The statistical measurement of the minimum standard of living of dependent women wage-earners is not easy. What fraction of all the dependent wage-earners must be existing on or above a given plane to enable it to be called the minimum recog-

(8) Cf. Chapter VI.

nized by the class as within reason need not detain us here. For the present our task is to measure the variable character, standard of living, in the thousands of dependent women employed in stores

Need of accurate consumption statistics

and factories in the state. The measurement can be effected only thru consumption statistics. The data collected by the wage

commission are unsatisfactory in that they do not adequately measure the value of the board, room and laundry received by the woman at home, but some highly suggestive inferences may be drawn from them regarding the relative standards of women at home and adrift.

The accuracy of the replies to specific questions on the cost of living schedule ⁽⁹⁾ is discussed under the several items of expenditure for which statistics were collected. In general it may be said that the returns appear to have been made in good faith.

Accuracy of the commission's cost of living statistics

The answers were set down from memory and seldom based upon accounts. Expenditures occurring periodically, or expressed in lump sums of large amount, were therefore reported

with a high degree of accuracy. Among these were room rent, board, car fare, doctor, dentist, and oculist bills, insurance, and lodge and club dues. Reported expenditures occurring sporadically, irregular in amount and dispensed in small sums which had to be carefully recalled to give a correct total, were doubtless far from accurate. The replies to the inquiries on clothing, amusements, and reading matter were in many cases gross overestimates. Reported expenditures for these items obviously beyond the means of the

(9) A copy of the schedule is included in Appendix IV, 576.

girl filling out the schedule were reduced in editing to within the limits of her wage. No attempt was made to raise estimates which appeared too low. Since this process of revision was necessarily less severe upon the replies of women at home, who, because of their smaller expense for board and lodging, had as a class a larger surplus for clothing and miscellaneous expenses, the revised returns are of no value in comparing the relative expenditures of women at home and adrift. For this purpose the unrevised returns are used: since there is every reason to suppose that the errors of women at home would, in a large number of cases, be substantially the same in direction and magnitude as those of women adrift, Replies as to the expenses for laundry, (10) and as to church gifts (11) are believed to be substantially representative. The question on (12) vacation was variously interpreted and only with caution may conclusions be based upon the replies.

Perhaps the gravest source of possible error in the cost of living statistics lies in the interpretation placed upon failures to answer particular questions. The blank did not direct

Interpreting failures to reply how to indicate that nothing was spent for an item and it was the exception to find a schedule which set down a specific answer to every inquiry. Each reply had to be examined in conjunction with the others on the schedule: in many cases the silence could be confidently interpreted. How large an error was introduced by these

(10) Infra., 421 .
 (11) Infra., 483.
 (12) Infra., 510.

failures to reply into calculations of the average expenditure of all women tabulated, there is no means of telling. In some cases the possibility of error is so obvious that no averages per capita (13) tabulated have been attempted. It is to be noted, however, that the error introduced by this cause tends to reduce rather than increase per capita expenditures, and that since the error is probably constant, the figures admit of comparisons of wage, age, industry, and family connection classes.

The schedules used by the commission were ill adapted to enumerating the expenses of women at home. In Chapter IV it was pointed out that the reported expenditures of the latter for room, food, and laundry were an approximate measure of their contributions to the maintenance of the homes, but on the average were less in amount than the value of the food and accommodations received. The difference between the actual value and the girl's contribution to the home measures the amount of the subsidy received by her. The remainder of her income she is free to spend upon other items and it seems a legitimate inference that her standard in these respects is on a scale commensurate with the board and lodging she enjoys and therefore proportionate to the standard of living of the family as a whole. With some exceptions her expenditures for these additional items should be comparable with those of the woman adrift.

Comparing
standards
of women at
home and adrift

(13) Cf. the individual items of expenditures, Chapters VI, VII, and VIII.

The first of these exceptions in medical attention,- the average reported per capita expenditures of women at home for doctors' bills are somewhat lower than those of women adrift earning the same wage (Table 100 and Plate 32). The difference probably indicates, not that women at home have a lower standard of living, but that they are either sick less often, or when sick are attended by the family physician at the expense of the parent, or that the superior nursing of the mother or sister renders calling a doctor less necessary. Very probably all of these causes contribute to the result. In the case of insurance, a larger proportion of women at home carried life insurance and a relatively smaller proportion sick benefit policies than of women adrift (Table 107 and Plate 37). Comparisons of per capita expenditures for this item of women at home and adrift are misleading because the purpose for which the insurance is bought is different: women adrift are protecting themselves against loss through sickness: to a greater extent women at home are protecting their families. Expenditures for vacation are not comparable because the greater ability of the woman at home to pay is offset by her pleasanter home, rendering vacation expense less necessary.

Expenditures for other items in the budget which are believed to be comparable are presented in Table 71. The first column gives the average or median expenditures of 1,222 women at

(14) Of those at home earning \$6.50 and less than \$8.50, 44.3 per cent carried insurance of some form. Of those adrift, only 30.6 per cent.

home earning \$6.50 and less than \$8.50 per week; the second column gives the same information for 572 women adrift earning the same

Comparable
expenditures
at home and
adrift

wage. In the third column is given the difference between the two expressed in per cent of the expenditure of the class adrift. The average income of the two groups is almost identical,

\$7.39 for the women at home and \$7.49 for those adrift. In addition there is little difference in the ages of the two groups. In the case of clothing, reading matter, and amusements, for which many of the answers received were highly inaccurate, averages are used based on the original answers rather than on the revised replies, because the former are believed to be more comparable.

A study of Table 71 will show that with some exceptions the average expenditures of women at home are from 10 to 20 per cent higher than those of women adrift earning the same wage. In the items of laundry, of dentist's bills, and of church gifts, all of which should be thoroly comparable, the differential runs about

Clothing 15 per cent. In clothing and in lodge and club dues it is somewhat less, but the reason is not far to seek. Women at home save money in the repair and alteration of clothes and frequently get new ones at low cost by having them made by a seamstress in the home. Were the actual value at retail prices of all their clothing ascertainable, it would probably raise the differential to a figure higher than 13.8 per cent. Lodge and

(15) Infra., 436-439

(16) Infra., 499.

(17) Infra., 505.

Table 71 .

Comparable expenditures of women in the Twin Cities at home and adrift earning \$6.50 and under \$8.50 per week.

Item	Expenditure		Per cent of excess at home over adrift
	At home	Adrift	
Clothing (unrevised) per year Average	\$104.00	\$92.00	12.8
Laundry, per week Average, all specifying amount of expense	.547	.470	17.5
Car fare per week Average, all schedules	.63	.49	28.6
Average, all spending	.65	.54	30.4
Dentists' bills per year Average, all schedules	12.94	10.86	19.2
Average, all spending	18.80	16.00	14.9
Church gifts per week Average, all schedules	.139	.116	19.8
Average, all giving	.168	.153	9.8
Median, all giving	.15	.13	15.4
Lodge and club dues per year Average, all belonging	2.87	2.55	12.5
Reading matter (unrevised) per week Average, all answering question	.132	.122	8.2
Average, all spending	.214	.166	28.8
Amusements (unrevised) per week Average, all schedules	.500	.272	84.0
Average, all answering	.570	.335	70.2
Average, all specifying an expense.	.650	.420	54.8

club dues, on the other hand, are an expenditure for which a woman at home has distinctly less need than one who has no family with whom to pass the time. Yet in spite of this fact, the per capita expenditure of women at home is higher and indicates a higher standard of living.

Lodge and
club dues

The differentials for reading matter (8.2 per cent of all answering the question, 28.8 per cent for all spending something) are somewhat confusing because the expenditures of the two classes are not strictly comparable. A

Reading
matter

larger proportion of women adrift spend money for reading matter because in many cases the girl at home has the advantage of the newspaper, periodicals, and books purchased by other members of the family. On the other hand, when women at home do spend money for reading matter it is often to subscribe to some magazine which is read by the entire family. The calculated percentages do not seem inconsistent with the idea that women at home live according to a standard about one-seventh higher than that of women adrift earning the same wage.

It is to be expected that the per capita expenditures for car fare of women at home should be considerably higher than those of women adrift, because the latter can better choose their abode with an eye to avoiding car fare in going to and from work. Even allowing for this factor, the higher standard of living maintained by women at home is indicated in the excess of their expenditures over those of women adrift (20.4 to 28.6 per cent).

Car fare

(18) Of women earning \$6.50 and under \$8.50; 49.8 per cent of those at home declared they spent money for books, etc. 53.7 per cent of those adrift declared they spent for the same purpose.

In amusements the standard set by girls and women at home is very much higher, - apparently from 50 to 85 per cent - than that which women adrift can afford. Expenditure for amusements is thus the most elastic of the major habits of consumption.

Amusements

A sudden increase in wage stimulates expenditures for amusements more than anything else.

It is in expenses for recreation that a scrupulous economy will least violate convention, and that is why the standard of women adrift falls so far short of that set by girls at home.

The averages of Table 71 furnish at best but a rough basis for comparing the standards of living of dependent and self-supporting women wage-earners. Concerning the relative standards

Standard of dependend women one- seventh higher

maintained in food and lodging we have no means of judging. If the differential is correct, it probably holds true of board and lodging as well, and women at home are nourished and lodged on a

scale one-seventh more generous than that prevailing among self-dependent women. The striking constancy of the differential in those items of the budget for which comparison is possible seems to justify the generalization that in the Twin Cities the standard of living of the depend woman wage earner is about one-seventh higher than that of the self-supporting woman. That is to say, dependent women as a class are subsidized by their families to the extent of about one-eighth of their cost of living. In other words, an increase of 15 per cent in real wages would bring up the standard of the class of women adrift approximately to the point now occupied by women living with their families. An equal increase in the wages of the latter would be absorbed in part by their families.

The final step in the selection of the minimum standard in expenditures controlled by convention is to determine what point on the standard prevailing among working people as a whole is considered by them the minimum of respectability. The argument has so far brought us to the conclusion that allowance for the require-

8. The minimum standard is that maintained or surpassed by three-fourths of the group of dependent wage earners.

ments of convention is no less essential to a minimum standard which meets the test of social utility than allowance for physical needs. To satisfy the requirements of con-

vention a reasonable allowance for a self-supporting working woman is that prevailing among dependent female wage earners. The standards of the latter we have been able to measure through consumption statistics. We are now in the possession of the standard of reasonableness for self-supporting women. The last step is to determine the particular point in this standard which may be designated as the minimum.

The standard of living of a group like all other measurable habits, is a variable character and displays the frequency curve typical of phenomena obeying the law of chance. An excellent

Analysis of the standard as a frequency curve

example of the frequency curve typical of the standard of living is shown in Plate 54.

Each instance represents the consumption habit of a single woman measured in terms of the cost of its gratification. The instances group themselves more or less symmetrically about a mean which serves as a type for the group. Such a frequency curve for the expenditures of dependent female wage earners is the standard which we have agreed upon as reasonable for the independent

worker precisely because it is to this standard that convention bids her conform.

The question now to be determined is, where on the frequency curve must her expenditures fall if she is to conform to the standard. If her expenditure approximates the average, she is obviously a member of the class. If her expenditure falls in the tenth decile of the curve, she will be generally regarded by

The quartile expenditure - is a convenient minimum of respectability

the members of the class as belonging to a group maintaining a higher standard. If, on the other hand, her expenditure falls in the first decile, she will be looked upon askance, as an inferior sort of creature, not conforming to the customs of the group.

Now the lowest point between mean and the lower extreme where the expenditure is recognized as entitling its spender to membership in the group, is the minimum standard of reasonableness for that particular item of the budget. The position of this minimum above which the expenditure is recognized as within the bounds of convention and beneath which it is subject to adverse comment, is necessarily vague. Like all other lines of division separating variables which grade imperceptibly into each other, its location at any one point is arbitrary. Yet for practical purposes, such an arbitrary assumption must be made. The writer suggests that the woman making the first quartile expenditure will be safely inside the dead line of respectability. Three-fourths of the group will be spending more than she does, yet one-fourth will be spending less. In the estimates of the minimum allowances for each item of the budget presented in the three following chapters, it has

been assumed that the expenditures of the quartile or tertile woman satisfied the minimum demands of respectability.

The advantage of the method is its definiteness. By constructing frequency curves for the expenditures of dependent working women on each item of the budget and allowing for each item as a part of the minimum standard the expenditure of the quartile woman, a consistent minimum wage may be built up. The spectacle then of an advisory board making a minimum allowance for food and lodging as high as the average enjoyed by the working population, and an allowance for car fare less than that enjoyed by the average working woman would be inexcusable. (19)

Advantage
of the
method

To translate from the technical language of statistics, a woman is conforming to the minimum standard imposed by convention when she spends as much as is spent by one-quarter of the class of dependent working women. Since there are two women wage earners at home for everyone adrift, it is they as a class who set the standard to which the self-supporting woman must try to conform. If she preserves an appearance as good or better than that of a fourth of the class of dependent women, she is satisfying the demands of respectability. So far as outward appearances go she need not feel ashamed. She has kept her self-respect, and with it her hope and ambition. While objectively she may be ill-nourished or underclad, subjectively she is provided with "the necessary comforts and conditions of reasonable living."

Having determined upon the minimum standard of reasonable living, the task of pricing the cost of maintaining it is not difficult. The problem now becomes, "How much does it cost the self-

supporting woman to buy the economic goods enjoyed by the quartile woman of the class of dependent wage-earners?" "How much does it cost her to live as well as at least a fourth of the women workers who share the standards of their families?"

9. Pricing
the standard

The problem may be attacked in two ways: (1) by means of statistics of consumption expressed in terms of money, and (2) by pricing in the open market the list of goods agreed upon as necessary to reasonable living. The same consumption statistics used in determining the standard may frequently be employed in measuring the cost of maintaining it, for all items in which the cost to a self-supporting woman is the same as to a dependent wage-earner. The type expenditure for dentists' bills, for instance, is at once the most convenient measure of the standard of living in the care of the teeth and of the cost of maintaining it. In the case of this and similar items, the expense accounts of working women themselves are the best index to the cost of living.

A second means of measuring the cost of living is to investigate the prices of a list of the minimum of economic goods necessary to reasonable living. The list, since it is not based upon consumption statistics, is presumably prepared by an expert in the field in question.

(2) By pricing
in the open
market

The method is applicable to lodging, food, and clothing in so far as the latter is dictated by physical need. Its use in determining all three items is discussed in Chapters VI and VII.

At the cost of iteration, the chapter may be summarized as follows:

Summary,
measuring the
standard of
living

The fixing of a living wage involves the determination of a standard of living and of the cost of living. The two tasks are essentially distinct.

The standard to be determined is the minimum standard of reasonable living: the cost to be determined is the cost of maintaining that standard.

By "standard of living" is meant a complex of habits of consumption and by "minimum standard of reasonable living" is meant that complex which consists of the fewest and least expensive habits of consumption consistent with the maintenance of the individual's health and his position as a respected member of society. The maintenance of health is controlled chiefly by physical factors, of which the most important variable is climate. The maintenance of respectability is controlled by the standards of living of the group of which the individual is a part, the conventional demands of which are scarce less imperious than the demands of his physical environment. Tho an ideal standard of living may depart widely from that actually prevailing, if it would be wise it must take cognizance of the requirements of convention no less than the physical requirements of health. Science may determine allowances for the physical factors. Statistics of consumption must be relied upon for those of convention.

By means of statistics of consumption the standard of living maintained by dependent wage-earning women may be measured.

Since this class of women outnumber those supporting themselves two to one, it is they who set the standard in conventional expenditures to which the latter must conform.

The expenditure exceeded by three-fourths of women at home as a class may be taken as the lowest recognized by them as conforming to the customs of their group. This, technically known as the first quartile expenditure, is the minimum standard of reasonable living for self-supporting women. The cost per week of maintaining this minimum standard, obtained from consumption statistics and investigation of prices, is the minimum living wage.

CHAPTER VI

ROOM, BOARD, AND LAUNDRY.

The items of food and lodging are the most important in the budget of the worker living near the margin of subsistence, (1) both in the proportion of the total expenditure which they embrace and in their effect upon health and efficiency. Their importance

Room, Food, and laundry grouped together.

has been generally recognized in the studies of the several state wage commissions. In

Minnesota a special sub-committee of the mercantile board was appointed to report upon the cost of room and board; the Twin City Manufacturing Board and the Duluth Boards created similar sub-committees to whom was instructed the task of estimating the cost of clothing in addition to that of food and lodging. In the present discussion laundry is grouped with lodging and food, because in some cases the weekly sum paid for room and board includes all or part of the lodger's washing, and very often grants her the privilege of doing her own laundry work on the premises. Facilities for washing and ironing are quite as important a consideration to the shop girl struggling to live on \$8.00 a week as access to a clean toilet or as a good light in her room, and in consequence affect the price of the room. To compare properly the

(1.) Chapin found that food absorbed 44.6 per cent and rent 25.6 per cent of the income of 72 workingmen's families in New York, whose annual earnings fell below \$6.00 and \$7.00, and who were just able to make ends meet. The standard of living among workingmen's families in New York City, 70.

monthly expenditure for room rent of two girls, one of whom had the privilege of doing her own washing on the premises while the other did not, would involve the deduction of the rent of the laundry for an evening or two a week. Since, however, it is difficult to assign a money value to this privilege of laundry work, expenditures for room, food, and laundry have been grouped together in the belief that their cost may be more accurately compared jointly than separately.

The allowances made by the three advisory boards for room rent, food, and laundry are as follows:

Table 72.

Weekly Cost	Mercantile board	Manufacturing board	Duluth board
Room and food combined	(2) \$4.80	\$5.00	\$4.90
Necessary laundry	.50	.45	.50
Room, food, and laundry	\$5.30	\$5.45	\$5.40

The commission has not made public its allowances for each item of expenditure. The fact, however, that its promulgated minimum rates for cities of the first class were slightly higher than the estimates of the cost of living made by the advisory boards, indicates that its allowance for room, food, and laundry was if

(2) It will be remembered that the sub-committee of the Mercantile Advisory Board on room and board could not agree, and that the board as a whole adopted a motion to accept \$4.80 as a minimum allowance,

anything higher than \$5.40.

The data upon which these minimum weekly allowances of \$5.35 to \$5.40 were based included not only the field investigation of rooming facilities, room rents, and prices of board conducted

Data on which the allowances were based

by Miss Evans and assistants in the Twin Cities, Duluth and certain smaller towns, but also the employees' returns obtained in the statistical

inquiry into the cost of living. The circumstances which led to both of these undertakings have been narrated in Chapter II.

It will be seen that of the two kinds of evidence by reference to which the minimum standard of reasonable living may be determined - expert opinion and consumption statistics - the boards relied very largely on the latter. With the exception of certain of the mercantile employers and employees, who by reason of their business experience were experts in the quality and cost of clothing, the board members themselves were as competent to estimate the cost and standard of living as would have been any similar group of equally intelligent men and women recruited from the same pursuits. The judgment of the board members could be at best the critical judgment of intelligent and fair-minded persons concerning things of which they had common experience, but no expert knowledge. Nor did they seek the opinion of such experts as were within call. They gave generously of their time and relied upon their own judgment in interpreting the statistics collected by the commission. The statistics abundantly demonstrated how much was spent by working women for each item of expenditure. Their weakness lay in the scant information they gave as to the quality and amount of the economic goods purchased by each expenditure. The

cost of living schedules obtained from individuals gave of themselves no clue as to the nature of the accommodations received; for example, the schedule reporting an expenditure for food of \$3.00 per week afforded no means of telling whether or not the food obtained was nourishing or palatable. The field survey of lodging and boarding houses did indeed give a rough measure of the quality of accommodations. Each room priced was inspected and classed as "satisfactory" or "unsatisfactory." In the case of board, however, no attempt was made to determine the quality of the food beyond a casual inspection of the premises.

1. Room rents in Minneapolis and St. Paul

a, Field survey

The field surveys of rooming and boarding facilities were personally supervised by the secretary of the commission and the method cannot better be described than in her own words.

Field survey of rooming facilities and room rents - methods.

"The data on cost of room and board in the Twin Cities is the result of a personal investigation and inspection of each place.

The following points were covered for each place visited and for each room in the place:

- Name of owner and address.
- Price, weekly or monthly of single room, double room, room and board, 2 meals; 3 meals.
- (Places serving only one meal are so limited that they are not tabulated).
- Light - (lamp, gas, electricity, windows).
- Heat - (stoves, hot air, hot water, heated from outside).
- Cooking - (is it allowed in room?)
- Parlor - (does girl have use of?)
- Laundry - (does girl have any privileges?)

Toilet - (in house, outside, sanitary condition) 391
Bath - (sanitary condition).
Environment and general comments.

The investigation does not in any sense cover all of the rooming and boarding house conditions in the Twin Cities. It is rather an investigation of what facilities the Twin Cities have to offer working women. Only twenty-six places where the cost of room was \$14.00 per month or over for one woman, and twenty-nine places where the cost was \$16.00 or over per month for two or more women were visited. The list of places was made in two days, - first, through advertisements for board, for room, and for room and board for a working woman, - second, addresses of working women earning less than \$12.00 per week and living away from home. The results are typical of actual living conditions of working women earning small weekly wages in the Twin Cities." (3)

The work of all the young women employed as field agents was not equally careful, and the data were not in all cases complete. In the early part of the investigation, for example, the price of rooms when rented double was not ascertained.

The following discussion of the results of the survey of rooming places in the Twin Cities is taken with little change from a report prepared by the author for the commission and printed on pages 24-30 of its first biennial report.

"The investigation covered the price single of 437 rooms and the price double of 318 rooms. Only rooms in districts frequented by working women or elicited in response to advertisements for low priced rooms were visited. Variations in price and in quality of accommodation between Minneapolis and St. Paul were not considered significant. Both cities have their boarding house zones and quarters largely occupied by laboring people. A considerable number of places in the Twin Cities offering rooms are not suitable homes for working girls.

(3) Minnesota Minimum Wage Commission, First biennial report, 1913-1914, 23,24.

The proportion of the rooms covered by this investigation which, because of unwholesome moral environment or inadequate accommodations, were classed as unsatisfactory, was one-twelfth of the total.

"Rooms were classified as 'satisfactory' or 'unsatisfactory.' A room was called unsatisfactory for any of the following reasons; (1) if it was in an immoral neighborhood, or if people in the house were disreputable; (2) if it was reported filthy by the investigator; (3) if toilet and bath were wanting or unsanitary, unless a clean outside toilet was provided; (4) if heating facilities were inadequate. Rooms heated by stoves were classed as satisfactory unless other conditions were bad."

Satisfactory and unsatisfactory rooms.

It is to be noted, parenthetically, that the field investigators reported no dark rooms, and no basement rooms, of which

The poorest rooms not found by the field agents.

there are admittedly many in the Twin Cities. The report of the committee on housing of the Minneapolis Civic and Commerce Association, published at about the same time, called attention to the in-

ipient slum nuclei in Minneapolis, characterized by excessive lot occupation, congested tenements, basement apartments, ill ventilated sleeping quarters, and rooms without windows. The families living in these districts harbor many lodgers, both male and female. Of basement apartments the housing investigation estimated that there were in Minneapolis "hundreds" often described as windowless and usually dark and damp. Dark rooms were found to be common. "The tenements in Minneapolis have within them more than a thousand dark

(4) The housing problem in Minneapolis, a preliminary investigation made for the committee on housing of the Minneapolis Civic and Commerce Association, September 15, 1914.

rooms, - rooms without an outside window, rooms without ventilation, rooms into which the light of the sun never enters." (5) These are not closets, but living quarters occupied by human beings. Conditions in St. Paul are probably no better, No attempt was made by the housing investigation to price these rooms; obviously the rents would be less than those of decently habitable rooms.

There can be no doubt that the commission's statistics on room rents do not represent the lowest prices at which shelter can be obtained in the Twin Cities. Many places are to be found even below the level of furnished rooms at \$5.00 and \$6.00 a month, but the darkness, bad air, dampness, and over-crowding of these rooms make them unfit for human habitation. By no possible interpretation of the law could these dark, underground, and congested rooms be considered as conforming to a standard of reasonable living. Indeed, the housing ordinances of Minneapolis specifically prohibit living in basements. (6) The commission's survey covered, then, neither the very poorest rooming accommodations to be had nor those of the distinctly better sort occupied by prosperous persons earning \$20 or more per week; it covered rooms within the means of the mass of self-supporting women and included rooms a considerable proportion of which are below the margin of decency in comfort and respectability. An investigation of the many rooms available at lower prices would probably have increased the proportion of unsatisfactory rooms without appreciably depressing the average price of satisfactory ones.

(5) Ibid., 35.

(6) Ibid., 27. "So far as is known this law has been uniformly enforced in the new buildings, but the building department has not sufficient funds to enable it to properly detect violations in old ones."

"Table 73 gives an analysis of the reports of the investigators upon single rooms and Table 74 upon double rooms.

Thirty-seven (8.5 per cent) of the 437 rooms visited were declared to be unsatisfactory, the cause in the majority of cases being a questionable moral environment. The prices of the unsatisfactory

Single
rooms

rooms ranged considerably lower than those of satisfactory rooms. While only 8.5 per cent of all rooms were classed as unsatisfactory, nearly a fourth,

22.6 per cent, were unsatisfactory rooms that rented for less than \$6.00 per month. Ninety-four per cent of the rooms renting for \$8.00 per month and over were satisfactory.

"A glance at Table 73 will show that 73.8 per cent of all unsatisfactory single rooms cost \$8.00 or more per month. In other words, while rooms are offered in satisfactory places at \$6.00 or lower, the number of such rooms is limited, being only 17.8 per cent of the total. The price most frequently asked for single rooms was \$8.00 while the average price asked for the 400 satisfactory rooms was \$8.89 per month or \$2.04 per week. It would appear then that the Twin Cities afford an abundance of satisfactory single rooms offering decent accommodations in a respectable location at the price of \$8.00 per month, and a lesser number of \$6.00 and \$7.00 per month."

Table 74 gives prices asked for rooms rented double. Only satisfactory rooms are included. During the early part of the investigation, the price of rooms when rented double was frequently not ascertained. It so happened that few of the rooms which were priced when rented double were unsatisfactory, and these few were discarded in preparing Table 74.

Double
rooms

Table 73.

Prices per week and per month asked for rooms in the Twin Cities, June and July, 1914.
Single rooms. Satisfactory and unsatisfactory.*

	All Prices	Less than \$5 per month \$1.15 per week	\$5 and under \$6 per month \$1.38 per week	\$6 and under \$7 per month \$1.61 per week	\$7 and under \$8 per month \$1.84 per week	\$8 and under \$9 per month \$2.09 per week	\$9 and under \$10 per month \$2.30 per week	\$10 and under \$11 per month \$2.53 per week	\$11 and under \$12 per month \$2.76 per week	\$12 and under \$13 per month \$2.99 per week	\$13 and under \$14 per month \$3.22 per week	\$14 and over per month \$3.22 per week
Total number of rooms.....	437	4	27	57	35	112	16	104	4	42	10	26
Satisfactory.....	400	2	22	47	34	102	16	96	4	42	9	26
Unsatisfactory.....	37	2	5	10	1	10	.....	8	.....	.....	1	.....
	All prices	Under \$6 per month	\$6 and under \$8 per month	\$8 and under \$10 per month	\$10 and under \$12 per month	\$12 and under \$14 per month	\$14 and over per month					
Total.....	437	31	92	128	108	52	26					
Satisfactory.....	400	24	81	118	100	51	26					
Unsatisfactory.....	37	7	11	10	8	1	.....				
Per cent of all rooms offered at specified price.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0					
Satisfactory.....	91.5	77.4	88.0	92.2	92.6	98.1	100.0					
Unsatisfactory.....	8.5	22.0	12.0	7.8	7.4	1.9	.....				
Per cent of all rooms.....	100.0	7.1	21.1	29.3	24.7	11.9	5.9					
Satisfactory.....	100.0	6.0	20.2	29.5	25.0	12.8	6.5					
Unsatisfactory.....	100.0	18.9	29.7	27.1	21.6	2.7	.....				
	Average price of all single rooms.....		\$8.89									
	Average price of satisfactory rooms.....		\$9.03									

* Clipped from First biennial report of Minnesota Minimum Wage Commission, 26, for which it was prepared by the author.

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Table 74.

Prices per week and per month asked for rooms in the Twin Cities, June and July, 1914.
Double rooms, satisfactory only.*

	All prices	Less than \$6 per month \$1.38 per week	\$6 and under \$7 per month \$1.38- \$1.61 per week	\$7 and under \$8 per month \$1.61- \$1.84 per week	\$8 and under \$9 per month \$1.84- \$2.09 per week	\$9 and under \$10 per month \$2.09- \$2.30 per week	\$10 and under \$11 per month \$2.30- \$2.53 per week	\$11 and under \$12 per month \$2.53- \$2.76 per week	\$12 and under \$13 per month \$2.76- \$2.99 per week	\$13 and under \$14 per month \$2.99- \$3.22 per week	\$14 and under \$15 per month \$3.22- \$3.45 per week	\$15 and under \$16 per month \$3.45- \$3.68 per week	\$16 and over per month \$3.68 and over per week
Total number of rooms.....	318	2	2	5	30	7	75	9	86	9	34	30	29
	All prices	Under \$6 per month	\$6 and under \$8 per month	\$8 and under \$10 per month	\$10 and under \$12 per month	\$12 and under \$14 per month	\$14 and under \$16 per month	\$16 per month and over					
Number at specified price.....	318	2	7	37	84	95	64	29					
Per cent of all rooms.....	100	.6	2.2	11.6	26.4	29.9	20.1	9.1					
Average price of all double rooms, \$11.88													

* Clipped from First biennial report of Minnesota Minimum Wage Commission, 27, for which it was prepared by the author.

These double rooms afford about the same standard of comfort as the satisfactory single rooms of Table 73 . "Only nine of the 318 rooms, for which prices rented "double" were returned, could be had at less than \$8.00 per month, and only 14.4 per cent or one-seventh of the total were held at less than \$10.00. The price of the remaining 85.6 per cent ranged as high as \$18.00 and \$20.00, many of the latter, however, being large rooms, capable of accommodating three or four women. The price most commonly asked for a room rented to two women was \$12.00 per month. The average price of the 318 rooms was \$11.88 per month or \$2.73 per week.

"The investigation indicates that the number of rooms which two girls rooming together can obtain for \$7.00 or \$8.00 in the Twin Cities is insufficient to accommodate the working women and that \$10.00 per month, renting "double", is a minimum allowance for two persons."

The higher priced double rooms (\$14.00 and over) are in many cases equipped for light housekeeping and women renting such rooms can save in cost of food what at first appears extravagance in room rent. In addition, some rooms reported as "double" are sufficiently large to accommodate three or even four girls, and are so rented at a price only slightly exceeding that when rented double.

"Prices given for 78 rooms which could be rented either single or double indicate that the average saving in room rent to a girl by rooming with a companion is approximately one-third (31.5 per cent). The average would nevertheless be subject to a considerable variation in the individual case. Five establishments charged twice as much for the room when rented double as when

Light
house-
keeping

single. Of course, in this case no saving was possible. On the other hand some places make no addition to the price when renting double. In the latter case the saving amounts to 50 per cent.

Saving by having a room-mate

In general the landlady adds \$1.00 or \$2.00 to the cost per month single to cover the greater wear and tear on room and furnishings caused by two

persons, and the extra labor due to the extra person. The amount of the saving is therefore greater in the case of the higher priced rooms than in the case of cheaper ones, and on the average it may be said that by rooming double a girl can save one-third of her room rent expense. Even greater saving can sometimes be effected by sharing a very large room among three or four girls.

"Perhaps \$8.00 (89 cents less than the average) would be a fair allowance for a room rented single. By having a room mate the working woman can reduce her lodging expense one-third. Ten dollars

Reasonable allowance for room rent.

a month is a common price for respectable double rooms. The expense to each occupant is thus \$5.00 per month, or about one-third less than \$8.00 for

which a satisfactory single room can be had." A reasonable allowance for room rent would seem to be \$5.00 per month or \$1.15 per week. This assumes a room mate in a decent double room. For women suffering from physical deformity or peculiar habits, to whom privacy may be termed a necessity, the limited number of \$5.00 and \$6.00 single rooms would doubtless suffice.

b, Employee's cost of living returns.

Of the 1,731 women and girls adrift in the Twin Cities and earning less than \$12.00 per week who reported their living expenses to the commission, about one-third gave the cost of room

and board in a lump sum. The expenditures of the 1152 who reported room rent separately are Room rents as reported by employees.

exhibited in Table 75. A wide variation is shown by the replies. Eight spent nothing for room rent, probably paying for it by washing the family dishes evenings or otherwise helping with the housework. The surprisingly high proportion, (13 per cent) spending \$10.00 or more per month, is partly to be explained by the prevalence of light housekeeping, in which room rent pays a part of the cost ordinarily attributed to food.

What kind of accommodations do these expenditures provide? The average for all, \$6.37 per month, and even for those earning \$6.50 to \$8.50, amounting to \$5.80, will rent a decent small single room or pay for one half of a double room. More than one-half,

however, spend less than the average. The amount most frequently reported was \$5.00. Proportion living below the minimum standard.

Nineteen per cent of the total earning less than \$12.50 and nearly one-fourth of those receiving \$6.50 and under \$8.50 per week spent \$5.00 a month, which, as we have seen, seems to be the minimum allowance for room rent. Exactly one-fourth of the class earning \$6.50 to \$8.50 are living in quarters which do not come up to the minimum standard. A glance at Tables 73 and 74 will show the kind of accommodations probably had by the twelfth (8.6 per cent) of this class who spend \$3.00 or less per week.

Table 75.

Room rent paid by females living adrift in the Twin Cities and earning less than \$12.50 per week.

Expenditure per month	Earning less than \$12.50			Earning \$6.50 and under \$8.50		
	Number	Per cent of all reporting	Cumulative per cent	Number	Per cent of all reporting	Cumulative per cent
Total number of schedules	1,731			572		
Not reporting rent separately	579			217		
Schedules reporting separately	1,152	100.0		355	100.0	
No expenditure for room rent	8	.7	.7	2	.6	.6
Expense less than \$2.00	3	.3	1.0	2	.6	1.2
\$2.00 and under \$2.50	15	1.3	2.3	7	2.0	3.2
2.50 " "	12	1.0	3.3	6	1.7	4.9
3.00 " "	40	3.5	6.8	13	3.7	8.6
3.50 " "	4	.3	7.1	1	.3	8.9
4.00 " "	153	13.3	20.4	51	14.4	23.3
4.50 " "	20	1.7	22.1	6	1.7	25.0
5.00 " "	217	18.8	40.9	82	23.1	48.1
5.50 " "	12	1.0	41.9	4	1.1	49.2
6.00 " "	197	17.1	59.0	69	19.4	68.6
6.50 " "	30	2.0	61.6	9	2.5	71.1
7.00 " "	65	5.6	67.2	22	6.2	77.3
7.50 " "	25	2.2	69.4	11	3.1	80.4
8.00 " "	164	14.2	83.6	47	13.2	93.6
8.50 " "	10	.9	84.5	2	.6	94.2
9.00 " "	26	2.3	86.8			
9.50 " "	2	.2	87.0			
10.00 " "	93	8.1	95.1	14	3.9	98.3
11.00 " "	4	.3	95.4	1	.3	98.6
12.00 " "	40	3.5	98.9	5	1.4	100.0
13.00 " "	5	.4	99.3			
14.00 " "	4	.3	99.6			
15.00 and over	3	.3	100.0			
Average		\$6.37			\$5.80	

The best arrangement open to one of these girls is half of a double room renting for \$6.00 per month; and of such rooms only two satisfactory ones were found by the investigators. Virtually no satisfactory single rooms were found at less than \$4.00 per week. The girl is more likely to be found sleeping in one of the basement rooms or dark rooms, the only shelter possible for those unable to afford the luxury of daylight.

2. Food

a, Field survey of cost of board.

Food is unquestionably the most important single item in the budget of the worker. More immediately than any other single factor it controls health and happiness, and it absorbs a larger proportion of the total income than any other expenditure. Of all items in a logical standard of living none is capable of more certain scientific determination. As we have seen, it is the factor upon which expert opinion is of greatest value: statistics of expenditure for food can mean little without expert analysis of the nutritive value of the food purchased.

It is to be regretted that the advisory boards made no effort to secure the assistance of a dietician. No attempt was made in Minnesota to price a balanced ration with minimal allowance of protein fats and carbohydrate. Experimental evidence was not entirely lacking. In addition to the well-known studies of Chittenden,

Need of expert analysis of diet of working men.

Atwater, Underhill, and others, local studies in food economics were available for reference.

The Department of Home Economics of the Agricultural College had long been giving instruction on the subject. ⁽⁷⁾ Dr. Alfred Owre, also of the university, had demonstrated the possibility of maintaining physical vigor unimpaired on an expenditure for food of \$1.75 per week. ⁽⁸⁾ The advisory boards were doubtless right in believing that a proper allowance for food should be based not upon the cost of a minimum balanced ration but rather upon a sum that would purchase a sufficiency of nourishing food at a clean cafeteria or boarding house. The selection of a scientific minimum ration and its prepara-

(7) The work involved local studies in the cost and nutritive value of typical foods; their price in the dietary; principles of selection; the importance of food as an item in the family budget; nutritive requirement as influenced by activity, size, and age.

(8) Not including the cost of preparation and service, which may amount to two-fifths of the food cost in the ordinary boarding house, the cost of the unprepared food is approximately five-eighths of the price charged. Statement to the writer by Mr. H. D. Harper, instructor in accounting at the University of Minnesota, based on studies in Owatonna, Minnesota, in the summer of 1915.

The cost of Dr. Owre's balanced ration, based upon prices prevailing in 1914-1916, is as follows:

Fruit (apples chiefly)	\$.20
Ryekrisp (Swedish unleavened bread)	.25
Cheese	.10
Butter	.25
Vegetable - carrots, beets, cabbage	.25
Eggs or meat	.10
Sweets, jams	.25
Milk or cream	.10
Rice	<u>.10</u>
Total per week	1.75

The ration is designed to be taken in two meals and will supply 3000 calories per day, an amount considered sufficient for a man at moderately hard labor,

tion involves a knowledge of food economics rarely possessed by the business or professional man's wife, to say nothing of the untrained factory girl. Some investigation, however, of the quality of food served by the places reporting prices of weekly board would have been eminently desirable. As the survey was actually conducted, nothing was ascertained regarding the character of the board furnished beyond the number of meals per day included, and the general cleanliness of the house. The data on cost of board was indeed merely a by-product of the survey of rooming houses. It was assumed that three meals served in a reasonably clean room must suffice to maintain the worker in health, whatever the price charged might be. It is quite conceivable that the board of three meals offered by one establishment in Table 76, for \$2.75 per week, would not suffice in quality or quantity for the needs of a factory employee. The question is one for the dietician to decide and points to a new line of investigation which may well be undertaken by the commission in the future.

The following table (Table 76) gives prices asked for board in the Twin Cities during the summer of 1914.

Table 76.

Prices per week asked for board in the Twin Cities by places frequented by working women, June and July, 1914.

<u>Price per week</u>	<u>Places offer- ing 2-meal board</u>	<u>Places offer- ing 3-meal board</u>
Total at all prices	14	33
Under \$2.50 per week.....		
\$2.50 and under \$2.75	4	
2.75 and under 3.00		1
3.00 and under 3.25	5	2
3.25 and under 3.50	1	1
3.50 and under 3.75	1	15
3.75 and under 4.00	2	
4.00 and under 4.25	1	8
4.25 and under 4.50		2
4.50 and under 4.75		2
4.75 and under 5.00		
5.00 and over		2
Average price	\$3.08	\$3.76
Price most often demanded...	3.00	3.50

"Fourteen places offering board of two meals were inspected. The price ranged from \$2.50 to \$4.00 per week. The average price asked was \$3.08, and that most commonly demanded was \$3.00. Thirty-three places were visited offering three meal board. The price ranged from 50 to 75 cents higher than that of two meal board - from \$2.75 to \$5.00." The difference represents the cost of the third meal to be purchased elsewhere. To purchase the additional meal - usually lunch on working days and supper on Sundays - should cost at least 75 cents and probably \$1.00 per week. Places offering board of two meals are commonly beyond walking distance and must therefore charge less in proportion than those so near the business or factory district that the worker can walk home to lunch. The price most commonly asked for board of

Prices asked for board

three meals was \$3.50. Four dollars was a price frequently demanded. The average price was \$3.76.

The number of places visited is not as numerous as could be desired. From the data at hand it appears that the lowest price at which board of two meals may be had in the Twin Cities is \$2.50 per week. If ninety cents be added to this for the cost of six fifteen-cent lunches, assuming no Sunday night supper, the minimum weekly cost of food becomes \$3.40. The number of places offering board of three meals for \$3.00 is limited, and the allowance for food on this basis can hardly be less than \$3.25.

b- Cost of food as reported by employees.

Turning now to the reported expenditures of 1,153 Twin City girls and women for food (Table 77) it will be seen that fully half of them spend less than the minimum cost of table board as reported by the boarding and rooming houses. The weekly expense most often reported is \$3.00 and the average is little more (\$3.19 for all earning less than \$12.50). Only 2.5 per cent spend as

Expense for
food reported
by employees

much as \$5.00 per week. About one per cent report an expenditure of less than \$2.00; in all probability these are girls who earn two

or three meals a day by helping in the dining room or kitchen, and buy an occasional or perhaps a daily lunch down town. Approximately one-fifth declare that they spend \$2.00 and under \$3.00 per week. Of these a considerable proportion are doubtless engaged in light housekeeping and probably pay in increased room rent or extra gas bills much of what they save in food. When all allowances for these two causes for a small food outlay have been made, the proportion

Table 77.

Expenditure for food of females living adrift in the Twin Cities and earning less than \$12.50 per week.

Expenditure per week for food	Earning less than \$12.50			Earning \$6.50 and under 8.50		
	Number	Per cent of all reporting	Cumu- lative per cent	Number	Per cent of all reporting	Cumu- lative per cent
Total number of schedules	1,731			572		
Not reporting food separately	579			217		
Schedules reporting separately	1,152	100.0		355	100.0	
No expense for food	7	.6	.6	4	1.1	1.1
Expense less than \$1.00	0	.0	.6	0		1.1
\$1.00 and under \$1.50	0	.0	.6	0		1.1
1.50 " " 2.00	4	.3	.9	2	.6	1.7
2.00 " " 2.50	96	8.3	9.2	32	9.0	10.7
2.50 " " 3.00	153	13.3	22.5	61	17.2	27.9
3.00 " " 3.50	404	35.1	57.6	144	40.6	68.5
3.50 " " 4.00	242	21.0	78.6	74	20.8	89.3
4.00 " " 4.50	197	17.1	95.7	34	9.6	98.9
4.50 " " 5.00	21	1.8	97.5	4	1.1	100.0
5.00 " " 5.50	25	2.2	99.7			
5.50 " " 6.00	1	1	99.8			
6.00 and over	2	.2	100.0			
Average expenditure for those reporting separately		\$3.19			\$3.01	

spending less than \$3.00 per week is distressingly large. Of all earning less than \$12.50, 22.5 per cent spend less than this amount. Evidently a great many of the poorly paid working girls of the Twin Cities who receive no outside support, must be receiving insufficient food. Of the wage group \$4.50 to \$6.50, the proportion spending less than \$3.00 for food is 43.6 per cent. Indeed, 18.6 per cent spend less than \$2.40 per week. It will be recalled that no establishment visited by the commission's field agents offered board of two meals for anything less than \$2.50.

It will be asked, how reliable are the reported expenditures for food? In the opinion of the writer the answers to this question returned by women living away from home are trustworthy, as

(9)
Accuracy
of the re-
plies as to
food.

much so as those to any inquiry on the schedule.

The question was answered by all the tabulated schedules either separately or in conjunction

with that concerning room rent. The expenditure is a constantly recurring one, distinctly uniform in amount, frequently paid in a lump sum and expressed in round numbers. If the worker could remember any item of expenditure she could remember her weekly board bill. If the schedule was made out in good faith there seems little reason to suppose the replies are not accurate. A possible source of error is the inclusion of schedules of women sharing their reported food with some dependent person. It is believed that most of such cases were eliminated in editing.

(9) Question 4 of the employee's schedule, "What are you spending for food per week?"

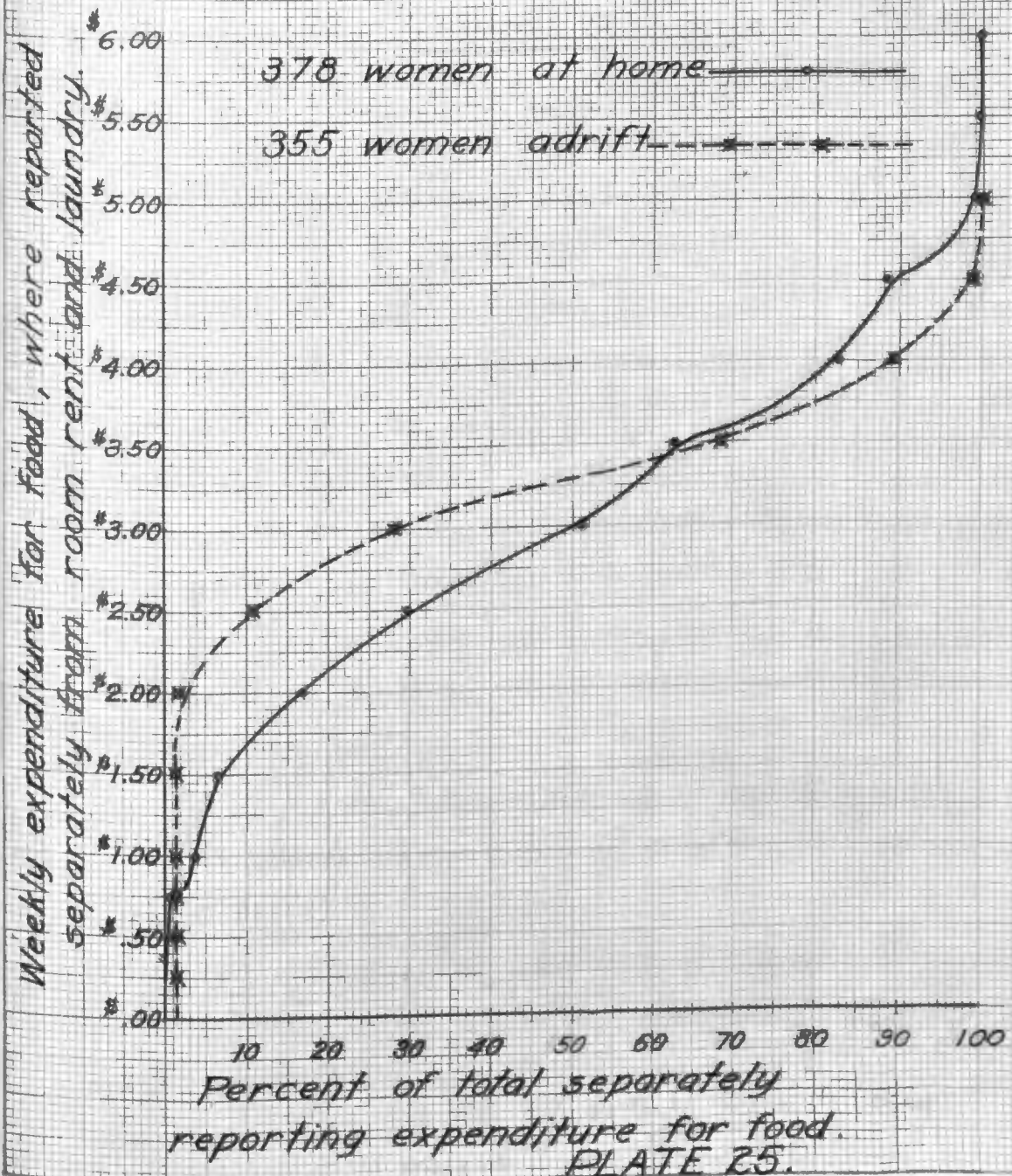
The distribution of the expenditures for food reported by women adrift earning \$6.50 and less than \$8.50 is shown graphically in Plate 25. For comparison, the curve of girls living at home in the corresponding wage class, is plotted to the same

scale. The curve of women at home can be interpreted only by inference, since the reported expenditures for food may be simply a nominal form of contribution to the maintenance of the home. It seems probable that the larger proportion of women at home who spend \$4.00 and \$4.50 for board indicates a higher standard of living manifesting itself in a more palatable and nourishing diet. The larger proportion of women living at home who spend less than \$2.00 are evidently reporting expenditures of from \$.75 to \$2.00 for lunches which are far more generous than can be afforded by women who must make \$3.00 suffice for the twenty-one meals of the week.

The food consumption statistics are difficult of interpretation. They suggest a widespread lack of nourishing food among the poorer working girls. In a question of such fundamental importance, careful dietary studies of the nutritive value of the food consumed by these girls who are spending only \$2.00 and \$2.50 a week are a pressing necessity.

25. Comparative weekly expenditure of women at home and adrift for FOOD where separately reported from room rent and laundry.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.



3. Room and board combined.

a-Field survey.

A much larger number of places were visited offering board and room combined for a weekly price (Table 78) than those offering board separately. Little was ascertained about the quality of the food and accommodations afforded by these places, but they

Survey of places offering room and board combined.

were roughly classified by the number of meals included and the number of persons in a room. Ninety-eight prices for room and board of three meals are quoted in Table 78, 64 of which in-

clude exclusive use of a room, and 34, half of a double room. Fifty-four quoted prices of room and board of two meals, 44 for single rooms and 10 for double are given in the second half of the table. The price most often demanded for 3-meal board and a single room was \$5.00; for 3-meal board and half of a double room, \$4.00; for 2-meal board and room, \$4.00. The average price for 3 meals and single room was \$4.74. By rooming double it could be reduced about 50 cents. The average price for 3 meals and room was a little more than \$4.00.

Three dollars and fifty cents seems to be the lowest possible weekly allowance for room and board. Not one place in twenty offered such a rate. Of even this small fraction some cases were exceptional, as for example the not infrequent case of a lonely woman desiring a companion. A considerable number of places offered three meals and share in a double room for \$3.50. Two-meal board and room could be had without difficulty at this price, and

Table 78

Places in the Twin Cities offering room and board combined for a weekly price. June and July, 1914.
Places frequented by working women.

PLACES IN THE TWIN CITIES OFFERING ROOM AND BOARD COMBINED FOR A WEEKLY PRICE. JUNE AND JULY, 1914
Places Frequented by Working Women

	Room and Three Meals									Room and Two Meals								
	Total			Rooming Single			Rooming Double			Total			Rooming Single			Rooming Double		
	Number	Per Cent of Total	Cumulative Per Cent	Number	Per Cent of Total	Cumulative Per Cent	Number	Per Cent of Total	Cumulative Per Cent	Number	Per Cent of Total	Cumulative Per Cent	Number	Per Cent of Total	Cumulative Per Cent	Number	Per Cent of Total	Cumulative Per Cent
All prices.....	98	100.0	.....	64	100.0	.....	34	100.0	.....	54	100.0	.....	44	100.0	.....	10	100	.....
Under \$3.00 per week..	†2	2.0	2.0	†2	3.1	3.1				†9	16.7	16.7	†8	18.2	18.2			
\$3.00 and under \$3.50	2	2.0	4.0	1	1.6	4.7	1	2.9	2.9	10	18.5	35.2	7	15.9	34.1	1	10	10
3.50 and under 4.00..	10	10.2	14.2	4	6.3	11.0	6	17.6	20.5	10	18.5	53.7	14	31.6	65.7	3	30	40
4.00 and under 4.50..	†19	19.4	33.6	†8	12.5	23.5	11	32.4	52.9	†14	25.9	78.6	†12	27.3	93.0	2	20	60
4.50 and under 5.00..	18	18.4	52.0	9	14.1	37.6	9	26.5	79.4	7	13.0	91.6	4	9.1	100.0	3	30	90
5.00 and under 5.50..	35	35.7	87.7	29	45.3	82.9	6	17.6	97.0	10	18.5	100.0	9	20.5	100.0	1	10	100
5.50 and under 6.00..	4	4.1	91.8	4	6.3	89.2			97.0	1	1.9	98.9	1	2.3	100.0			
6.00 and over.....	8	8.2	100.0	7	10.9	100.0	1	2.9	100.0	3	5.6	100.0	3	6.8	100.0			
Average price.....	\$4.57			\$4.74			\$4.25			\$4.13			\$4.16			\$4.00		
Price most often demanded.....	\$5.00			\$5.00			\$4.00			\$4.00			\$4.00					

†Including one case where landlady desired a companion.

Note—In addition to the cases cited in the table 4 places were visited in which the girl paid for part of her board and lodging by helping with the house work or in the kitchen. The additional cash payment was less than \$3.00 per week, but of course this does not represent the cost of the room and board to the girl.

* Clipped from First biennial report of Minnesota Minimum Wage Commission, 29, for which it was prepared by the author.

in not a few instances was offered at \$3.00. It is to be remembered, however, that many of these lower prices are partly to be explained by the car fare differential. To take advantage of them frequently means 30 to 60 cents additional car fare per week.

A certain allowance must also be made for lunches. On Saturday evenings and during the Christmas rush and season of stock-taking many retail clerks work into the evening and must buy a supper or go hungry. Seventy-five cents to a dollar in the case

of the 2-meal board and 25 cents in that of 3-meals seem a not unreasonable allowance for these additional expenditures for food. The minimum standard thus could not possibly be less than \$3.75, and few who have seen the bare rooms or tasted the meager fare it procures could urge that \$4.00 or even \$4.50 were in themselves extravagant.

b- Employees' reports.

Turning to the reports of the employees as to the combined cost of room rent and food (Table 79) it will be seen that a considerable number are living below the minimum standard. Twenty-two per cent of women adrift earning less than \$13.50 per week are spending under \$3.75, our estimated minimum allowance. Thirty and nine-tenths per cent spend less than \$4.00, the sum estimated by the employers on the mercantile sub-committee on room and board as the minimum allowance. Nearly three-fourths (72.5 per cent) spend

Cost of room and food as reported by employees.

(10) Obtained by graphic interpolation.

Table 79.

Weekly expenditure for room and board of females living adrift in the Twin Cities and earning less than \$12.50 per week.

Expenditure per week for room rent and board *	Total earning under \$12.50			Earning \$6.50 and under \$8.50			Earning \$4.50 and under \$6.50		
	Number	Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent
Total schedules	1,731	100.0		572	100.0		329	100.0	
Expense nothing, working for room and board	5	.3	..3	2	.3	.3	3	.9	.9
Expense less than \$2.00	7	.4	.7	2	.3	.3	5	1.5	2.4
\$2.00 and under \$2.50	15	.9	1.6	3	.5	1.1	8	2.4	4.9
2.50 " " 3.00	52	3.0	4.6	21	3.7	4.8	24	7.3	12.2
3.00 " " 3.50	162	9.4	14.0	68	11.9	16.7	65	19.7	31.9
3.50 " " 4.00	292	16.9	30.9	100	17.5	34.2	113	34.4	66.3
4.00 " " 4.50	380	22.0	52.9	161	28.2	62.4	80	24.3	90.6
4.50 " " 5.00	340	19.6	72.5	133	23.3	85.7	23	7.0	97.6
5.00 " " 5.50	250	14.4	86.9	58	10.1	95.8	7	2.1	99.7
5.50 " " 6.00	108	6.2	93.1	20	3.5	99.3	1	.3	100.0
6.00 " " 6.50	72	4.2	97.3	4	.7	100.0			
6.50 " " 7.00	32	1.8	99.1						
7.00 " " 7.50	16	.9	100.0						
7.50 and over									
Average for all schedules		\$4.39			\$4.13				

* Laundry frequently included or done by girl herself.

less than \$5.00, the minimum allowance of the Twin City Manufacturing Board, while 65.6 per cent (11) and 69.0 per cent (11) spend less than the estimates of the Twin City mercantile and Duluth boards, which were \$4.80 and \$4.90 respectively.

The average expenditure was \$4.39, and \$4.00 was that most commonly reported. More than one-fifth (23.0 per cent) spent between \$4.00 and \$4.50 per week.

A slight margin of error is introduced into the average by the fact that 3.9 per cent of the total received, in exchange for the weekly payment, washing in addition to room and board. If this error could be eliminated it would slightly lower the actual cost of room and food.

It is evident that the minimum allowances for room rent and food adopted by the three boards are considerably above the actual expenditures of the workers themselves. The lowest of the allowances, the figure of \$4.80 adopted by the mercantile board, was itself an average, and is a trifle higher than the average price charged for a single room and board of three meals by the ninety-eight families and boarding houses in-

Estimates of boards above the minimum

spected by the commission. Mr. Draper Dayton, in moving an allowance of \$4.00 before the same

board, argued with justice that the minimum was not by the nature of the things to be based upon an average, and pointed out that approximately one-half of the thirty-four places offering three meals and a share of a double room charged \$4.00 or less. At all events, the manufacturing board's allowance of \$5.00 per week is

(11) Obtained by graphic interpolation.

above the minimum of decency. The average expenditure of women adrift earning under \$12.50 was only \$4.39. The field survey showed an abundance of places in the Twin Cities (37.6 per cent of the total for single lodging, 79.4 per cent for double lodging) offering room and board of three meals for under \$5.00 per week. In short, it seems that Mr. Dayton's estimate of \$4.00, at prices prevailing in 1914,^{was} a not unreasonable minimum weekly allowance for room and board.

In this connection estimates of the cost of board and room made by other investigators are of interest.
(12)

(12) Quoted from Persons, C. E., Estimates of a living wage for female workers, in Quarterly Publications of the American Statistical Association, June, 1915, 568.

Table 80.

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<u>Locality</u>		<u>Weekly cost of room and board</u>
Kentucky	(1911) ⁽¹³⁾	\$4.00
Baltimore	(1909) ⁽¹⁴⁾	3.60
St. Louis	(1914?) ⁽¹⁵⁾	5.50
Kansas City	(1913) ⁽¹⁶⁾	5.00
Massachusetts (Brush-makers wage board)	(1914) ⁽¹⁷⁾	5.50
Massachusetts (Social workers estimate)	(1913) ⁽¹⁸⁾	6.48
Portland, Oregon,	(1913) ⁽¹⁹⁾	5.80
Minnesota (Average of estimates of three boards)	(1914) ⁽²⁰⁾	4.90
Minnesota (Estimated subsistence minimum)	() ⁽²¹⁾	4.00

(13) Kentucky, Report of Commission to Investigate the Condition of Working Women, 5.

(14) Butler, Elizabeth Beardsley, Saleswomen in mercantile stores, 115.

(15) Estimate of the School of Social Economy of Washington University.

(16) Kansas City, Report on wage-earning women, 80.

(17) Massachusetts, Statement and decree concerning the wages of women in the brush-making industry, App. No. 1

(18) Massachusetts, Report of Commission on Minimum Wage Boards, App. D., 222.

(19) Oregon, Report of Social Survey Committee of the Consumer's League on Wages of women, 67.

(20) Minnesota Minimum Wage Commission, First biennial report, 37.

(21) Supra., 415.

Comparisons of these allowances are dangerous because of local variations in the cost of living, and it is to be remembered that they are not all of equal authority. It is noteworthy, however, that except for the Baltimore and Kentucky estimates, both of which were of earlier date and represented sections where

Estimates of other investigations.

the cost of living is admittedly lower than in the Twin Cities, they confirm the conclusions of the Minnesota advisory boards. The wide differences are due to a difference in the standard set. The Baltimore and Kentucky estimates obviously aimed to strike the level of subsistence, while the interpretation of the other investigations was more liberal. No one familiar with room rents and food prices would regard \$5.00 or even \$6.00 per week as an extravagant expenditure for board and lodging. As an ideal of social justice, few would take exception to the thesis that no human being ought to be compelled to live below such a level. As the basis of a minimum wage for adult experienced women as distinct from young and inexperienced workers, an allowance of \$4.90 is not impracticable. Nevertheless the fact is incontrovertible that on the basis of 1914 prices it was possible to obtain food and shelter in the Twin Cities, of a kind which a considerable proportion of the people of the state would not regard as insufficient or indecent, for as little as \$4.00 per week. About one-third of the self-supporting women earning less than \$13.50 per week appear to get along on less. Moreover, one-third of the prices quoted for board of three meals and room were for \$4.00 a week or less.

A liberal interpretation of the term "reasonable living" as used by the law would assuredly justify an allowance of \$5.00

for room and food. The minimum allowance consistent with health and decency, the writer believes, should be fixed at \$4.00 per week.

Even at this greatly reduced estimate the proportion of self-supporting women who are existing below the minimum standard amply demonstrates the social necessity of alleviating their condition. Three-tenths of the total earning under \$12.50, one-third of those earning from \$6.50 to \$8.50, and two-thirds of the group \$4.50 to \$6.50 are living below the minimum standard of health and respectability in food and lodging. (22)

4. Laundry

The weekly allowances for laundry made by the three boards were:

Table 81.

Twin City Manufacturing Board	\$.45
Twin City Mercantile Board .....	.50
Duluth Board .....	.50

These estimates were based almost entirely upon the average expenditures reported by the employees themselves. The sub-committees were influenced by the reports of "other committees of other states dealing with the same problem..... The Oregon report indicates that 50 cents was the minimum allowed for laundry in that state and the social workers' estimate in the Massachusetts commission report was 55 cents. (23)

(22) The writer had no part in investigating the cost of room and board in Duluth and the smaller cities of the state. The results are therefore not presented in this paper. They will be found summarized in First biennial report of the Minnesota Minimum Wage Commission, 30-31, 39-40.

(23) Report of sub-committee of the manufacturing board on miscellaneous expenditures, in Minnesota Minimum Wage Commission, First biennial report, 44.

No item in the budget of the working girl shows greater variation than that of laundry. The expenditures reported varied from nothing to more than \$2.00 per week. A strong girl, who has access to laundry tubs and irons in the house where she rooms, may do all her own washing evenings and holidays. Those to whom washing is a physical impossibility or excessively distasteful or who are earning comfortable salaries may spend from \$.75 to \$3.00, depending upon their individual habits.

The following list of the clothing which might be sent to the wash by a stenographer or successful saleswoman earning \$12.00 or more per week is submitted, not in the hope that any two persons will agree upon it, but rather to show that the expenditures of \$2.00 and \$3.00 or even \$4.00 per week reported by some of the employees, are by no means impossible. The list was compiled by a stenographer and a statistical clerk in the office of the wage commission.

Table 82.

During winter.

Article	Number	Cost at average prices of four St. Paul laundries.	Cost at Chinese laundry	Cost when taken to a washerwoman.
Skirt	1	\$.25	\$.30	\$.20
Waists	2	.40	.30	.30
Combination suits	2	.50	.30	.40
Night gowns	2	.30	.25	.20
Stockings	3 pair	.15	.15	.12
Handkerchiefs	14	.42	.21	.14
Vests	2	<u>.10</u>	<u>.10</u>	<u>.10</u>
Total for the week		\$2.12	\$1.61	\$1.46

Article	Number	Cost at average prices at four St. Paul laundries	Cost at Chinese laundry	Cost when taken to washerwoman
Dresses	3	\$1.00	\$.60	\$.50
Skirts	3	.75	.60	.60
Waists	3	.50	.30	.30
Combination suits	3	.50	.30	.40
Nightgowns	3	.30	.25	.20
Stockings	3 pair	.15	.15	.13
Handkerchiefs	14	.42	.21	.14
Vests	3	.15	.15	.15
Total for the week		\$3.37	\$2.58	\$2.41

To have all washing done at a steam laundry is obviously beyond the purse of all but the highest paid clerks and buyers, and even the cost when taken to the home of a washerwoman is no small item of expense. In consequence the great majority of independent women do at least a part of their washing themselves. The decreasing proportion with increasing income of those who do their own work entirely will be seen in the following table.

Table 83.

	Wage per week					
	Total earning under \$12.50	\$4.50 and under \$6.50	\$6.50 and under \$8.50	\$8.50 and under \$10.50	\$10.50 and under \$12.50	\$12.50 and over
Per cent of women adrift who do all their own washing . *	33.4	42.3	34.4	30.4	19.4	14.2

* Reporting expense as nothing, presumably doing their own washing.

A glance at Table 83 shows that approximately one-third of the 1,731 women living adrift in the Twin Cities and earning under \$12.50 per week habitually spent nothing for washing. Sixty-seven, or 3.9 per cent of the total, reported that their payments for board and room included laundry work. The remainder, 32.4 per cent of the total, indicated that they spent nothing for laundry, presumably doing all their own washing. It is worthy of emphasis that the great majority of the 63.7 per cent who reported some expenditure for laundry must have done a part of their own work.

The replies of those who reported an expenditure for laundry were evidently the roughest of estimates. The curves of Plate exhibit an extraordinary concentration of instances at 35 cents, 50 cents, 75 cents, and \$1.00. Averages of actual weekly expenditures would be unlikely to result in such a preponderance of round numbers. Many of the estimates were extravagant and obviously beyond the means of the girl reporting. These were freely reduced in editing. Little reliance therefore can be placed upon the expenditures reported. They represent the impressions of some 1,100 women and girls concerning a constantly recurring but variable expense for which no record was kept. The more extravagant of these impressions have been reduced by the statistician to within the limits of inherent probability.

Such as they are, the expenditures reported indicate that the great majority of self-supporting women do at least a part of their own washing and send out rather irregularly a few garments which require unusual skill in starching or ironing. Most of the sums reported were too small to pay for even a modest washing.

Table 84.

Weekly expenditure for laundry of females employed in mercantile and manufacturing establishments in the Twin Cities and earning under \$12.50 per week.

Expenditure per week for laundry.	Adrift		At home	
	Number	Total earning less than \$12.50	Number	Earning \$6.50 and under \$8.50
		Cumulative per cent of total spending		Cumulative per cent of total spending
Total schedules	1,731		572	1,222
Reporting no expense for laundry	628		225	*
Laundry reported as "included" with room and board	67		28	*
Expense reported as "nothing", pre- sumably done by girl herself	561		197	*
Reporting an expense	1,103	100.0	347	296
\$.05 and under \$.10	2	.2		
.10 " "	20	2.0	7	2.0
.15 " "	18	3.6	5	3.4
.20 " "	38	7.0	13	7.1
.25 " "	136	19.4	51	21.8
.30 " "	85	27.1	36	32.2
.40 " "	52	31.8	20	38.0
.50 " "	436	71.3	143	79.2
.60 " "	54	76.2	12	82.7
.70 " "	128	87.8	38	93.6
.80 " "	18	89.4	4	94.8
.90 " "	5	89.9	2	95.4
1.00 and over	111	100.0	16	100.0
Average for all schedules		\$.33		\$.29
Average for those reporting an expense		.52		.47
				\$.55

* The replies of women at home do not subject themselves to this classification.

26. Comparative weekly expenditure for LAUNDRY of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

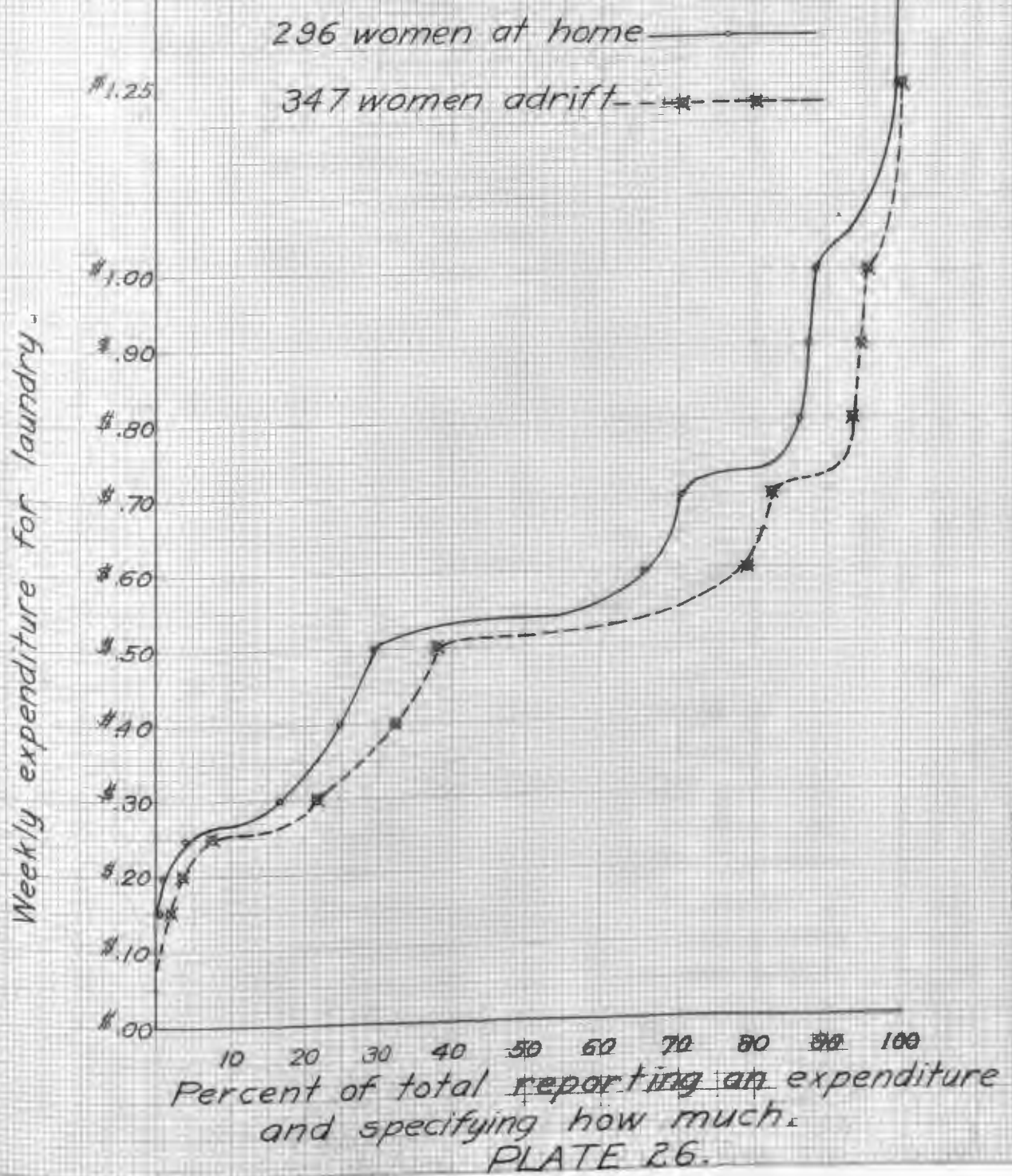


PLATE 26.

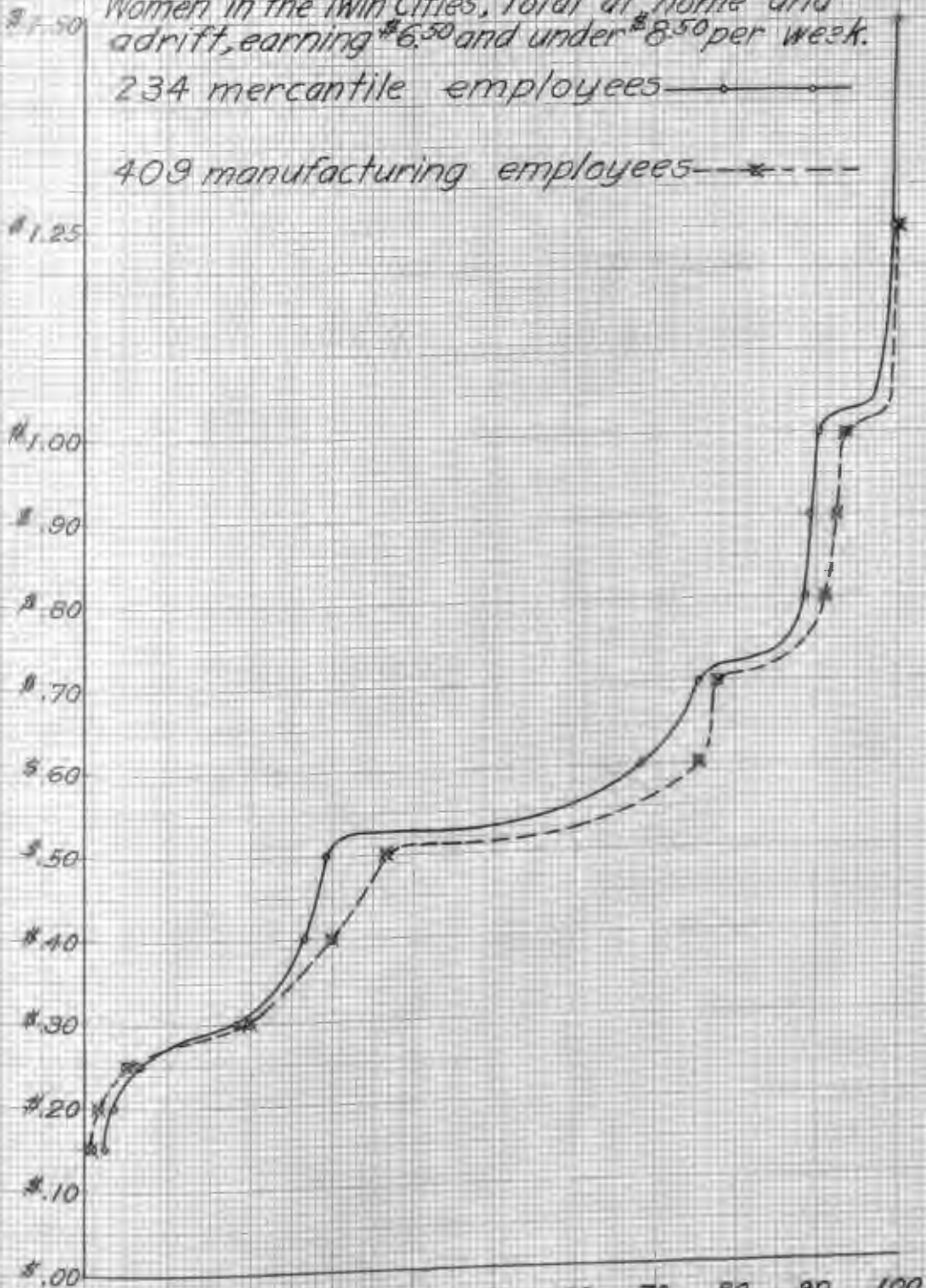
27. Comparative weekly expenditure for LAUNDRY of mercantile and manufacturing employees.

Women in the Twin Cities, total at home and adrift, earning \$6.50 and under \$8.50 per week.

234 mercantile employees ————○———

409 manufacturing employees ————x———

Weekly expenditure for laundry.



Percent of total reporting an expenditure and specifying the amount.

PLATE 27.

495

The average expenditure for the wage group earning under \$12.50 who spent nothing at all was 52 cents per week. The average thus closely approximates the mode. Forty per cent of all spending reported 50 cents per week, and about 70 per cent spent this amount or less. For all women whether spending anything or not the average cost was 33 cents per week. The writer concludes that this sum (35 cents in round numbers) should be made the basis of the minimum allowance rather than 50 cents, the figure adopted by the commission, based upon the average for all spending. The commission's contention that the average of the schedules reporting an outlay should be taken as a type, rather than the average of all schedules whether spending or no, has a certain validity in dealing with contingent expenditures such as doctor's bills, which may constitute a sudden and unforeseen drain upon the resources of the worker. But expenditures such as laundry can be estimated accurately for an indefinite period in advance while the item of laundry may fluctuate from week to week, and particularly from winter to summer, from year to year, ceteris paribus, it should remain the same. The allowance of 50 cents per week is a standard enjoyed by only 43.4 per cent of the self-supporting workers earning less than \$12.50, if the revised employees' returns be accepted as an indicator of the facts; while a larger number (45.0 per cent) either spend nothing at all or get along on less than 35 cents.

Plate 26, presenting ogive curves for the expenditure of women at home and adrift, shows the higher standard of living of women at home earning the same wage (\$6.50 to \$8.50) as expressed in a consistently higher expenditure. A higher expenditure is also reported by mercantile than by manufacturing employees, probably

a result of the pressure brought upon saleswomen to present a neat appearance. It is to be noted that many sedentary occupations such as those of stenographer and clerk, which entail perhaps the most frequent changes of clothing, are those in which the vigorous exercise of rubbing out clothes for an hour or two a week might be distinctly beneficial.

The advisory boards' allowance of 50 cents is confirmed by the judgment of the Kentucky, Baltimore and Portland investigations, (24) and the social workers' estimate in Massachusetts. Lower allowances were made in St. Louis (25 cents), in Kansas City (40 cents), and in Massachusetts by the brush-maker's board (20 cents).

The conclusion seems warranted that 50 cents is not an extravagant weekly allowance for laundry under a liberal interpretation of the law, but that 30 cents is an allowance which works no serious privation on the working girl of the Twin Cities. Either figure, it is to be noted, assumes that much of the washing be done by the girl herself, a result which to many workers in sedentary occupations is salutary.

(24) Cf. table in Persons, C.E., Estimates of a living wage, in Quarterly Publications of the American Statistical Association, June, 1915, 568.

5. Room rent, food, and laundry combined.

It was pointed out at the beginning of the chapter that, because of unavoidable overlapping, the items of room rent, food, and laundry could best be studied in conjunction with one another. Since the amount of time and money expended on laundry is an index of personal cleanliness, the item of laundry has an indirect bearing on health. If medical attention be considered as directed to the restoration of health, the three items room, food and laundry affect more than any others the maintenance of health. The expenditures for these purposes of the 1,731 Twin City working women earning less than \$13.50 are given in Table 85.

Table 85 and its accompanying frequency curve (Plate 28) are the most significant of the commission's data on the cost of living. The curve represents only women and girls living away from their parents and so far as known self-supporting. The higher paid women (over \$12.00 per week) who are amply able to fend for themselves in the world are not included. The mode is \$9.29. The average and median expenditure coincide at \$4.73 per week. Exactly one-half of the females included spend more than this sum. The first and third quartiles are \$4.07 and \$5.46 respectively.

We are now in a position to demonstrate the effect of the minimum allowance of the advisory boards, if it could be enforced, upon the standard of living prevailing among self-supporting working women in the Twin Cities. The average of the minimum allowances of the two Twin City boards for room, food, and laundry is in round

Table 85.

Expenditure for room rent, food, and laundry of women employed in mercantile and manufacturing establishments in the Twin Cities, earning less than \$12.50 per week.

Expenditure per week for room rent, food, and laundry	Adrift			At home					
	Number	Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent	Number	Per cent of total	Cumu- lative per cent
Total schedules	1,731	100.0	.	572	100.0		1,029 *		
No expense, (working for room, board, and laundry)	5	.3	.3				1	.1	.1
Expense less than \$.50							8	.8	.8
\$.50 and under \$1.00	1	.1	.4	2	.4	.4	18	1.7	2.5
\$1.00 " " 1.50	4	.2	.6				39	3.8	6.3
1.50 " " 2.00				2	.4	.8	50	4.9	11.2
2.00 " " 2.50	11	.6	1.2	12	2.1	2.9	96	9.3	20.5
2.50 " " 3.00	31	1.8	3.0	46	8.0	10.9	148	14.4	34.9
3.00 " " 3.50	109	6.3	9.3	81	14.2	25.1	159	15.4	50.3
3.50 " " 4.00	226	13.1	22.4	128	22.4	47.5	179	17.4	67.7
4.00 " " 4.50	326	18.8	41.2	138	24.1	71.6	111	10.8	78.5
4.50 " " 5.00	318	18.4	59.6	106	18.5	90.1	140	13.6	92.1
5.00 " " 5.50	294	17.0	76.6	42	7.3	97.4	45	4.4	96.5
5.50 " " 6.00	172	9.9	86.5	10	1.7	99.1	22	2.1	98.6
6.00 " " 6.50	111	6.4	92.9	5	.9	100.0	9	.9	99.5
6.50 " " 7.00	63	3.6	96.5				4	.4	100.0
7.00 " " 7.50	27	1.6	98.1						
7.50 " " 8.00	21	1.2	99.3						
8.00 " " 8.50	7	.4	99.7						
8.50 " " 9.00	5	.3	100.0						
Average for all schedules		\$4.73			\$4.42			\$3.87	
First quartile		4.07			4.00			3.20	
Median		4.73			4.55			4.00	
Third quartile		5.46			5.08			4.83	
Mode		4.00			4.50			4.00	

* Total specifying an expenditure.

Table 85.

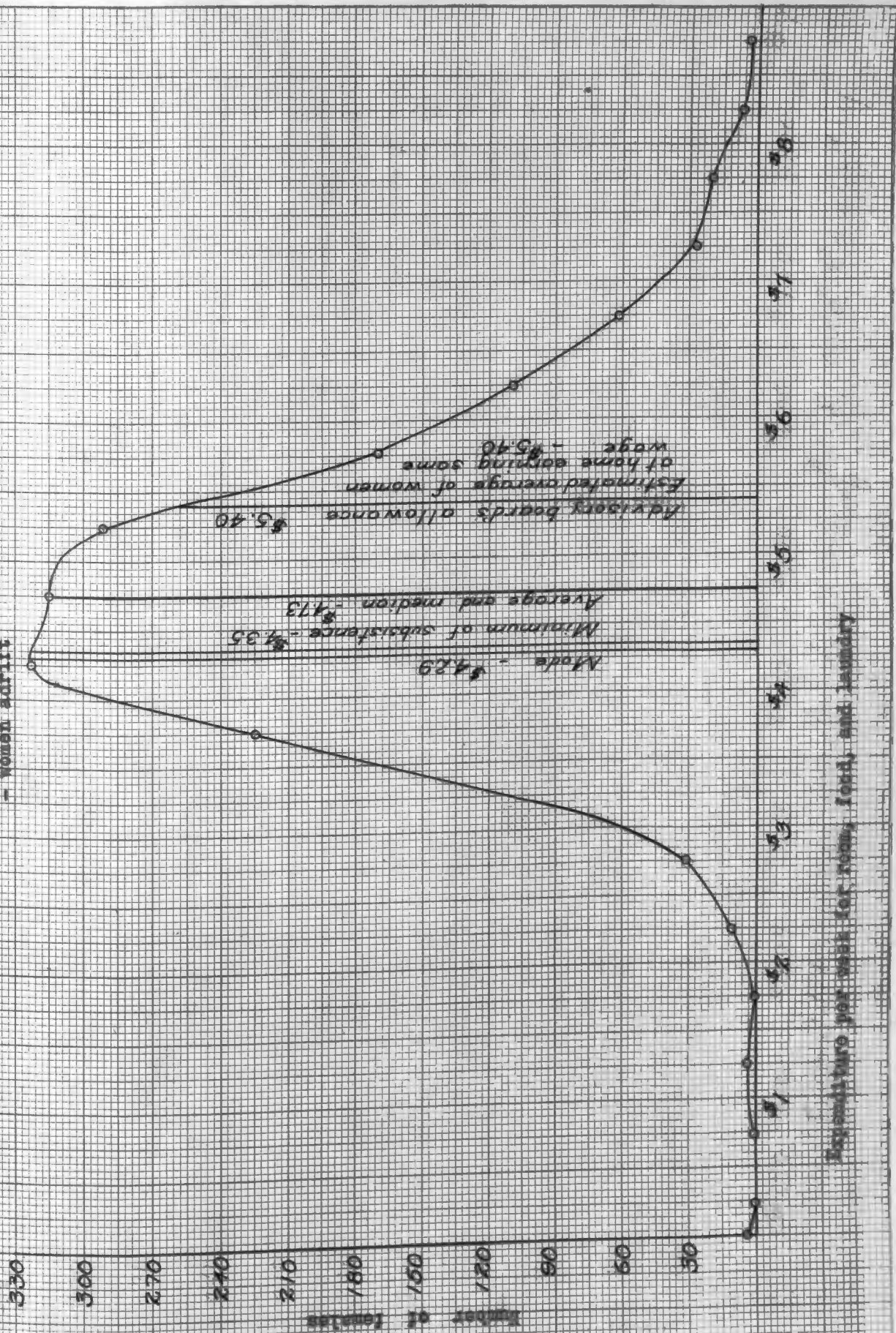
Expenditure for room rent, food, and laundry of women employed in mercantile and manufacturing establishments in the Twin Cities, earning less than \$12.50 per week.

Expenditure per week for room rent, food, and laundry	At home		At home		At home	
	Total earning under \$12.50	Earning \$6.50 and under \$8.50	Number	Per cent of total	Number	Per cent of total
Total schedules	1,731	572	1,023	100.0	1,023	100.0
No expense, (working for room, board, and laundry)	5	3	3	.3	3	.3
Expense less than \$1.50	1	2	2	.4	2	.4
\$1.00 "	4	6	6	1.2	6	1.2
1.50 "	11	12	12	3.0	12	3.0
2.00 "	31	46	46	9.3	46	9.3
2.50 "	109	81	81	22.4	81	22.4
3.00 "	226	128	128	41.2	128	41.2
3.50 "	386	138	138	59.6	138	59.6
4.00 "	318	106	106	76.6	106	76.6
4.50 "	294	82	82	86.5	82	86.5
5.00 "	172	10	10	92.9	10	92.9
5.50 "	111	5	5	96.5	5	96.5
6.00 "	63	27	27	98.1	27	98.1
6.50 "	21	7	7	99.3	7	99.3
7.00 "	7	5	5	99.7	5	99.7
7.50 "	7	5	5	100.0	5	100.0
8.00 "	7	5	5	100.0	5	100.0
8.50 "	7	5	5	100.0	5	100.0
Average for all schedules	\$4.73	\$4.42	\$4.42		\$4.42	
First quartile	4.07	4.00	4.00		4.00	
Median	4.73	4.50	4.50		4.50	
Third quartile	5.96	5.08	5.08		5.08	
Mode	4.00	4.50	4.50		4.50	

* Total specifying an expenditure.

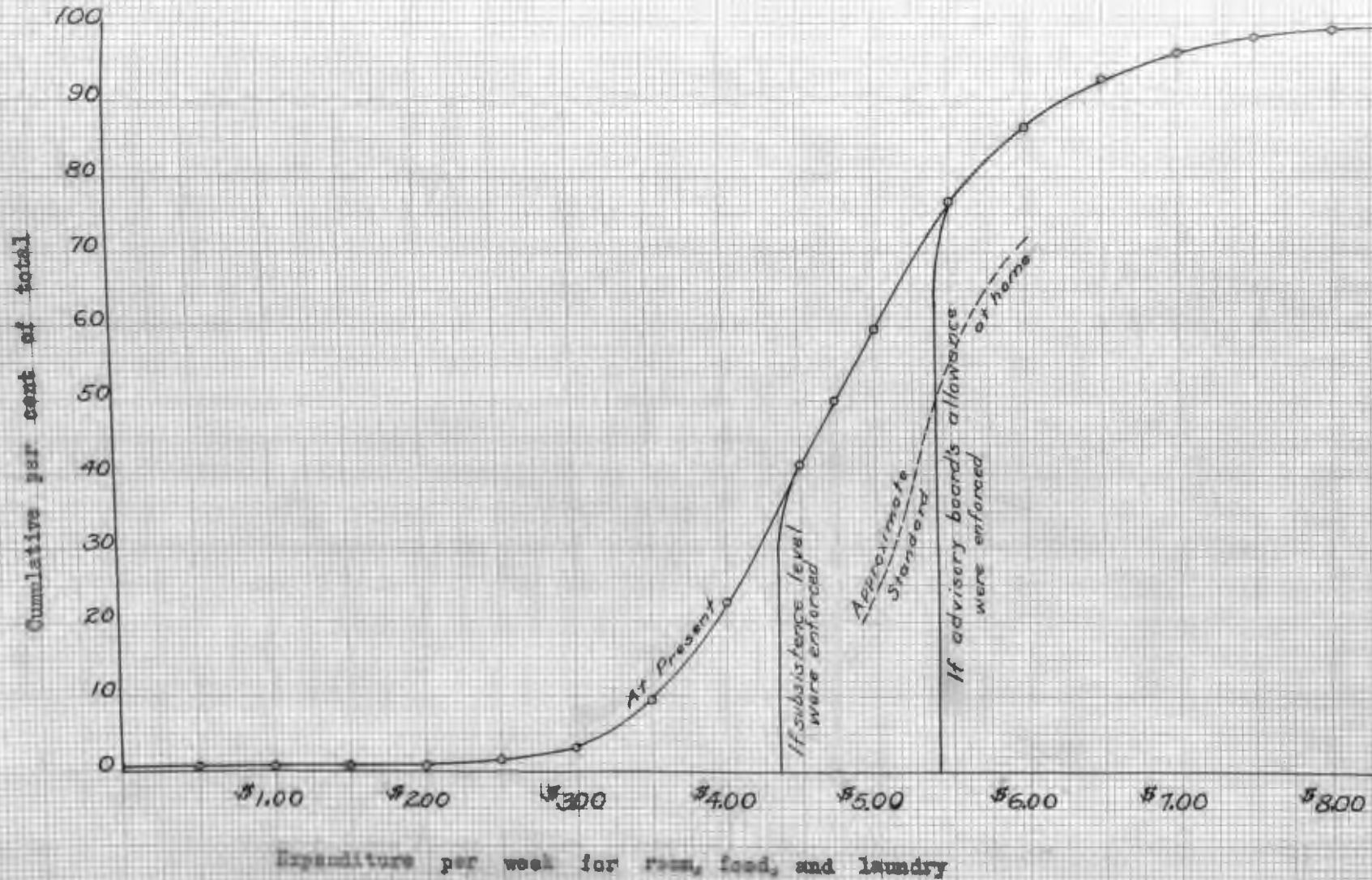
PLATE 25

Weekly expenditure for room rent, food, and laundry of females living in the twin cities and earning less than \$12.50 per week
 - women adrift



Expenditure per week for room, food, and laundry

Per cent of total females living adrift in the Twin Cities and earning under \$12.50 per week who spend less than specified sums for room, food and laundry



(25)
numbers \$5.40 per week. This figure is so far above the average (\$4.73) that nearly three-fourths of the employees are spending less than the commission's estimate. Only 26 per cent of the total number of self-supporting women earning under \$12.50 are living on or above a plane regarded by the boards as "reasonable." The immensity of the commission's undertaking to pull up the entire group to a standard at present maintained by only a fourth of those earning \$12.00 or less must be apparent.

The commission's assumed minimum standard is too high. It is higher than that of many girls living at home and sharing their earnings with their families, higher than the standard prevailing among their families as a whole. In Chapter V it is suggested that the maximum figure at which a minimum wage for women may justly be fixed is that wage sufficient to purchase for the self-supporting worker the standard of living at present enjoyed by her sisters in industry who live with their families. It is further suggested that in the Twin Cities the differential between the actual standard of living of the girl at home and that of the girl adrift who earns the same wage is approximately one-seventh. If the estimated differential be accepted for a moment as correct, the average value of the room, food and laundry enjoyed by the woman at home earning less than \$12.50 per week is one-seventh greater than that of the woman adrift, or \$5.40. This average cost of room and board, of the girls living at home, is exactly the figure proposed by the advisory boards as the minimum for women adrift. The recommendation

(25) The actual arithmetic average of the two is \$5.375.

of the boards thus amounts in fact to a proposition that no independent working woman shall live below a plane which is at present attained by only half of her dependent sisters earning the same wage, and, presumably, by only half of the entire working population, male as well as female, from which the ranks of wage-earning women are recruited.

Turning now to the probable effect of enforcing the minimum subsistence level, which we have placed at \$4.00 for room and board and 35 cents for laundry, it will be seen that 34.8 per cent of the wage-earners under \$12.50 per week spend less than this figure. If this minimum allowance were to be enforced, the task would be limited to raising the standard of one-third of the female workers receiving under \$12.50 to a level maintained or exceeded by the remaining two-thirds, an undertaking of itself sufficient to tax industry severely at its inception.

It is concluded that the advisory boards' minimum of \$5.40 for room rent, food, and laundry, subsequently accepted with but little change by the commission, while a not unreasonable interpretation of the language of the statute, is so high as to be impracticable.

Conclusion,
minimum allow-
ance for room,
food and laundry.

In view of the provision of the law that the living wage must be paid to beginners as well as experienced workers, and of the economic readjustment inevitably following

the enforcement of the minimum, a readjustment proportionate in its severity to the height at which the minimum rate is fixed, it would have been wiser at the outset to construe ^{narrowly} the phrase "living wages" as "subsistence wages." If the burden of a low minimum proved

light, to raise the wage progressively would have been a simple matter. Under such a construction of the statute, the minimum allowance for rent, food, and washing is estimated by the author at \$4.35 per week. At prices prevailing in 1914, this sum is sufficient to provide board of three meals and half of a double room, the use of facilities for washing and ironing, and an allowance for sending out a few garments which the girl cannot well wash herself.

CHAPTER VII

CLOTHING

The data upon which the advisory boards' allowances for clothing were based included lists of the articles of clothing necessary to an independent worker, which had been compiled and priced by sub-committees, and the statistics of actual expenditures obtained from the employees themselves. In treating of the item of clothing, the employees' reports will be discussed first.

1. As reported by female employees living adrift.

(1)

The inquiry on clothing was phrased: "How much did you spend for clothing during the last year?" The replies were in almost all cases estimates, often of the roughest, and are believed to be highly inaccurate. The question wisely asked, not for an estimate of the girl's average expenditure over a period of years, but rather for the sum actually spent during the preceding year. Even in this simpler form, accurate answers could be made to the question only by women who were in the habit of keeping accounts or who had the time and ability to recall in detail their expenditures. Clothing costs, recurring occasionally in varying amounts, are much less easily remembered than room rent and board. While the price of a suit or

Accuracy
of the
replies.

(1) Question 6 of the employees' schedule. Cf. Appendix IV, p. 576.

a winter coat may be remembered vividly for months or years, the total annual expenditure for clothing exists in the minds of most people only as a vague impression. The habit of keeping accounts is not a common one among working women. Replies based upon accounts could usually be detected, because they would naturally be expressed in odd sums rather than in round numbers; unfortunately the number of such replies was a negligible portion of the whole. In the absence of records of expenditures it would be possible for an intelligent woman to make a close estimate by setting down item by item the clothing purchased during the preceding year. However, to recall the small purchases particularly would require half an hour's reflection. That most of the girls were willing to spend so much time in answering a single question is improbable, as is indicated by the fact that the great majority of the replies were expressed in round numbers at intervals of \$25.00. The effect of the tendency to exaggerate the expenditure in order to produce a favorable impression cannot be determined; it is believed, however, that most of the schedules exaggerating intentionally were eliminated in editing.

Of 5,828 employees in the Twin Cities whose replies were tabulated by the commission, 19.6 per cent failed to specify the amount of their expenditures for clothing. In the case of a limited number who replied that they spent "all that was left after other bills were paid," the cost of clothing was supplied by subtracting the sum of the reported expenditures for other items from the wages received. The expenditures declared by the remainder varied from less than \$25 to more than \$400 per year. In many cases the replies were

Editing
the
replies.

evidently much too high. Expenditures of \$200 per year were not infrequently reported by girls adrift who were earning under \$8.50 a week. Rarely the expenditure given exceeded the wage. To eliminate these grosser errors, the expenditure of each schedule was examined in conjunction with the replies to other questions and reduced to within the limits of the wage, assuming no period of unemployment during the year. Extremely low expenditures, such as under \$25.00 per year, were, however, not raised to a more probable figure. The rigor of the process of editing is indicated by the average annual expense as reported by the women, unedited and as subsequently revised; for women adrift earning \$6.50 and under \$8.50, these averages were \$92.00 and \$76.00 respectively.

In interpreting the statistics of expenses for clothing it should be remembered that the individual replies represented actual expense for a single year rather than average annual expense.

The two may differ widely. A year of heavy expense for clothing may be followed by a year of economy, while it frequently happens that girls enter industry with an accumulation of clothing which makes immediate additions unnecessary. Averages of any considerable number of replies give, however, a measure of the average annual expense. As edited, the returns lie within the limits of inherent probability, the average expenses being below the minima allowed by the boards. They are to be accepted only as suggestive.

A distinct usefulness attaches to the unedited replies. While absolutely the margin of error is doubtless high, relatively, it should be the same in direction and magnitude for all classes reporting. Comparison of the unedited returns therefore may serve

Value
of the
returns.

Table 86

Expenditures for clothing during the preceding year reported
by female employees living adrift in the Twin Cities,
before and after revising improbable replies.

Annual expenditure for clothing	As originally reported				As edited by reducing improbable returns			
	Total earning under \$12.50 per week		Earning \$6.50 and under \$8.50		Total earning under \$12.50 per week		Earning \$6.50 and under \$8.50	
	Number	Cumulative per cent	Number	Cumulative per cent	Number	Cumulative per cent	Number	Cumulative per cent
Total answering question	1390		458		1390		458	
Expense less than \$25	25	1.9	15	3.3	43	3.1	15	3.3
\$25 and under \$50	127	11.0	46	13.3	153	14.1	55	15.3
50 " " 75	250	29.0	98	34.7	294	35.3	124	42.4
75 " " 100	246	46.7	85	53.3	291	56.2	113	67.1
100 " " 125	280	66.8	98	74.7	333	80.2	116	92.4
125 " " 150	117	75.2	32	81.7	112	88.3	23	97.4
150 " " 175	168	87.4	52	93.1	101	95.6	9	99.4
150 " " 200	53	91.3	12	95.7	28	97.6	2	99.8
200 " " 225	88	97.6	17	99.4	28	99.6	1	100.0
225 " " 250	7	98.1		99.4	3	99.8		
250 " " 275	20	99.5	3	100.0	2	99.9		
275 " " 300	2	99.6				99.9		
300 and over	5	100.0			2	100.0		
Average		\$103		\$92		\$87		\$76
Mode		\$100 and under \$125		?		\$100 and under \$125		\$50 and under \$75

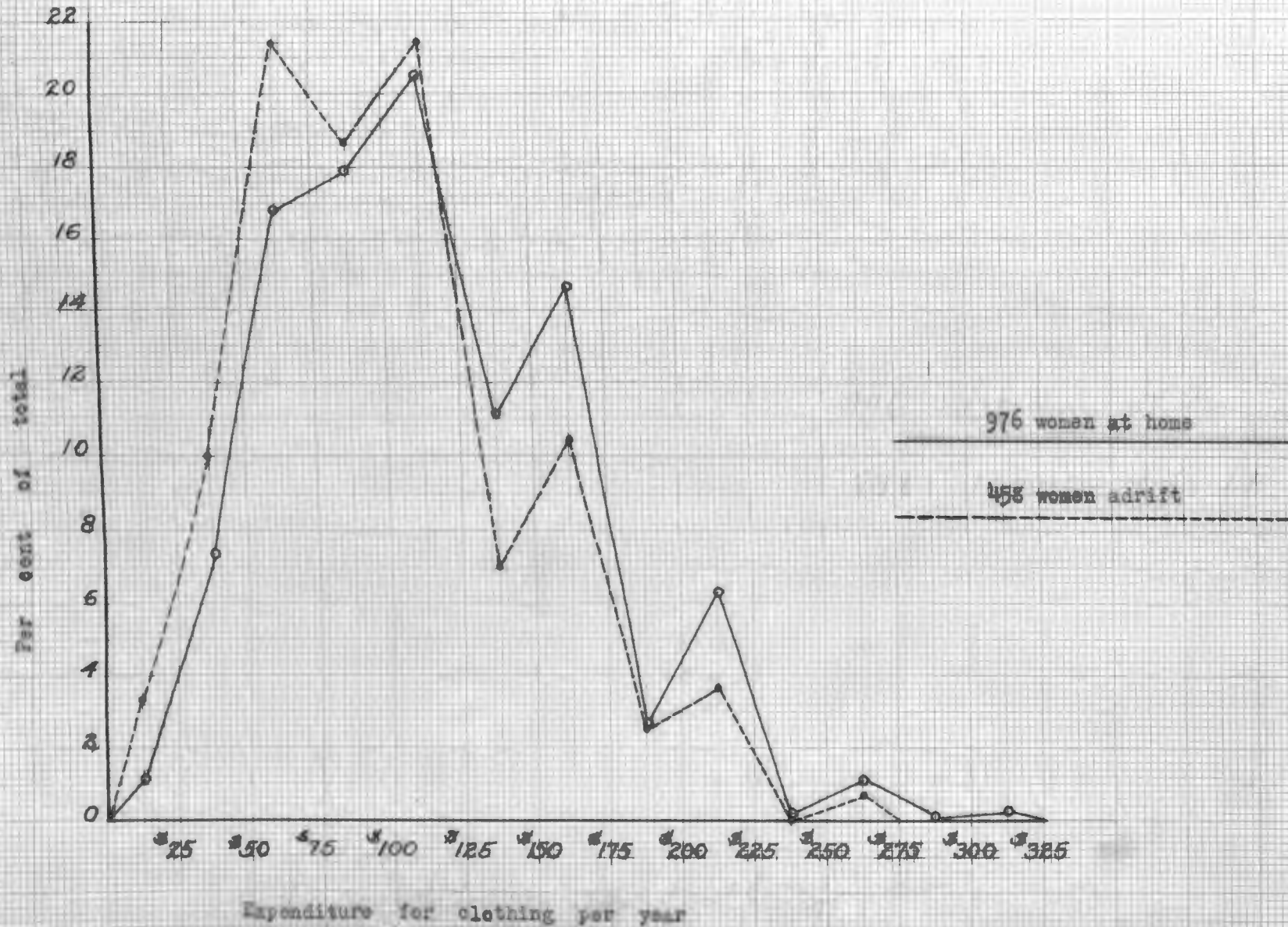
Table 86

Expenditures for clothing during the preceding year reported
by female employees living adrift in the Twin Cities,
before and after revising improbable replies.

Annual expenditure for clothing	As originally reported				As edited by reducing improbable returns.			
	Total earning under \$12.50 per week		Earning \$6.50 and under \$8.50		Total earning under \$12.50 per week		Earning \$6.50 and under \$8.50	
	Number	Cumulative per cent	Number	Cumulative per cent	Number	Cumulative per cent	Number	Cumulative per cent
Total answering question	1390		458		1390		458	
Expense less than \$25	25	1.9	15	3.3	43	3.1	15	3.3
\$25 and under \$50	127	11.0	46	13.3	153	14.1	55	15.3
50 " " 75	250	29.0	98	34.7	294	35.3	124	42.4
75 " " 100	246	46.7	85	53.3	291	56.2	113	67.1
100 " " 125	280	66.8	98	74.7	333	80.2	116	92.4
125 " " 150	117	75.2	32	81.7	112	88.3	23	97.4
150 " " 175	168	87.4	52	93.1	101	95.6	9	99.4
150 " " 200	53	91.3	12	95.7	28	97.6	2	99.8
200 " " 225	88	97.6	17	99.4	28	99.6	1	99.8
225 " " 250	7	98.1		99.4	3	99.8		100.0
250 " " 275	20	99.5	3	100.0	2	99.9		
275 " " 300	2	99.6			2	99.9		
300 and over	5	100.0			2	100.0		
Average	\$103		\$92		\$87		\$76	
Mode	\$100 and under \$125		?		\$100 and under \$125		\$50 and under \$75	

PLATE 30

Comparative expenditures for clothing of women in the Twin Cities at home and adrift, earning from \$5.50 and less than \$8.50 per week, (as reported by women without revision).



as a basis for conclusions as to the variation in clothing expenses caused by occupation, income, age, and family connection. The differential to be fixed between the minimum clothing allowance of retail store and factory employees can be determined by this method.

Table 86 presents the expenditures for clothing of women and girls living adrift in the Twin Cities, both as originally reported and as subsequently revised by reducing replies which were manifestly too high. One thousand three hundred ninety females earning less than \$12.50 reported an average expense of \$103 per year, an amount almost exactly equal to the allowance made by the Twin City manufacturing board. Two-thirds reported that they spent less than \$125. On revision, the average became \$87 and the proportion spending less than \$125, eighty per cent.

Summary
of the
returns

2. Estimate of cost of clothing prepared by investigators.

a- The Minnesota advisory boards.

The allowances made by the advisory boards for clothing were as follows: Table 87.

	<u>Per week</u>	<u>Per year</u>
Mercantile board	\$2.00	\$104
Manufacturing board	\$1.92	\$100
Duluth Board	\$2.00	\$104

The estimates were largely based upon the reports of the sub-committees of the two Twin City boards. Less heed was paid to the statistics of annual expenditures obtained from the employees.

Estimate of
the manufac-
turing board

The report of the sub-committee of the manufacturing board, illustrating both the results and the method by which they were reached is condensed (2) herewith.

"Your committee reports that it finds the cost of clothing 'sufficient to maintain a female worker and supply her with the necessary comforts and conditions of reasonable life,' so far as clothing is concerned, is \$1.92 per week.

"That the way in which such cost of clothing was ascertained was, first, by determining the articles of clothing necessary for such worker; and second, by affixing thereafter the minimum cost of such clothing to last the required period.

"The committee reports that it has been impossible to find even two persons or authorities who agree upon every item of such clothing, and believes from the nature of things, it is impossible for any number of persons to do agree. Any such list, therefore, must have some items priced too high, and some items too low, in the opinion of any critic. The committee has attempted to balance the different opinions of its members in such a way as to reach an average result."

43. (2) Minnesota Minimum Wage Commission, First biennial report,

Table 88.

<u>Items</u>	<u>Price</u>
1 heavy waist	\$1.50
4 light waists at \$1.00	4.00
1 stocking cap .....	.50
1 pair cloth gloves .....	.25
1 pair mittens .....	.50
1 pair leather gloves	1.00
2 suits heavy underwear	2.00
4 suits summer underwear at \$0.50	2.00
2 summer dresses	7.00
1 skirt	4.00
4 pair shoes	13.00
1 pair rubbers, lasting over two years, at \$0.75 .....	.50
2 working aprons .....	.50
1 winter coat, lasting over two years, at \$18.00	9.00
1 suit, lasting over two years, at \$19.00	9.50
1 heavy dress	8.00
1 slicker	3.00
1 Sunday dress	7.50
3 nightgowns at \$0.75	2.25
2 hats at \$3.00	6.00
2 corsets at \$2.00	4.00
4 corset covers at \$0.35	1.40
3 underskirts at \$0.80	2.40
1½ dozen handkerchiefs at \$0.05 .....	.90
2 pair dress shields at \$0.25 .....	.50
2 ties at \$0.30, ball string at \$0.15, pins and hooks at \$0.25, needles at \$0.10, buttons at \$0.20, thread at \$0.15, darning yarn at \$0.05; miscellaneous, \$0.30	1.50
12 pair stockings at \$0.25	3.00
Margin for unforeseen necessities	4.30
Total annual expenditure	
	\$100.00

"The cost of clothing a male minor is less than the cost of clothing a woman worker, so no separate list is made of his clothing."

The Twin City mercantile board as a whole adopted \$2.00 per week as the proper allowance for clothing. The board had under consideration two lists of the clothing necessary for a woman employed in a store, one prepared by a representative of the public, and the other by an employer, both of whom were members of the board. The first list called for

(3)

Of the mercantile board

(3) Ibid, 42.

a total annual expenditure of \$135.45, or with the 10 per cent discount usually allowed by department stores to their own employees, \$121.91. The second list could be purchased for \$2.00 per week, or \$104.00 per year, also allowing for the customary discount. This mercantile employer's estimate, coming from a man thoroly familiar with prices and quality of wearing apparel, as well as with the standards set the shop girl by convention and by the requirements of her employer, may be regarded as expert tho interest-ed testimony. The list follows:

Table 89.

2 hats	\$10.50
1 cap .....	.95
1 winter coat at \$16.50, lasting two winters	8.25
1 summer coat at \$15.00, lasting two summers	7.50
1 raincoat, lasting two years, at \$4.00	2.00
1 umbrella, lasting two years, \$2.00	1.00
1 skirt, lasting two winters, at \$5.00	2.50
1 skirt, lasting two summers, at \$5.00	2.50
1 sweater, lasting two years, at \$5.00	2.50
12 pair stockings at \$0.25	3.00
3 pair shoes at \$2.70	8.10
1 pair oxfords	2.25
2 pair rubbers	1.36
1 wool working dress	5.40
1 summer dress	2.00
1 summer dress, "best"	7.00
Corsets	3.00
2 sateen petticoats	1.40
Underwear including nightgowns	11.00
Handkerchiefs	2.00
Furs, lasting two years, at \$31.00	15.50
Gloves	3.00
Aprons, two at \$0.49, two at \$0.25	1.48
Waists	6.00
Neakwear and pins	1.50
Annual expenditure	\$104.00
Or a weekly expenditure of	\$ 2.00

The conclusion of the Duluth board, which fixed an allowance for clothing of \$104 per year, seems to have been based chiefly on the lists prepared in the Twin Cities, confirmed by inquiry (4) as to the prices of the same articles in Duluth.

Of the
Duluth
board

The opinion of the commission itself as to the minimum allowance for clothing has never been given out. That it substantially confirmed the estimates of the advisory boards is indicated by the fact that the minimum wage rates promulgated by the commission exceeded but little the minima recommended by the boards.

Estimate
of
Miss Evans

Miss Evans' own estimate based upon the estimate of the sub-committees and the employees' cost of living returns was \$144.90 per year. Her list, as released to the papers, follows:

(4) Report of sub-committee of Duluth Advisory Board on the cost of board, room, and clothing, in Minnesota Minimum Wage Commission, loc. cit., 38.

Table 90

1 winter coat	\$20.00
1 suit	20.00
1 dark dress	8.00
1 separate skirt	5.00
1 dark waist	3.00
3 white waists	4.00
2 summer dresses	8.00
1 best dress	10.00
2 hats	8.00
gloves	3.50
3 pair shoes	13.00
1 pair rubbers.....	.75
12 pair hose	3.00
aprons	1.00
2 dozen handkerchiefs	2.40
1 umbrella	1.00
3 suits winter underwear	3.00
4 suits summer underwear	2.00
2 corsets	3.00
4 corset covers	2.00
2 underskirts	3.00
3 night dresses	2.25
1 slicker (last two years) \$8.00	4.00
Incidentals.....	15.00
	<hr/>
	\$144.90

Miss Evans's estimate does not allow for a discount as do the estimates of the two mercantile board members, since the opportunity to purchase at a discount is limited to department and clothing store employees, who form but a fraction of the total.

A careful comparison of the four lists shows that the much higher estimates of Miss Evans and the representative of the public differ from the others not so much in the articles included as in their quality and the time they are assumed to last. There is substantial agreement as to the garments which may be called necessary. The low estimates are based upon a cheap quality of goods and assume a longer life. The estimates of \$120 and \$145 provide for better appearing

Criticism
of the
estimates

and more durable goods, but the chief difference is the frequency with which they assume the garments to be replaced. The manufacturing board's estimate, for example, allows the purchase of an \$18 winter coat every two years; Miss Evans is content with a coat costing \$20, but assumes that it is worn out in a single year. Similarly the \$20 street suit which she would replace each year is priced by the board at only a dollar less but must be made to last two years. The writer has submitted the list to several self-supporting women, among them university students, school teachers, and stenographers, and all agree that to wear the same winter coat and suit for two years is not an intolerable hardship. An allowance of \$100 is obviously not sufficient for a teacher in the Minneapolis public schools, but most women wage-earners manage to get along on less. Women adrift in the Twin Cities and earning less than \$12.50 per week reported an average expenditure of \$103 per year, a sum quite beyond their average income. The clothing worn by working girls as a class can hardly be called insufficient from the standpoint of health, and an allowance of more than \$100 is to be justified on the ground of imperious convention rather than of physical need. Yet convention can hardly be said to demand an allowance of even \$125 imperiously, in view of the fact that the average reported expenditure of all women wage-earners living at home amounts to but \$107, a figure which in conjunction with the wages they receive seems in itself improbably high. One hundred dollars, the estimate of the employer on the mercantile board, is probably the minimum sufficient to meet the standard exacted of a successful saleswoman. The allowances of the three boards are therefore conservative estimates, and it is undoubtedly

possible for employees in other branches of mercantile business, and in manufacturing generally, to maintain themselves in health on less.

b - Estimates prepared by investigators
outside of Minnesota.

In comparison with allowances for clothing made by other agencies investigating the living wage, the recommendations of the Minnesota advisory boards are high. In part, the difference is to be expected because of the rigors of winter in the Northwest, which increases the expense of outer garments. Among the significant estimates of the cost of clothing to a self-supporting woman are the following:
(5)

(5) Compiled from Persons, C.E., Estimates of a living wage for female workers, in Quarterly publication of the American Statistical Association, June, 1915, 568.

Table 91

<u>Locality</u>	<u>Date</u>	<u>Allowance</u>	
		<u>Per week</u>	<u>Per year</u>
(6) Kentucky	1911	\$1.40	\$ 73.00
(7) Baltimore (for department store employees only)	1909	\$2.00	\$104.00
(8) St. Louis	1914 (?)	\$1.53	\$ 80.00
(9) Kansas City	1913	\$1.50	\$ 78.00
(10) Massachusetts (brush-makers board)	1914	\$1.35	\$ 70.00
(11) Massachusetts (social workers estimate)	1913	\$1.92	\$100.00
(12) Portland, Oregon (Miss Gleason)	1913	\$2.50	\$130.00
(13) Washington, State (average of six conferences)	1914	\$2.10	\$109.00

(6) Kentucky, Report of Commission to Investigate the Condition of Working Women, 5.

(7) Butler, Elizabeth Beardsley, Saleswomen in mercantile stores, 115.

(8) Estimate of the School of Social Economy of Washington University, in Persons, loc. cit., 568.

(9) Kansas City, Report on Wage-earning women, 80.

(10) Massachusetts, Minimum Wage Commission, Bul. No. 3, 19, 20.

(11) Massachusetts, Report of Commission on Minimum Wage Boards Appendix D, 222.

(12) Oregon, Report of Social Survey Committee of Consumers' League, loc. cit., 67.

(13) Washington Industrial Welfare Commission, First biennial report, 23.

It will be seen that the estimates of the Minnesota advisory boards^{are} exceeded by only two others, - Miss Gleason's personal estimate for self-supporting women in Portland, and the average of the six Washington wage conferences.

Miss Gleason, working in Portland at the request of the Consumers' League of Oregon, compiled two lists of clothing, one quoting the lowest prices at which any article can be bought, the

Miss Gleason's estimate for Portland

other based upon garments possessing "good wearing qualities, and looking well." The

second list called for an annual expenditure of \$187. The first could be had for \$108.⁽¹⁴⁾ Miss Gleason's recommendation as a minimum allowance was \$130. The same criticism brought against Miss Evans's minimum list of clothing for the Twin Cities applies to the work of Miss Gleason; while the articles listed may be necessary to "reasonable living" they need not be renewed every year. Like Miss Evans, Miss Gleason assumes that a winter coat must be replaced after a season's use.

The most systematic investigations of the minimum cost of clothing yet made are those of the six wage conferences of the State of Washington. On each conference employers, employees, and the

Studies of the Washington wage conferences

public were represented by three persons.

Separate conferences were held for saleswomen, factory operatives, laundry employees, telephone and telegraph operators, waitresses, maids and cooks

(14) Oregon, Report of Social Survey Committee of the Consumers' League, loc. cit., 64.

(15) Ibid., 67.

employed in hotels and restaurants, and office employees. Instead of adopting in toto the report of a sub-committee, the entire conference threshed out the allowances for each of the principal items of clothing (Table 92). Each estimate is therefore the consensus of the opinions of nine persons who had given the matter detailed study, while the average of the six conferences is a compromise between the estimates of fifty-four persons.

Table 92.

Annual allowances for principal items of clothing made by six Washington wage conferences. (16)

<u>Articles</u>	<u>Mercantile conference</u>	<u>Factory conference</u>	<u>Average of six conferences</u>
Shoes and rubbers	\$ 7.12	\$ 7.98	\$ 9.86
Repairing of shoes	3.42	1.46	2.01
Stockings	2.17	2.38	2.86
Underwear	3.77	4.37	4.91
Petticoats	2.17	4.13	3.80
Suit	17.63	21.36	22.77
Coat	10.23	11.34	13.45
Dresses and aprons	14.53	10.81	15.34
Shirtwaists	4.38	4.97	7.61
Handkerchiefs	1.16	1.68	1.52
Corsets	2.17	4.27	4.34
Corset waists	1.24	1.89	2.03
Gloves	2.33	2.48	3.17
Neckwear	1.00	1.54	1.38
Hats	6.75	7.00	9.22
Umbrella	1.40	2.20	1.55
Repair of clothing	3.83	4.41	3.29
Total for year	\$85.30	\$94.27	\$109.11

(16) Compiled from Washington Industrial Welfare Commission, First biennial report, 23.

The total annual expense for clothing as estimated by the six conferences varied widely.

Table 93.

Conference	Allowance for clothing	
	Per week	Per year
Mercantile	\$1.64	\$ 85.30
Factory	1.81	94.27
Laundry	2.14	111.76
Telephone and telegraph	2.05	106.49
Hotel and restaurant	2.79	145.32
Office	2.14	111.45
Average of the six conferences	\$3.10	\$109.11

While the average for the six conferences (\$109) closely approximates the estimates of the Minnesota boards, it is noteworthy that the "mercantile" and "factory" conferences, whose jurisdiction corresponded roughly to that of the Twin City mercantile and manufacturing boards, recommended much lower allowances. The estimate of the mercantile conference was only \$85, a figure which is especially significant when it is remembered that the budget of which it formed a part was generously conceived and called for a minimum wage of \$10 a week. It is true that the less rigorous climate of Seattle makes less necessary heavy winter coats, but this is a consideration largely offset by the higher prices prevailing on the Pacific Coast.

Estimates earlier collected by Miss Gleason from 113 working girls and 138 employers of Washington placed the "reasonable minimum expenditure for clothing" per annum at a much higher figure.

Estimates of employers and employees in Washington

(17)
Table 94 .

Occupation	Persons estimating	Estimated annual expense
Employees		
Mercantile	51	\$139.16
Factory	15	126.48
Laundry	14	144.08
Miscellaneous - Office, telephone, etc.	32	150.35
Employers	138	118.17

These estimates obviously have in mind a standard of living above the level of subsistence. They must yield precedence to the more thoro and impartial allowances of the conferences.

The conclusion of the Washington mercantile and factory conferences that it is possible to maintain health and satisfy the imperious demands of convention on an expense for clothing of less than \$100 a year is confirmed by the minimum standard accepted by

Chapin for working men's families in New York.

Chapin's
allowance
for a family
of five

Presupposing on the part of the mother a high grade of efficiency in mending and remaking,

Chapin estimated that \$105 would just suffice to clothe a family of five. Even this figure included an allowance of \$10 a year for washing. His allowances for each member of the

(17) Compiled from, Report of I.W.C. of Washington on wages...
of women wage-earners, 57.

(18)
family were:

Table 95.

452

For the man	\$33.00
For the woman	23.00
For two boys, each \$12	24.00
For one girl	15.00
For washing	<u>10.00</u>
	\$105.00

3. Minimum allowance for clothing -
conclusion.

While Chapin's allowance may seem to persons interested in social reform impossibly low, 126 out of the 318 families investigated by him were "underclad" when measured by this standard. (19) If his families were typical the conclusion is inescapable that 40 per cent of the working people of New York managed to exist on a standard less than one which allowed only \$100 to clothe a family of five.

Chapin's estimate was based upon prices obtaining in 1907, since when prices of clothing have risen.

Obviously, a woman wage-earner who must go on the street every day and has little time either to make new garments or repair old ones, must spend far more for clothing than a woman busied within the home. Nevertheless, it is apparent that a great proportion of the working girls drawn from the homes investigated by

(18) Chapin, R.C., The standard of living among working-men's families in New York City, 166.

(19) Ibid., 177.

Chapin would have considered it not intolerable to dress on \$75 a year. Expenditure for clothing is largely dictated by convention. When so large a proportion of female wage-earners spend no more than \$75 to \$100⁽²⁰⁾ for clothing, the estimates of the Washington mercantile and factory conferences (\$85 and \$94 respectively) seem to satisfy both the requirements of health and the demands of convention.

In conclusion, the estimates of the advisory boards of \$104 a year appear to be a liberal interpretation of the statute.

Conclusion,
minimum allow-
ance for clothing
in Minnesota.

A strict construction, interpreting the phrase "living wage" as meaning "subsistence wage," would place the allowance at \$90 per year, or \$1.73 per week.

4. Clothing expense of mercantile and manufacturing employees.

The Minnesota Minimum Wage Commission in its orders of October, 1914, fixed a differential of 25 cents per week between the wages of mercantile and manufacturing employees.⁽²¹⁾ The higher

The commission's 25-cent differential, based on studies in Duluth.

wage was awarded to the former in the belief that women employed in stores are required by the nature of their work to spend more upon clothing than women in factories. The

(20) The average annual expense reported by females adrift in the Twin Cities and earning under \$12.50 per week was, after reducing improbable returns, \$87 a year.

(21) Supra. 48.

Table 96 *

Comparative expenditures for clothing of 648 Duluth working women employed in mercantile and manufacturing establishments by family connection and wage.

Annual expenditure for clothing	Wage per week						
	Less than \$4.50	\$4.50 and under \$6.50	\$6.50 and under \$8.50	\$8.50 and under \$10.50	\$10.50 and under \$12.50	Total under \$12.50	\$12.50 and over
Living at Home							
The amounts between which the greatest number of instances occur for—							
Manufacturing employees.....	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$124	?	\$75-\$99	\$200-\$224
Mercantile employees.....	\$50-\$74	\$100-\$124	\$100-\$124	\$150-\$174	\$150-\$174	\$100-\$124	\$150-\$174
Average expense for all manufacturing employees.....	\$48.83	\$77.38	\$91.73	\$112.22	\$149.97	\$93.47	\$161.21
Average expense for all mercantile employees.....	\$70.73	\$93.84	\$110.92	\$128.75	\$123.09	\$102.58	\$186.84
Excess, mercantile over manufacturing*.....	\$21.90	\$16.46	\$19.19	\$16.53	-\$26.88	\$7.43	\$25.63
Living Adrift							
Manufacturing employees.....	\$50-\$74	\$25-\$49	?	\$100-\$124	?	\$50-\$74	\$200-\$224
Mercantile employees.....	\$50-\$74	\$50-\$74	\$75-\$99	\$100-\$124	?	\$75-\$99	\$175-\$199
Average expense for all manufacturing employees.....	\$60.00	\$46.82	\$68.00	\$97.42	\$200.00	\$97.80	\$179.38
Average expense for all mercantile employees.....	\$70.00	\$65.00	\$100.76	\$117.59	\$109.00	\$105.97	\$165.10
Excess, mercantile over manufacturing*.....	\$10.00	\$18.18	\$2.76	\$20.17	-\$91.00	\$8.17	-\$11.28
Total, at Home and Adrift							
Manufacturing employees.....	\$25-\$49	\$50-\$74	\$75-\$99	\$100-\$124	?	\$75-\$99	\$200-\$224
Mercantile employees.....	\$50-\$74	\$100-\$124	\$75-\$99	\$100-\$124	\$150-\$174	\$100-\$124	\$175-\$199
Average expense for all manufacturing employees.....	\$50.96	\$71.15	\$93.15	\$108.02	\$167.48	\$94.52	\$168.59
Average expense for all mercantile employees.....	\$70.70	\$90.49	\$109.69	\$123.56	\$118.69	\$103.51	\$177.00
Excess, mercantile over manufacturing*.....	\$19.74	\$19.34	\$16.54	\$15.54	-\$48.79	\$8.99	\$8.41

*A minus sign indicates that the expenditures of manufacturing employees were greater.

* Clipped from First biennial report of Minnesota Minimum Wage Commission for which it was prepared by the author.

commission's differential of 25 cents was based upon the following study of the unedited replies of 648 female wage-earners in Duluth, made by the writer at the request of the Duluth advisory board. The quotation is taken from the commission's report, in which the author's original study was printed with but slight alteration.

"An investigation of the clothing expenditures of 648 women at Duluth brought replies from all but 128 of the women. The 128 failed to answer the question or replied that they did not know how much they spent. One declared that she spent nothing. A comparison of the amounts spent by the largest number of girls at each wage shows that the clothing expenditures of girls employed in mercantile pursuits is, in general, greater than that of manufacturing girls. The mercantile employes are almost uniformly distributed among higher expense groups than manufacturing employes of the same wage group and family connection. Thus of all the mercantile employes earning less than \$12.50 per week only 44 per cent spend less than \$100 per year as against 58 per cent of manufacturing employes of similar wage. In 10 out of 17 wage groups by family connection, in which the mode is comparable, the modal expenditure of the mercantile employes was higher by \$25 or more. In 9 wage groups the expenditures for both groups were approximately the same. In only 3 wage groups did the majority of the manufacturing employes spend more than the mercantile, and these 3 wage groups were women earning over \$12.50 per week, who would hardly come within the scope of a minimum wage investigation.

"The higher expense of mercantile employes is even more significantly shown by the averages: in all but three wage and family groups manufacturing employes spent less than mercantile employes. These exceptions were for girls earning from \$10.50 to \$12.50 per week, both those living at home and adrift, and for girls earning over \$12 per week and living adrift. The former include only 7 per cent of all women investigated and the latter are beyond the scope of this inquiry.

"The average difference in expenditure for all girls in manufacturing and mercantile industries and earning less than \$10.50 per week is \$14.92. The average for mercantile employes earning less than \$10.50 per week is \$102.19 and for manufacturing is \$87.27. The study indicates that \$15 a year or about 29 cents a week is a fair allowance for the greater expense of clothing for women employed in the mercantile business."

Further analysis of the comparative expenditures for clothing of mercantile and manufacturing employees in the Twin Cities in the preparation of this thesis has shown that whatever the difference in the requirements of the respective managements,

Difference
less marked
in the
Twin Cities

the difference in the actual expenditures for clothing of the workers in stores and factories is not great. Indeed, computations based on all the employees' schedules from the Twin Cities

tabulated by the commission indicate that women employed in manufacturing spend slightly more for clothing than do mercantile employees earning the same wage.

When, however, the schedules of employees of the Northwestern Knitting Company, constituting 28 per cent of the total number of manufacturing workers enumerated, are

Excluding the
schedules of the
N.W. Knitting Co.

removed, the clothing expenditures of the remaining manufacturing employees are on the

whole lower than those of girls in stores. To exclude the Northwestern Knitting Company reports will give a safer basis for comparison, because its employees form a fraction of the commission's returns out of all proportion to their actual numbers. Thanks to the generous cooperation of the management, a nearly complete enumeration of the Northwestern's employees was obtained, while in the great majority of establishments only a fraction of the women on the payroll filled out the cost of living blanks.

Why the clothing expenses of the Northwestern Knitting employees should be so much higher than those of other girls in the same city earning the same wage is not easily answered.

A difference in the prevailing nationality of its employees may be a contributing cause. In the absence of statistics of nationality of the workers in individual factories, it may be worth noting that the Northwestern is situated near the Yiddish quarter from whence it draws many of its female help. A more important cause, in the opinion of the author, is the unusually high wages paid by the company. The suggestion is offered that on entering its doors its employees soon find themselves in the receipt of a higher income than they have been accustomed to. A sudden re-adjustment of their standard of living occurs, for the standard of living, as these studies show, is a function of the wage. The most elastic of their consumption habits are expenditures for clothing and amusements. For these purposes the additional wage is spent more freely than for room rent or board, until with ripening experience they adopt substantially the standard of other women earning the same wage. If the explanation offered be true, it suggests the possible initial effects upon the consumption habits of underpaid workers of a sudden increase in earnings caused by a minimum wage, and sounds an added warning against the promulgation of too high a minimum at the beginning.

High wages made the N.W. returns not typical.

The comparative expenditures for clothing of self-supporting girls in store and factory are shown in the following table:

Table 97.

Median annual expenditures for clothing of mercantile and manufacturing employees* adrift in the Twin Cities (as reported without revision).

	Median expenditure of those earning					
	Under \$12.50	\$4.50 and under \$8.50	\$6.50 and under \$8.50	\$8.50 and under \$10.50	\$10.50 and under \$12.50	\$12.50 and over
Mercantile	\$97.20	\$83.03	\$85.58	\$105.80	\$128.97	\$161.90
Manufacturing	94.90	74.45	93.90	103.84	116.82	159.74
Difference, mercantile minus manufacturing	2.30	8.58	8.32	1.96	12.15	2.16

* Excluding 1,018 employees of the Northwestern Knitting Company.

It will be seen that in four out of five wage classes, the reported expenditures of mercantile employees are higher than those of factory girls. In the wage class \$6.50 and under \$8.50 the expenditures of factory workers exceed those of women employed in stores. The differences are in almost every case smaller than those reported from Duluth (Table 96). Since the Twin City returns include 5,828 females as compared with the 648 upon whose replies Table 96 is based, more reliance is to be placed upon the former.

The evidence indicates that the females employed in factories spend as a class but little less for clothing than their sisters in retail stores. It is true that more and better clothing during work-

ing hours is required of saleswomen. The agents of the federal Bureau of Labor who investigated conditions among women wage-earners in the Twin Cities in 1910, report: "The girl or woman who works in a store must make as good an appearance as she can. Daintiness, attention to details in dress, and well-fitting clothes enhance her value to the employers and are regarded by her as so much stock in trade." (22) The bureau adds, however, that in the stores of the Twin Cities, "requirements in dress do not assume the importance that they do in some other cities. In most of the leading stores the saleswomen are required to wear black and white. But if, for a part or the whole of a day, one appears in a different garb it is not a vital matter. Where black and white is the requirement, it is the general opinion that it is no more expensive, and many believe it to be less so, than any other style of dress. Those who think it more expensive base their contention on Sunday clothing, for which, unless it is of the regulation color, there can be no further use. Some complain about this requirement because it forces them to wear black or white at all times, since they are unable to afford Sunday clothing which may not eventually serve as an everyday garb." (23)

These added requirements in dress imposed by retail stores upon their employees are, however, offset by other factors.

(22) U.S. Bureau of Labor, Report on condition of woman and child wage-earners, Vol. V, Chapter VI, Living conditions of wage-earning women in Minneapolis and St. Paul, 129.

(23) Ibid., 129.

Most important of these is the 10 per cent discount on personal purchases which the bureau found it the custom to allow employees of stores in the Twin Cities. (24) It is noteworthy that by allowing a 10 per cent discount the mercantile advisory board was able to reduce its annual allowance for clothing to within \$4 of that set by the manufacturing board. (25) The difference is very close to that actually reported by the store and factory workers themselves in Table 97. It has also been suggested to me that factory girls may be tempted to spend on clothing for evening and holidays what they save on working clothes, in order to compensate for limited opportunities of meeting marriageable men. (26) If it be true that the factory operative makes, in the routine of work, fewer acquaintances afterwards ripening into friendship, the explanation appears a valid one. To place herself in a position to meet respectable men is surely a part of a reasonable standard of life for any woman.

In the light of the apparent slight difference in the actual expenditures for clothing of mercantile and manufacturing employees, the commission's 25-cent differential in the minimum rates for the two classes is excessive. An additional allowance of 10 cents a week, - \$5.20 a year - would apparently remove the handicap imposed by the nature of their occupation upon women employed in the retail stores.

The commission's differential too high.

(24) Ibid., 138.

(25) Supra., 439.

(26) Suggestion of Mr. L.E. Crograve, Instructor in Labor Problems, Department of Economics, University of Minnesota.

CHAPTER VIII

MISCELLANEOUS EXPENSE .

The phrase "miscellaneous expense" as used by the three Minnesota advisory boards comprised laundry, care of the health (including doctor's, dentist's, and oculist's bills), recreation (including amusements and vacation), reading matter (books, magazines, and newspapers), church gifts, insurance and lodge and club dues. Laundry we have seen best to study in conjunction with food and lodging. For the remaining items the boards made the following revision.

Table 98.

	Mercantile board	Manufacturing board	Duluth board
Car fare	\$.50	\$.30	\$.30
Doctor			
Dentist .....	.30	.35	.38
Oculist			
Church .....		.15	.10
Books, etc.....	.10	.10	—
Insurance .....	.06	.05	.06
Lodge and club dues	—	—	
Amusements .....	.25	.50	.25
Vacation .....	.10		.20
	<hr/>	<hr/>	<hr/>
	\$1.31	\$1.45	\$1.29

Of the two kinds of evidence upon which a minimum wage may be based - expert opinion and statistics of consumption - the boards seem to have relied very largely on the latter. (1) The

a priori determination of the minimum reasonable expenditure for such items as medical attention, for example, is impossible. The necessity of the services of a physician in time of need is so imperious that it may not be denied; a fact which modern society has recognized by providing visiting nurses and free hospitals for those whose savings are insufficient to pay a doctor.

A reasonable allowance for this item of the budget is the average spent by working women for the purpose. When the sickly girl worker, year in and year out, is paying the average, she has satisfied the demands of convention and may accept the charity of free medical service without loss of self-respect. Obviusly the only way to determine the demands of custom is through statistical studies of the standard of living. Provision for other items of miscella-

(1) The sub-committee of the mercantile board on miscellaneous expenditures reported that "after carefully reviewing the summary of reports from about 1,350 girls your committee selected a low average for each item." Minnesota Minimum Wage Commission, First biennial report, 41.

The manufacturing sub-committee on miscellaneous expense reported, however, that while it was obliged to reply upon "the statements made by the girls in answer to the questionnaire sent out," it was also "obliged to use the reports of other committees of other states dealing with the same problem." Ibid., 44.

A similar classification of miscellaneous expenditure had been used in 1911 in the social workers' estimate of a standard living wage, Appendix D, Report of Massachusetts Commission on Minimum Wage boards, 223, and by Miss Gleason, in 1912, in Social Survey Committee of the Consumers' League of Oregon, loc. cit., 67.

neous expenditure must likewise be based largely upon what convention demands of the worker, and consequently may best be studied through the medium of consumption statistics.

The present chapter aims to arrive at a reasonable allowance for each item of miscellaneous expenditure by recourse to the cost of living returns received by the commission from working women in the Twin Cities. To eliminate the effect of a

Method
of the
present
chapter

possible local variation in price, schedules received from Duluth are not included. The number of schedules has been further limited to 1,731

women and girls earning less than \$12.50 a week, in the belief that women earning over \$50.00 a month obviously do not require the protection of a minimum wage act. In the present chapter the phrase, "women adrift," unless otherwise qualified, refers only to these 1,731 self-supporting women earning less than \$12.50 per week. Particularly significant are the expenditures of employees in the wage group \$6.50 and under \$8.50, whose average wage of \$7.39 for those at home and \$7.49 for those adrift place them on the very edge of subsistence. While the minimum allowance must obviously be based upon the needs of the self-supporting woman, the expenditures of women at home earning the same wage are included for purposes of comparison and plotted against those of women adrift in the ogive frequency graph which accompanies each table. The number of women and girls of the wage group \$6.50 and less than \$8.50 who live at home is 1,222. Of those adrift and earning the same wage, there reported to the commission 572.

1. Car fare

Table presents expense for car fare. The inquiry was phrased: "How much do you spend for car fare per week?" It seems usually to have been interpreted to mean expenditures for car fare to and from work. Additional car fare in the evening and holidays was frequently considered as chargeable to amusements. The question was almost universally answered; in rare cases where it was

left blank, an appropriate figure was supplied in editing. It will be seen (Table 99) that 8.0 per cent of women adrift do not use the cars at all in going to and from work. The proportion who walk both ways regularly is greatest among the low-paid women; only 2.9 per cent of those earning \$12.50 or more reported no habitual expense for car fare. Plate 31 shows a very pronounced mode at \$0.60, at which 33.1 per cent of the instances occur. A third of all the women adrift thus ride twice a day; they either take their lunches with them or eat at a restaurant near the place of work; or, if going home to lunch, they walk two out of the four trips. Nearly three-fourths (73.4 per cent to be exact) spend 60 cents or less. Other sums frequently reported are 30 cents, allowing for a ride one way each day, and \$1.00, allowing regularly three rides per day for those who go home to lunch, with occasionally a fourth when the weather is bad. One-tenth of the total reported this arrangement. Fourteen schedules reported, apparently in good faith, a weekly expense of \$1.50 or more; these are evidently women living in St. Louis Park, Hopkins, White Bear, South St. Paul, or other

Analysis
of the
returns

Table 99 .

Expenditure for carfare of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure per week for carfare	Number	Adrift		At home	
		Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50
		Cumulative per cent	Cumulative per cent	Cumulative per cent	Cumulative per cent
Total schedules.	1,731				
Spending nothing	139	8.0	9.1	3.6	
\$.05 and under \$.10	16	8.9	10.3	4.0	
.10 " "	68	12.8	15.0	6.8	
.15 " "	38	15.0	17.1	7.8	
.20 " "	103	21.0	23.7	11.6	
.25 " "	69	25.0	27.7	13.4	
.30 " "	133	32.7	35.2	19.1	
.40 " "	39	35.0	37.8	20.4	
.50 " "	93	40.4	43.0	23.4	
.60 " "	572	73.4	77.2	67.2	
.70 " "	172	83.3	87.7	76.0	
.80 " "	54	86.4	91.2	80.9	
.90 " "	23	89.7	92.2	82.7	
1.00 " "	171	97.6	98.5	93.7	
1.10 " "	1	97.7	98.5	93.9	
1.20 " "	24	99.1	99.7	97.7	
1.30 and over	16	100.0	100.0	100.0	
Average for all schedules		\$.53	\$.49	\$.630	
" " " spending		.57	.54	.653	

31 Comparative weekly expenditure for CARFARE of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week

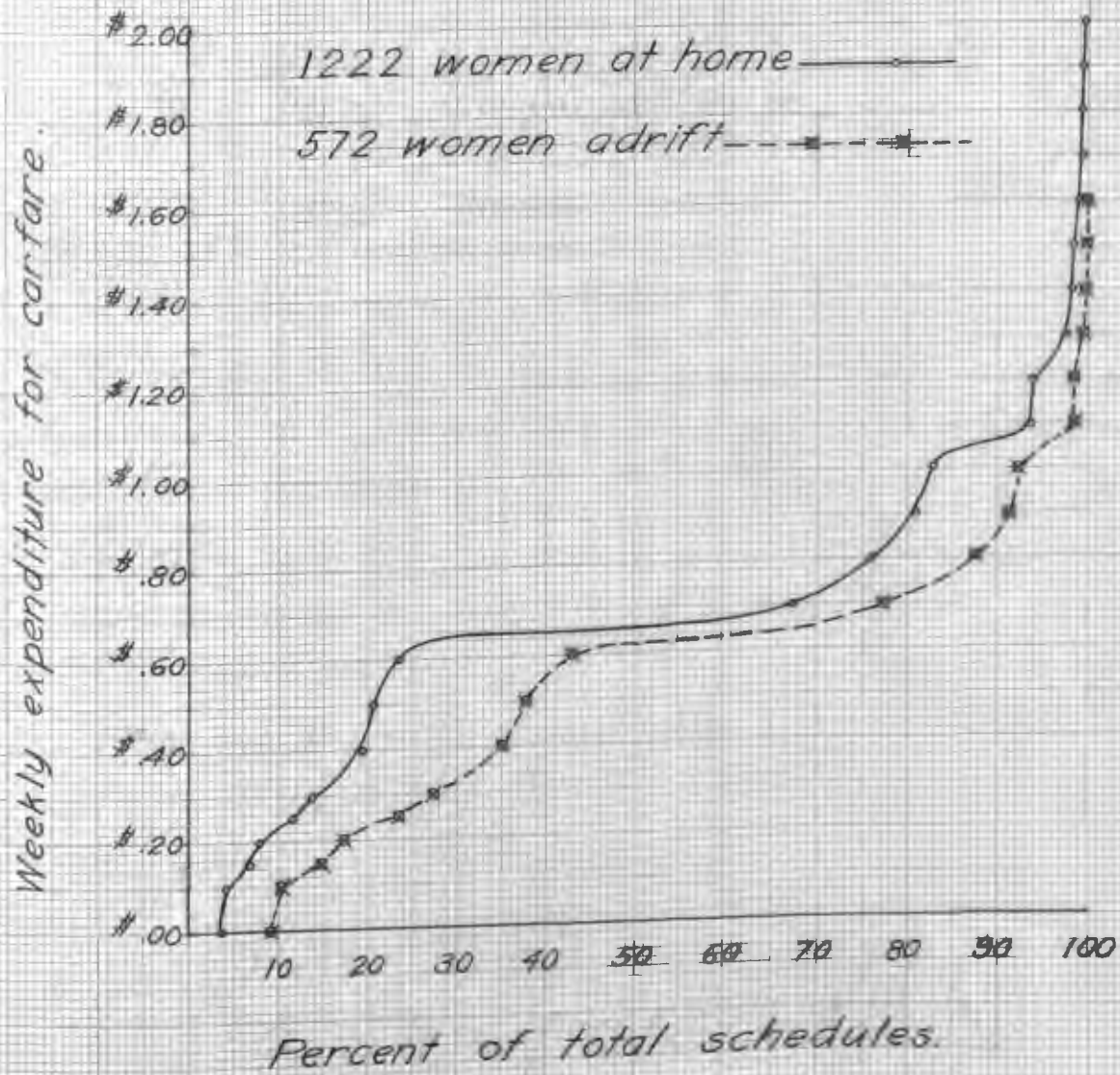


PLATE 31.

suburbs of the Twin Cities. The proportion of such women is higher (1.9 per cent) among the total living at home.

It will be seen from Plate 31 that the expenditures of women at home for car fare are consistently higher. The proportion spending nothing is 3.6 per cent, less than half as great as that for self-supporting women earning the same wage. The difference reflects not merely the higher standard of living enjoyed by dependent women, but also their tendency to go home to lunch and avoid the expense of a hot meal down town.

In fixing upon a minimum allowance for car fare, little (2) reliance can be placed upon the conclusions of other wage boards. The distances to be traveled from home to work, and the handicaps of walking during the winter may vary so much from place to place as to make a just standard in one place insufficient in another. (3) The Kentucky, Baltimore, St. Louis, Kansas City, and Massachusetts brush-makers investigations all apportioned 60 cents per week. Miss Gleason in Portland determined upon \$30.00 a year (58 cents a week), the social workers of Massachusetts estimated 52 cents, and the average allowance of the six Washington wage conferences was \$26.62 per year or 51 cents per week. The allowances of the Minnesota advisory bodies - 50 cents, 30 cents, and 30 cents for the mercantile, manufacturing, and Duluth boards respectively -

(2) The sub-committee on miscellaneous expense of the Twin City manufacturing board, however, reported that in the matter of car fare "the answers to the questionnaire are of no assistance and we have allowed the same amount as was allowed by the Oregon Commission." Minnesota Minimum Wage Commission, loc. cit., 44.

(3) For reference to this and the following investigations cf. notes on page 447.

are thus below all the other determinations.

While the Twin City room and board survey found few places offering accommodations suitable for working women which were out of walking distance of some establishment in which women were em-

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for the
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ployed, the reports of the workers themselves show that with the great majority car fare is an unavoidable expense. To eliminate it means either

to do an amount of walking which, however wholesome it may be, is evidently so distasteful to women workers that they will economize on physical necessities to avoid it, or else it means to pay higher prices for accommodations within easy walking distance. The acceptance of a low average of the expenditures actually reported therefore seems the only way of determining the minimum allowance for car fare; since those who spend less for this purpose must in all probability pay more for satisfactory board and lodging, and vice versa. The average expense of women adrift, earning \$6.50 and less than \$8.50, is 49 cents. The allowance of 50 cents made by the mercantile board thus seems the lowest compatible with a liberal construction of the language of the statute. Four-tenths of the total spend this amount or less. The minimum subsistence level could not be fixed at less than 30 cents, the estimate of the manufacturing boards, in view of the low allowances already made for room and board. If a working girl is to be required to find a place offering food and lodging for \$4.00 per week, she must be allowed money to reach it. Approximately one-third of the total are spending 30 cents or less. Even this allowance, it will be noted, necessitates walking at least one way each day.

2. Doctors', dentists', and oculists'
bills.

The employees schedule included the question, "What did you spend for doctor bills last year?" Similar inquiries were made concerning "dentist bills," and "oculist bills." In editing these questions, the chief difficulty lay in interpreting a failure to reply. As pointed out in Chapter V, the schedule did not direct that each question be answered, even if nothing was spent, and a failure to reply to the question might be interpreted as indicating that nothing was spent, as reluctance to answer the question, or as ignorance of the amount of the expense. It is believed that the last two possibilities are unlikely in the case of the three questions under consideration. Expenditures for medical or dental attention are specific in amount, usually expressed in round numbers, and associated with unusual experiences in such a way as to make a vivid impression on the mind. Further, there is little wish to conceal expenditures for any of these purposes: among many people bodily ills are a frequent topic of conversation, and to be in the habit of consulting a physician, even more to be able to exhibit a gold inlay or a crowned tooth is often considered a mark of gentility. Indeed, error in the commission's statistics is more likely to be caused by a tendency to exaggerate these expenditures with the desire of making a good impression. The practice of interpreting a failure to reply, on a schedule otherwise intelligently filled out, as a

Editing
the
replies

declaration that nothing was spent, seems, therefore, not unjustified. If errors were introduced by it the effect was to diminish the average per capita expenditure rather than augment it.

In interpreting the statistics for each of these three expenses, it should be remembered that a single reply represents not the average annual expenditure of an individual, but rather what that woman may have happened to spend during the preceding year. Averages of a number of such individual replies should give the average outlay to be expected from year to year by the normal woman.

Actual expenditure in one year not the individual's average.

a. Doctor.

Expenses reported for medical attention are presented in Table 100 and its accompanying graph. Somewhat less than half (44.7 per cent) of the women adrift spent nothing during the year. Of the 958 reporting an expense, 217 paid \$5.00 and less than \$10.00 to the doctor. Three-fourths of the total expended less than \$15.00 per year. One-fifteenth (6.6 per cent) were under obligation to pay \$50.00 or more. Thirty-one cases had run up bills in excess of \$100, nine reported bills of over \$200. The highest amount reported by three schedules, was \$300. These higher sums must mean major operations. Obviously bills of \$100 are not paid in a single year. The physician performs the operation, and the girl pays him as she can.

Plate 32 shows that while a larger number of women at home reported no expense (53.5 per cent) the distribution of expenses when encountered, ^{was} approximately the same. It would be rash

Table 100

Doctors' bills of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for doctors' bills during past year	Number	Adrift		At home			
		Total earning under \$12.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent
Total schedules	1,731						
Spending nothing	773		44.7	44.8		53.5	
Less than \$2.50 for the year	105		50.8	49.7		57.4	
\$2.50 and under \$5.00	81		55.5	55.3		61.8	
5.00 " " 10.00	217		67.9	68.9		72.9	
10.00 " " 15.00	150		76.6	77.6		81.1	
15.00 " " 20.00	88		81.7	83.0		85.8	
20.00 " " 25.00	56		84.9	85.3		88.2	
25.00 " " 30.00	78		89.4	89.3		91.7	
30.00 " " 35.00	28		91.0	90.0		93.3	
35.00 " " 40.00	18		92.0	91.4		94.4	
40.00 " " 45.00	18		93.0	92.4		95.2	
45.00 " " 50.00	7		93.4	93.1		95.5	
50.00 " " 60.00	42		95.8	95.2		97.3	
60.00 " " 70.00	8		96.3	95.7		97.9	
70.00 " " 80.00	18		97.3	96.8		98.7	
80.00 " " 90.00	4		97.5	97.5		98.8	
90.00 " " 100.00	1		97.6	97.5		98.8	
100.00 and over	39		100.0	100.0		100.0	
Median, all schedules		\$2.47		\$2.53			
Median, all spending		12.52					
Average, all schedules		12.70		11.89			
Average, all spending		22.95		21.52			

32 Comparative annual expenditure for DOCTOR'S BILLS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

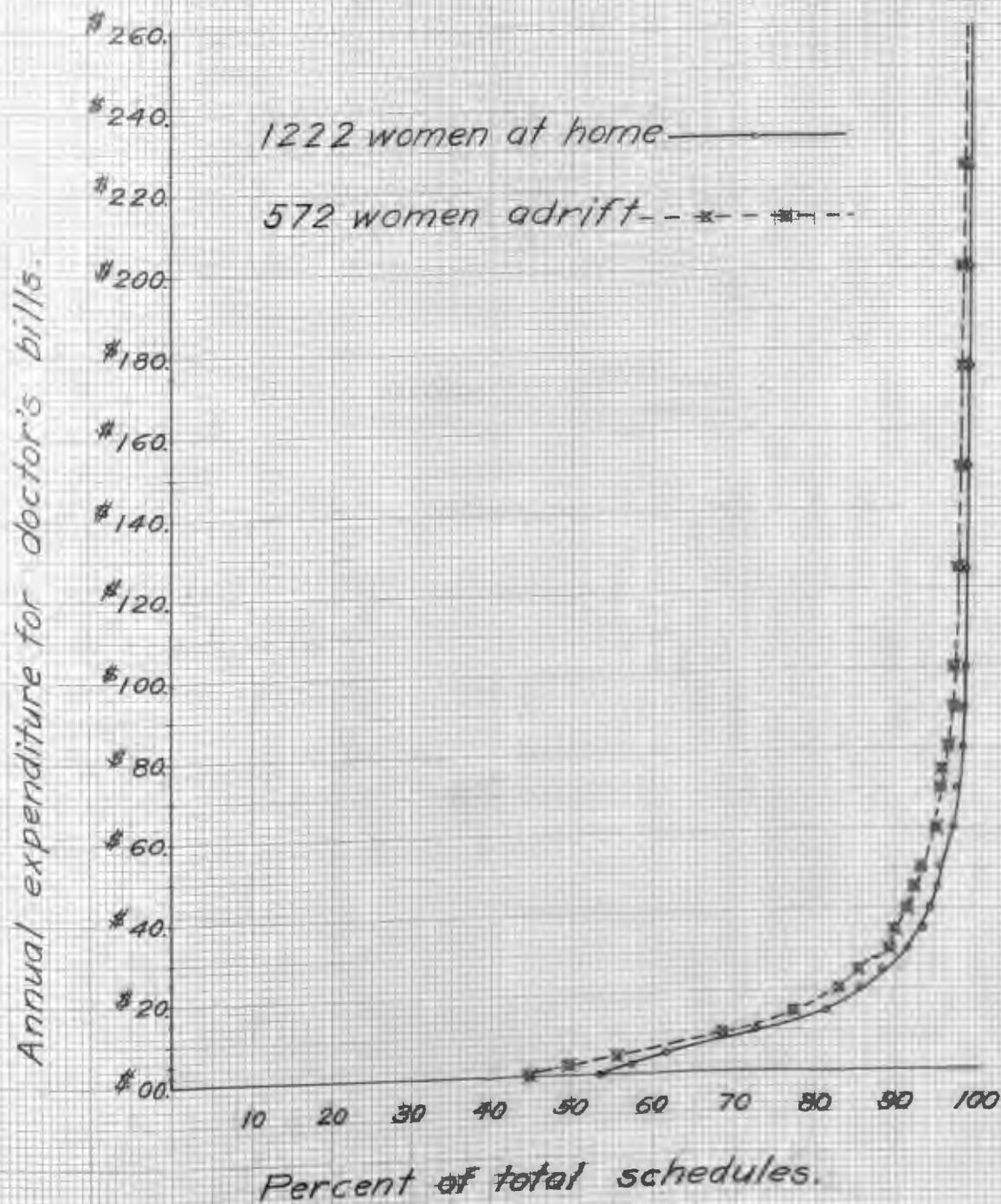


PLATE 32.

to base conclusions as to the comparative physical well-being of dependent and independent women upon these curves. Against the more debilitating living conditions of women adrift, tending probably to increase sickness, must be set the greater ability of women at home to pay, attention given them by the family physician whose bills are met by the father, the free nursing of mother or sister, and the reluctance of the woman at home to go to a hospital until a means of measuring the effect of these countervailing factors is at hand, the lower expenditures of women at home cannot be confidently ascribed to less frequent illness.

Obviously a minimum wage cannot be fixed at a point to provide in the life of every working woman for a major operation costing even at a reduced rate \$100 to \$300. Society must provide against serious and protracted illness by visiting nurses and hospitals for the needy rather than by paying the lowest worker in the scale a wage sufficient to arm him against all the contingencies of life. A reasonable allowance for medical attention can be determined only by what, on the average, the medical profession collects from the class from which the worker is drawn. The average doctor bill of the woman adrift was \$12.70 per year, including bills of \$100 or over, many of which will probably never be paid in full. The average amount of the bills rendered was \$23.95. The arithmetic average is not a satisfactory measure of these expenditures. The mode is at \$5 and under \$10. The median expenditure is \$2.47. Even the median expenditure for all who had to have the services of a doctor is only \$13.52. An allowance of \$5 would have been sufficient to tide over the year covered by the statistics nearly two-thirds of the women adrift.

Minimum
for the
Twin Cities

Five dollars a year, or 10 cents a week, seems a liberal interpretation of the language of the statute. This sum might be cut in half and still provide more money than was spent by 50.8 per cent of the women adrift. The minimum subsistence allowance is therefore placed at 7 cents per week or \$3.64 per year.

b. Dentist

Dentists' bills of working women and girls in the Twin Cities earning less than \$12.50 per week are exhibited in Table 101 and its accompanying graph. Of 1,731 women adrift, 29.9 per cent

Dentists' bills - analysis of the replies

did not visit the dentist during the year preceding the enumeration. The expenditures most often reported by the remaining two-thirds were \$5.00 and \$10.00. One-half of the total spent less

than \$10.00 and three-fourths (74.3 per cent), less than \$20.00. Three per cent reported bills of \$50.00 or more, one of which exceeded \$100. These bills may seem fabulous when reported by self-supporting women, yet it is highly probable that some of them, at least, represent the facts. The writer is informed by Dr. Alfred Owre, Dean of the College of Dentistry, University of Minnesota, that many young dentists setting up in practice will undertake work on credit. When a girl whose teeth are badly in need of attention comes to such a man he not infrequently does \$50 to \$100 worth of work upon her teeth, to be paid for little by little as she is able. Doubtless in some cases the bill is never paid in full, and often it hangs on for years.

Table 101

Dentists' bills of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for dentists' bills during past year	Number	Adrift	Earning \$6.50 and under \$8.50	At home
		Total earning under \$12.50.	Cumulative per cent	Earning \$6.50 and under \$8.40	Cumulative per cent
Total schedules	1,731			
Spending nothing	517	29.9	32.2	31.3
Less than \$2.50 per year	75	34.2	36.0	36.5
\$2.50 and under \$5.00	61	37.7	40.7	41.2
5.00 " " 10.00	224	50.6	53.1	52.0
10.00 " " 15.00	229	63.8	67.6	63.9
15.00 " " 20.00	182	74.3	78.3	72.4
20.00 " " 25.00	98	80.0	83.0	78.3
25.00 " " 30.00	123	87.1	90.9	85.0
30.00 " " 35.00	63	90.7	94.4	88.8
35.00 " " 40.00	52	93.7	96.1	91.9
40.00 " " 45.00	34	95.7	96.5	94.3
45.00 " " 50.00	22	97.0	98.1	95.6
50.00 and over	51	100.0	100.0	100.0
Average for all schedules		\$12.38	\$10.86	\$12.94
Average for those report- ing an expense		17.65	16.01	18.80
Median for all schedules		9.00		
Median for those report- ing an expense		15.50		

33. Comparative annual expenditure for DENTIST'S BILLS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

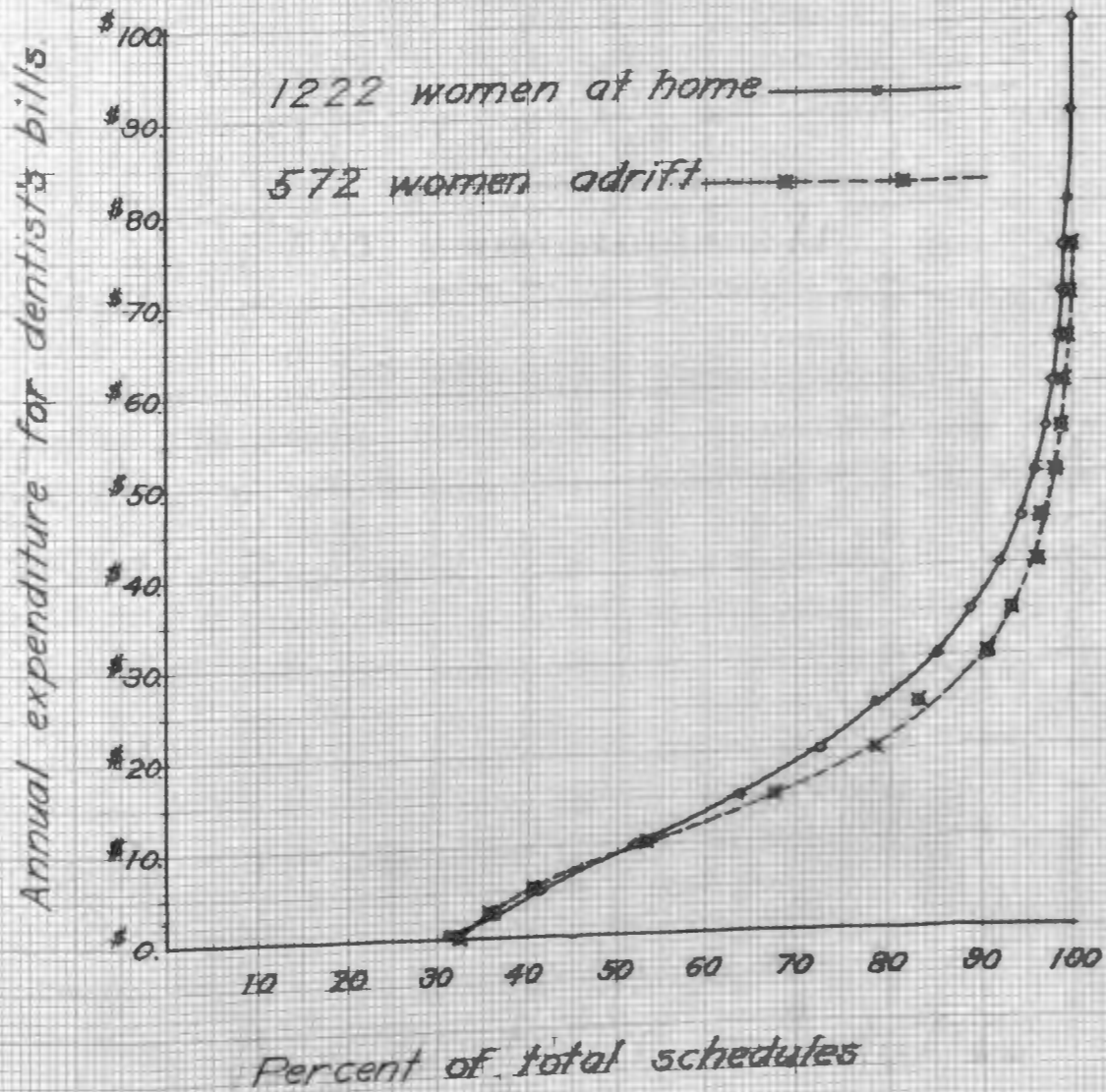


PLATE 33.

The calculated average per capita expense is \$12.38 per annum. For the two-thirds who reported an expense it is \$17.65. The averages are high: the few bills of \$50 or more, seldom if ever paid in one year by a self-supporting woman, and sometimes never paid in full, tend unduly to elevate the average. The median, a more reliable measure in such a case than the average, is \$9.00 per capita, and \$15.50 for the two-thirds reporting an expense.

It may be urged that these median expenditures are improbably high. To check them so far as possible the writer has submitted the statistics to Dr. Owre, who regards them as not in themselves improbable. While an annual per capita expense of \$9.00 is undoubtedly much higher than the standard prevailing among

Returns substantially accurate

the population of the United States as a whole, several factors tend to elevate the standard of the girls and women who came within the scope of the investigation. The standard of living in the Northwest is generally high. Standards in care of the teeth are higher in city than in country. Not only is the practice of dentistry in the cities of the state on a high plane of efficiency, but, according to Dr. Owre, care of the teeth assumes a greater importance in the standards of the people of Minneapolis and St. Paul than of most other cities of the country. (4) The dental infirmary in the Twin Cities is not open evenings or holidays and therefore serves few working women. Furthermore, the females included in Table 101, so far as dental expenses are concerned, are not typical of even

(4) Partly through the influence of the dental infirmary and of the high standards maintained by the college itself, now recognized as one of the best in the country, or in the world.

the working population. They are very largely girls and young women (Plate 23) between the ages of 16 and 25. Most of these girls have come from working homes where dental standards are not high. Frequently they have been sent to the dentist only under the pressure of toothache and then merely to have the pain relieved and a cheap amalgam filling put in. Indeed, dentists often advise against the use of gold fillings in the teeth of young girls because of the rapid decay during adolescence. These young women, reaching a period of life when the teeth become harder and careful attention it advisable, are sensitive about their appearance in a community which agrees that decayed teeth are unsightly, and finding themselves for the first time in the possession of spending money may very easily invest twenty, thirty or fifty dollars in having their teeth thoroly cleaned and restored. Dr. Owre notes the tendency of working women to spend money upon the repair of their front teeth, leaving the unseen molars to decay. Girls at home set the standard and spend on the average about one-seventh more than those adrift. The latter must keep up appearances even at the sacrifice of more essential needs.

The conclusion is warranted that the statistics are substantially typical of conditions among store and factory employees in the Twin Cities. In any year, about two-thirds of them will seek the assistance of a dentist. A representative charge for those who go is \$15.00, and a reasonable minimum per capita allowance, under a liberal interpretation of the law, is \$9.00 or 17 cents a week. The subsistence minimum can hardly be less than \$6.00 a year or 12 cents a week.

The substantial accuracy of the answers to the questions on dentist's bills confirms the related replies as to expenditure for the service of physician and oculist.

c. Oculist

It will be seen from Table 102 that less than one-fourth (23.1 per cent) of women adrift reported any expense for "oculist's bills." It is probable that the cost of glasses or their repair were also included here by most of the replies. The returns are probably less reliable than those for medical and dental services. A few women sending in schedules evidently did not know what the word oculist meant. The expenditure most commonly reported was \$5.00. Two bills of \$50 or more were declared. Only 5.2 per cent replied that they spent \$10.00 or more during the year. As the statistics stand, they indicate an average per capita expense of \$2.20. Of the quarter who are compelled to give attention to their eyes during the year, the average outlay is \$9.53.

A liberal construction of the statute would fix \$2.08 a year (4 cents a week) as the minimum allowance for oculist's services and the cost of glasses. A strict construction might fix upon 2 cents a week as the minimum of subsistence.

Table 102

Oculists' bills of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for oculists' bills during the past year	Number	Adrift		At home			
		Total earning under \$12.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent
Total Schedules	1,731						
Spending nothing	1,331		76.9	76.0		81.4	
Less than \$2.50 during year	49		79.7	79.0		83.1	
\$2.50 and under \$5.00	57		83.0	83.2		84.5	
5.00 " " 10.00	123		90.1	90.5		91.0	
10.00 " " 15.00	82		94.8	96.1		95.6	
15.00 " " 20.00	53		97.8	98.5		97.8	
20.00 " " 25.00	15		98.7	98.7		98.4	
25.00 and over	21		100.0	100.0		100.0	
Average for all schedules		\$2.20		\$2.13			
Average for all reporting an expense		9.53		8.90			

34 Comparative annual expenditure for OCULIST'S BILLS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week

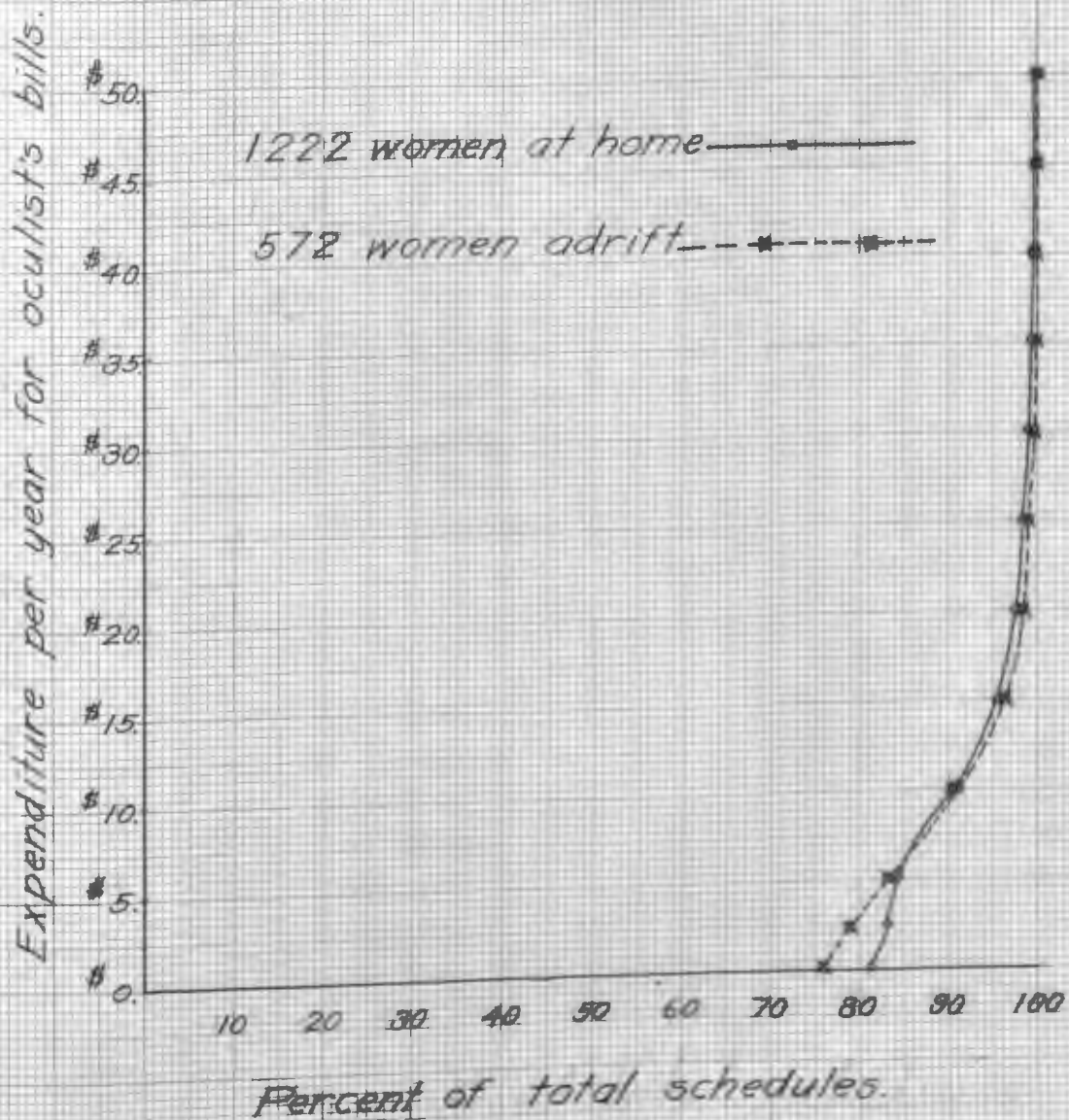


PLATE 34.

d. Doctor, dentist, and oculist, summary.

The suggested allowances for eyes, teeth, and general health may be combined as follows:

	Table 103.	Reasonable living wage	Subsistence minimum
Doctor's fees		\$5.20	\$3.64
Dentist's fees		8.84	6.24
Oculist's fees		<u>2.08</u>	<u>1.56</u>
Total, per annum		\$16.12	\$11.44
Total, per week		.31	.22

It may appear inconsistent to allow two-fifths as much for oculist's as for physician's fees, yet so long as the state and the municipality make insufficient provision for free clinics in fitting glasses, the contingency of visiting an oculist is one which every individual must make provision for. The allowances here suggested for care of eyes and teeth are more generously conceived than that for medical services because, in the latter case, society is better prepared to assist the worker.

Allowances made for care of health by other investigations have varied widely. The Massachusetts brush-makers' board provided 17 cents, the St. Louis investigation 20 cents; the Massachusetts social workers' estimate was more than twice as much (42 cents).

Allowances of other investigations.

(5) For references to this and the other investigations named cf. notes on page 416, supra.

Twenty-nine cents (\$15.00 a year) was the sum allowed by Miss Gleason in Portland and by the six Washington wage conferences. The allowances of the Twin City manufacturing and Duluth boards (35 and 38 cents respectively) therefore seem a little high. Thirty cents a week was proposed by the Twin City mercantile board, a figure which is almost identical with the suggested allowance of the author under a liberal construction of the law.

3. Church gifts, lodge and club dues,
and insurance.

a. Church

In editing question 12, "How much do you give the church per week?" it could not be assumed that failure to reply meant that the woman filling out the schedule gave nothing. Contributions to the support of the church are often irregular, and failure to reply may have been caused by unwillingness

Editing
the replies

to attempt an estimate of the average amount.

However, in view of the desire of human kind to appear respectable, the presumption is strong that those who failed to answer either gave nothing or gave only as occasional visitors at church. Annual pledges, frequently reported, were reduced to a weekly basis, and some gifts reported as weekly which were obviously beyond the individual's means, were assumed to be intended as annual gifts. The replies may be summarized as follows:

Table 104.

	Adrift		At home
	Per cent of total earning less than \$12.50	Per cent of total earning \$6.50 and less than \$8.50	Per cent of all earning \$6.50 and less than \$8.50
Gifts to the church			
Total all schedules	100.0	100.0	100.0
Probably giving nothing	23.4	24.0	17.5
Failing to answer question, presumably giving nothing	10.5	9.3	7.0
Stating that nothing was given	13.9	14.7	10.5
Giving a specified sum per week	76.6	76.0	82.5

The conclusion is justified that at least three-fourths of women adrift and five-sixths of those at home contribute to the church.

The amount of the contribution is exhibited by Table and its accompanying frequency curves. A striking mode appears at 10 cents and a lesser one at 25 cents. Five hundred of the 1,326 women adrift who were contributing regularly gave 10 cents a week. Over one-half of the same number gave this amount or less, while 90.7 per cent gave 25 cents or less.

Six per cent of those contributing regularly declared that they gave 50 cents or more per week. At first thought the contribution of so large a portion of the wage may appear unwise, but it must be remembered that expenditures in support of the church have

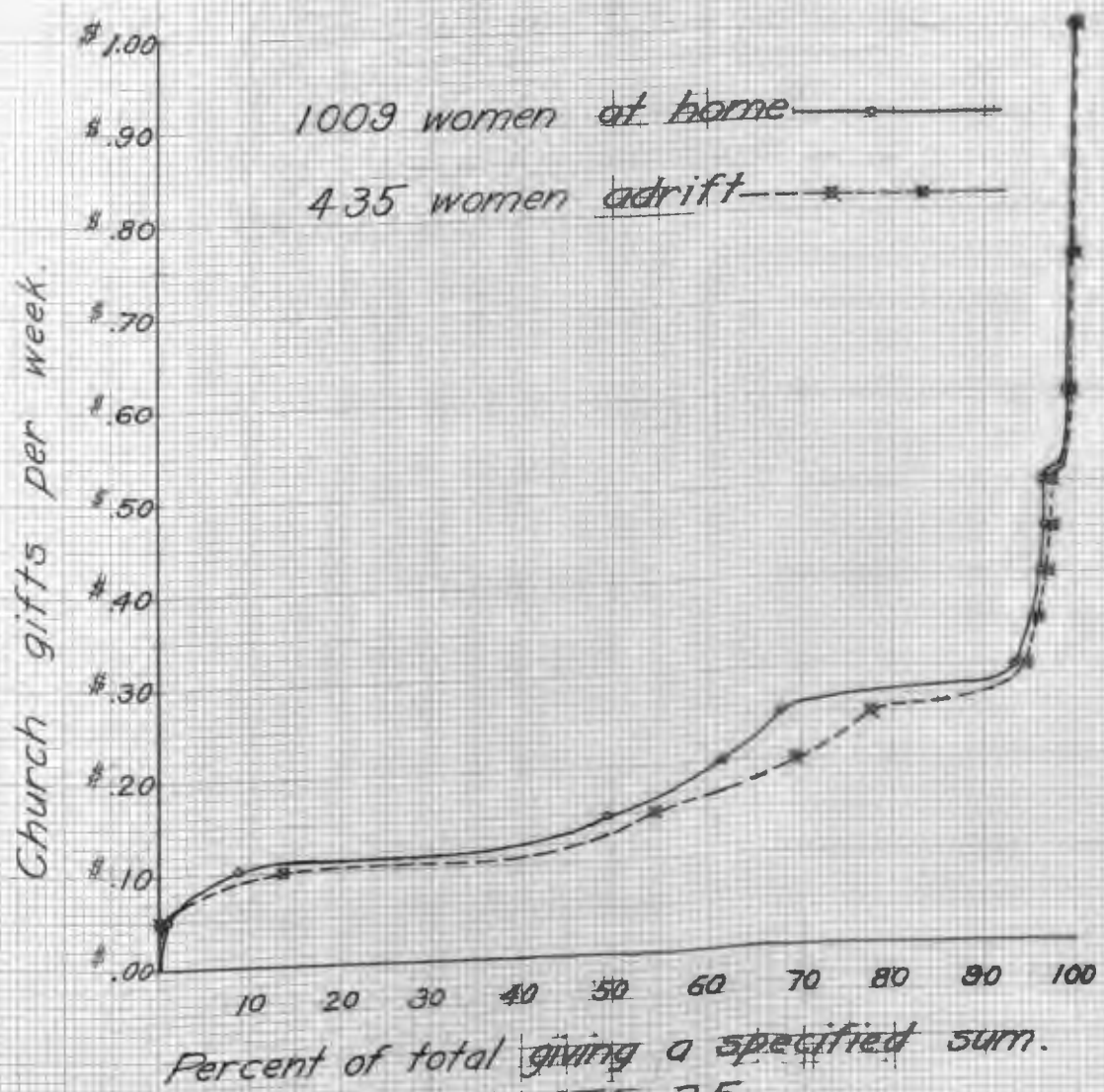
Table 105.

Church gifts of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for church gifts per week	Number	Adrift		At home			
		Total earning under \$12.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent	Earning \$6.50 and under \$8.50	Cumulative per cent
Giving a specified sum per week	1326						
Less than \$.05	8		.6	.5		.7	
.05 and under .10	160		12.7	13.4		8.9	
.10 " " .15	500		50.5	54.7		49.5	
.15 " " .20	165		62.9	69.2		61.6	
.20 " " .25	92		69.8	77.7		67.6	
.25 " " .30	277		90.7	94.7		93.6	
.30 " " .35	25		92.6	95.4		95.2	
.35 " " .40	15		93.7	96.5		96.1	
.40 " " .45	9		94.4	97.0		96.6	
.45 " " .50	2		94.5	97.3		96.7	
.50 and over	73		100.0	100.0		100.0	
Average for all schedules			\$.133	\$.116		\$.139	
Average for those giving			.174	.153		.168	

35. Comparative weekly expenditure for CHURCH GIFTS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.



Percent of total giving a specified sum.

PLATE 35.

an economic significance in the budget of the worker. Apart from the motive of religious devotion and the dictates of convention, the church offers the working woman opportunity for social life, and a certain amount of financial assistance, especially in time of sickness. Money given to the church, from whatever motive, may therefore make possible economies in amusements and in insurance or membership in benefit associations, lodges, clubs, or even in trade unions, which would be unwise in the case of a woman not affiliated with a church. Gifts reported by individual workers so large as to equal the Hebraic tithe may therefore not be excessive.

In view of the benefits received from connections with a church, 13 cents, the average expenditure of women adrift, seems a reasonable weekly allowance under a liberal construction of the law. This is less than the sum of 15 cents allotted by the Twin City manufacturing board, but more than that of any other minimum allowance in the country. The Kentucky and Baltimore estimates made no provision for church gifts; the St. Louis investigation allowed but 5 cents; while estimate of the Massachusetts social workers and brush-makers' wage board, and the average determination of the six Washington wage conferences were 10 cents. The minimum subsistence allowance for church support can hardly be less than 10 cents, the sum which custom is beginning to regard as the smallest which can be laid upon the contribution plate. Many girls will not turn it into the

(6) For references to this and other investigations named, cf. notes on page 447, supra.

church but these will need it to purchase elsewhere the economic utilities which the church supplies.

b. Lodge and club dues, and insurance.

Lodge and club dues and insurance have been here grouped with church gifts in the budget of the independent worker, because the sum of these three measures roughly the claim which she has upon others for economic assistance in time of need. While club dues and contributions to the church are not paid with the motive of establishing such a claim for assistance, the close connections formed with an organization of some financial strength may in an emergency be as useful as a sick benefit; and the economic status of the woman who has such affiliations is superior, *ceteris paribus*, than of one who has not.

Church gifts,
lodge dues and
insurance group-
ed together

In editing the replies to questions 13 and 14, "What do you spend for lodge or club dues per year?" and "What do you spend for insurance per year?" it was assumed, as in the case of the replies concerning dentist's bills, that failure to answer, in a schedule otherwise intelligently filled out, meant that nothing was spent for the purpose. Dues or premiums payable at fixed intervals would be remembered by the worker if any expenditure would be, and there seems to have been no motive for withholding their amounts. This interpretation doubtless tended to increase somewhat the proportion as tabulated of those spending nothing, but this effect was in part offset by the temptation to make a good appearance by reporting an

Editing
the
replies

Table 106

Lodge and club dues of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for lodge and club dues	Number	Adrift		At home
		Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50
		Cumulative per cent of total spending	Cumulative per cent of total spending	Cumulative per cent of total spending
Total schedules	1,731			
Spending nothing	1,295			
Total spending	436			
Expense less than \$1.00	18	4.1	6.7	4.0
\$1.00 and under \$2.00	141	36.4	40.0	35.0
2.00 " " 3.00	71	52.7	54.8	51.1
3.00 " " 4.00	60	66.5	66.7	65.0
4.00 " " 5.00	33	74.1	74.9	72.7
5.00 " " 7.50	50	85.6	83.6	85.6
7.50 " " 10.00	18	89.7	89.0	90.1
10.00 " " 15.00	27	95.9	95.7	96.1
15.00 " " 20.00	10	98.2	98.7	98.6
20.00 " " 25.00	3	98.9	99.4	98.8
25.00 and over	5	100.0	100.0	100.0
Average for all schedules		\$1.04	\$.98	
Average for all reporting an expense		4.12	4.12	
Median expense for all reporting an expense			2.87	\$2.55

36. Comparative annual expenditure for LODGE AND CLUB DUES; of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

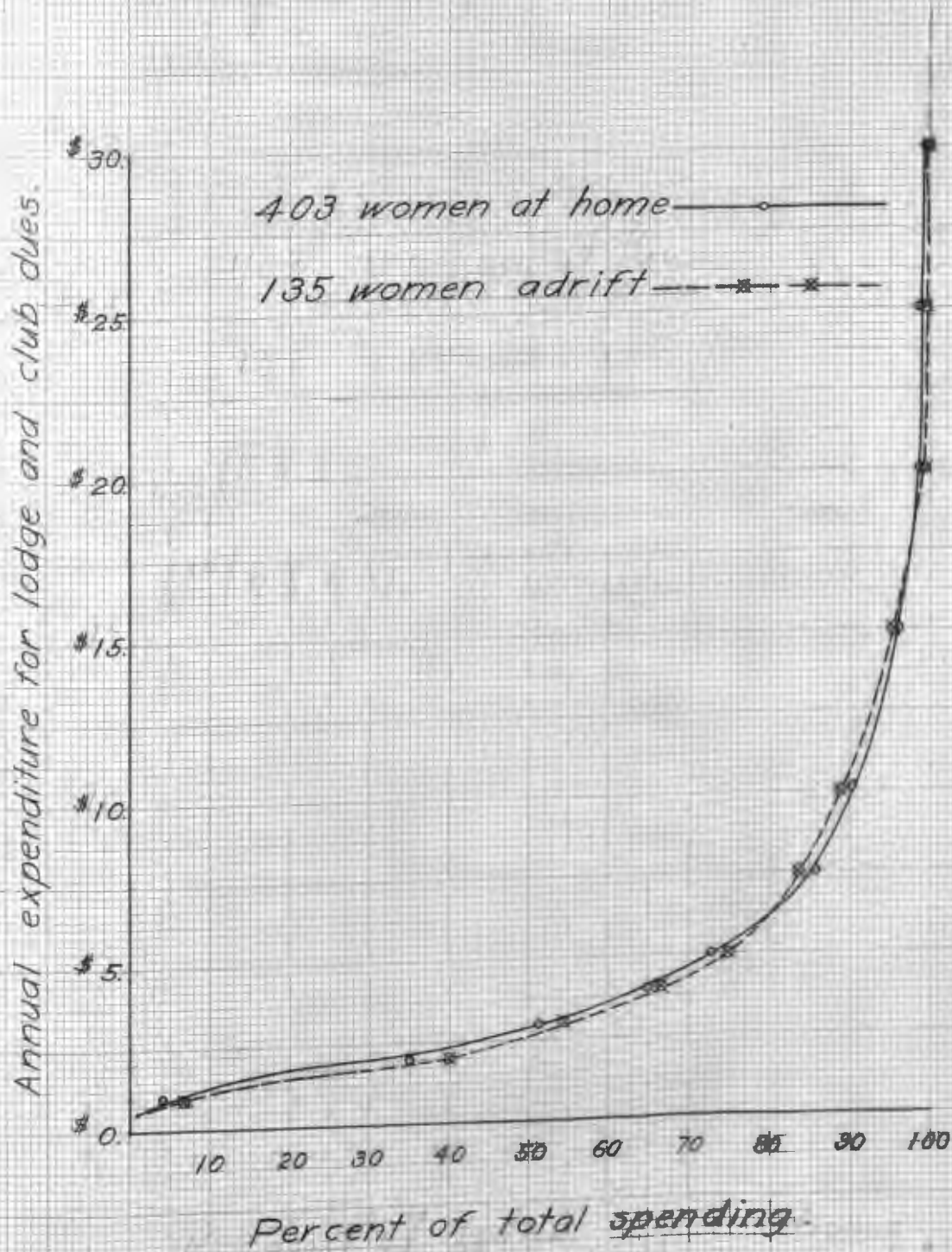


PLATE 36.

expenditure where none existed.

Expenditures of Twin City working women for lodge and club dues are presented in Table 106, and Plate 36. Only 436 out of 1,731 women adrift (25.2 per cent) reported that they spent anything. The dues varied from \$0.50 to \$35.00 a year. Three-fourths of those spending reported less than \$5.00 per year. The amount most commonly reported was \$1.00, and the median expense of the class earning \$6.50 and under \$8.50 who paid dues, amounted to \$2.87. The average was much higher, \$4.13 for all members of lodges or clubs. The average was raised by the tenth or more who paid dues of \$10 or even higher. The two items of lodge and club dues and of insurance might better have been combined in tabulating the returns, since it is obvious that sums in excess of \$5.00 reported as lodge dues, must be in the nature of benefit association dues, constituting a form of insurance.

As shown by the curves, the expenditures for this purpose of women at home and adrift differ but little. Of the wage class \$6.50 and less than \$8.50, 23.3 per cent of those at home and 23.6 per cent of those adrift are members of lodges or clubs which exact dues. The distribution of expenses is almost identical. Evidently the greater ability of the girl at home to pay is neutralized by the greater need of the girl adrift.

Table 107 and its accompanying graph give the replies to the question on insurance. One-third (32.6 per cent) of women and girls adrift were paying premiums for insurance which ranged

Lodge and
club dues,-
analysis of
returns

Expenditures
of women at
home and adrift

Table 107.

Expenditure for insurance of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for insurance per year.	Number	Adrift		At home	
		Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50	Cumulative per cent of total spending
		Cumulative per cent of total spending	Cumulative per cent of total spending	Cumulative per cent of total spending	
Total schedules	1,731				
Spending nothing	1,165				
Total spending	566				
Expense less than \$2.50	60	10.6	16.0	14.4	
\$2.50 and under 5.00	104	29.0	37.7	39.8	
5.00 " " 10.00	192	62.9	69.7	81.2	
10.00 " " 15.00	119	83.6	90.3	92.7	
15.00 " " 20.00	45	91.6	96.0	95.7	
20.00 " " 25.00	14	94.1	96.6	97.7	
25.00 " " 30.00	16	96.9	99.5	98.1	
30.00 " " 35.00	7	98.1	99.5	98.7	
35.00 " " 40.00	1	98.3	99.5	99.1	
40.00 " " 45.00	3	98.8	100.0	99.1	
45.00 " " 50.00	1	99.0		99.5	
50.00 and over	6	100.0		100.0	
Average for all schedules		\$3.09	\$2.33		
Average for those report- ing an expense		9.46	7.62		

37 Comparative annual expenditure for **INSURANCE** of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

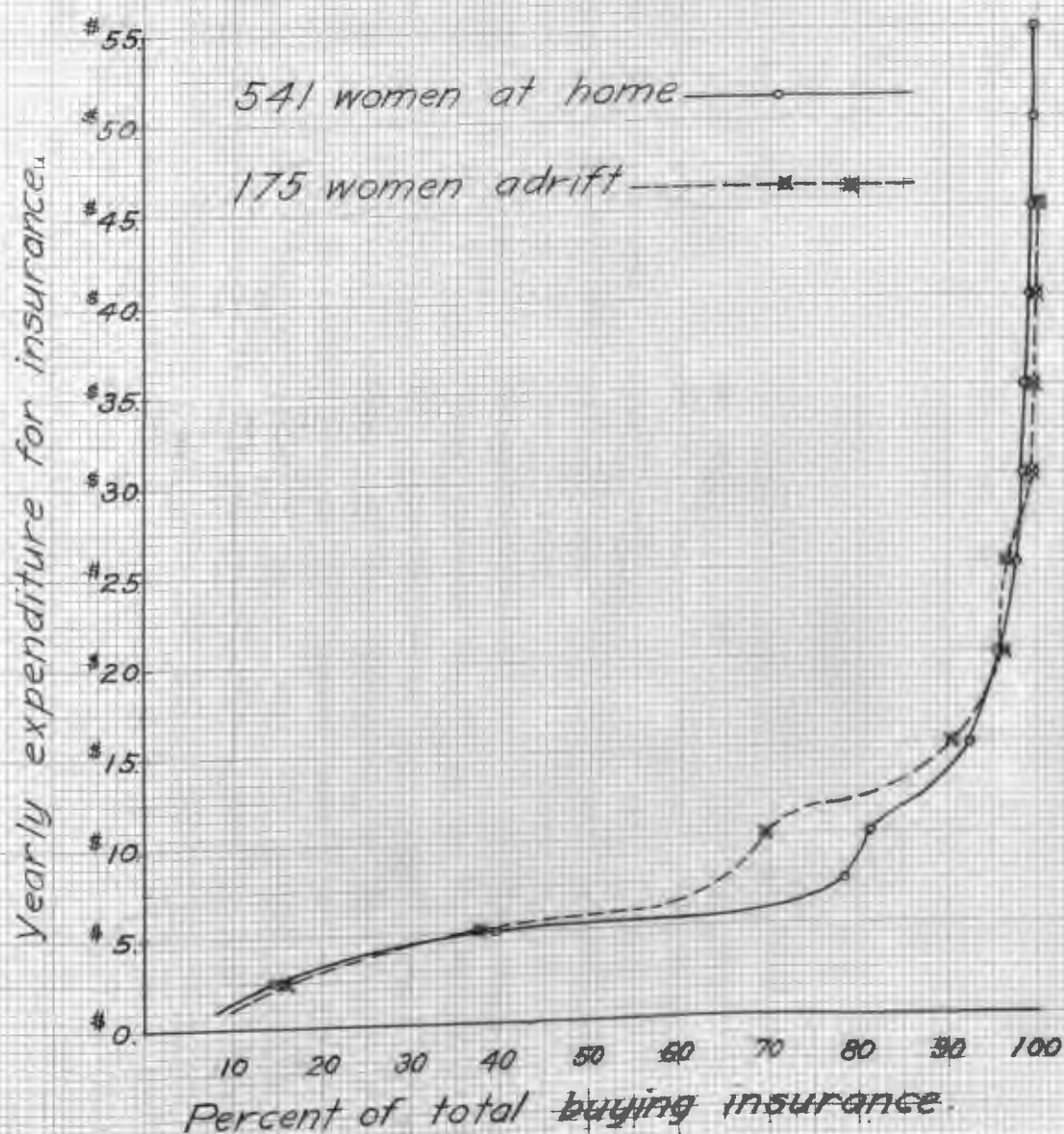


PLATE 37.

from less than \$1.00 to over \$50 per annum. Nine-tenths of those carrying insurance paid premiums of less than \$30, and two-thirds of less than \$10. The greater proportion of these are sick benefit

(7)

Insurance -
analysis
of returns

dues rather than life insurance. The median expense was \$5.80 and the average premium paid, \$9.46 per annum. Here, as in the case of doctor's bills,

the average is unduly affected by a few very high expenditures, and the median is a more representative type. For the 1,731 women adrift the average amounted to \$3.09 per capita.

(7) The federal labor bureau's report on the living conditions of wage-earning women in the Twin Cities says of the benefit association that it exists in a few of the larger stores. "The employees pay dues of 25 to 40 cents a month, the amount varying in different stores. The period of illness during which a benefit may be paid is usually from 12 to 15 weeks, and the amount of the benefit is \$5.00 per week. In case of death, the payment of a sum varying from \$50 to \$100 is made. If the sum in the treasury is not equal to the demands made upon it, an assessment is ordered, but this is rare. Membership in the associations here is not compulsory, as is frequently the case in other cities. In one store it is limited to those employees receiving over \$4.00 per week. Those who belong here seem to regard it as a semi-insuring, semi-philanthropic arrangement, for many, when it was mentioned, would remark that though they personally had derived no benefit from it, they willingly paid their dues since it helped others." U.S. Bureau of Labor, Report on condition of woman and child wage-earners in the United States, vol. V, 128.

Of women at home, a large proportion (44.3 per cent) carry insurance. A reasonable allowance for insurance and lodge and club dues together, construing the statute liberally, would be perhaps 6 cents a week, or \$3.12 a year, a sum sufficient to carry a very small sick benefit policy. The figure is arbitrary. If nothing at all were allowed for the purpose the condition of the independent worker would be no worse than the majority of self-supporting female wage-earners today. The only other separate allowances made for insurance were 10 cents, apportioned by the St. Louis⁽⁸⁾ investigation, and 11 cents, the average of the recommendations of the six Washington wage conferences.

Minima for
the Twin
Cities

4. Reading matter

The answers to question 17, "How much do you spend for books, magazines, newspapers, etc., per week?" were the least accurate of any received. One-fourth of the 1,731 women adrift did not answer the inquiry. Failure to reply created a probability, but did not establish a presumption that the individual spent nothing regularly for the purpose. Two hundred ninety-four others - 17 per cent of the total - definitely replied that they spent nothing. The reported expenditures of the remainder, who constituted 58 per cent of the total, varied from less than 5 cents to \$1.00 per week. The proportion of women at home earning the same wage

Editing
the
replies

(8) For references to the results of the several investigations confer notes on page 447, supra.

Table 108.

Expenditure for reading matter of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure per week for books, maga- zines and newspapers	Number	As originally reported			After reducing improbable replies				
		Cumulative per cent	Cumulative per cent	Cumulative per cent	Adrift		At home		
					Total earning under \$12.50	Earning \$6.50 and under \$8.50	Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50
Total indicating expense 1,002					1,002				
Less than \$.05 per week	42	4.2	5.5	3.5	48	4.8	6.2	5.8	
\$.05 and under \$.10	142	18.4	23.7	16.8	158	20.6	24.8	20.4	
.10 " " .15	310	49.4	56.3	46.5	357	56.2	59.0	53.8	
.15 " " .20	128	62.2	68.4	59.2	140	70.2	71.7	68.8	
.20 " " .25	69	69.1	75.9	65.1	85	78.7	79.5	76.4	
.25 " " .30	188	87.9	90.2	84.0	189	97.5	97.4	96.1	
.30 " " .35	18	89.6	91.5	86.3	13	98.8	99.0	98.4	
.35 " " .40	15	91.1	92.8	88.1	7	99.5	99.7	99.4	
.40 " " .45	8	91.9	93.5	89.4	2	99.7	100.0	100.0	
.45 " " .50	9	92.8	93.8	89.4		99.7			
.50 " " .60	53	98.1	98.7	95.8	2	99.9			
.60 " " .70	2	98.3	98.7	96.3	1	100.0			
.70 and over	18	100.0	100.0	100.0					
Average expense for all reporting an expense		\$.183	\$.166	\$.214		\$.145	\$.136	\$.144	

38. Comparative weekly expenditure of women at home and adrift for BOOKS, MAGAZINES AND NEWSPAPERS.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

{As reported, without revision of improbable returns.}

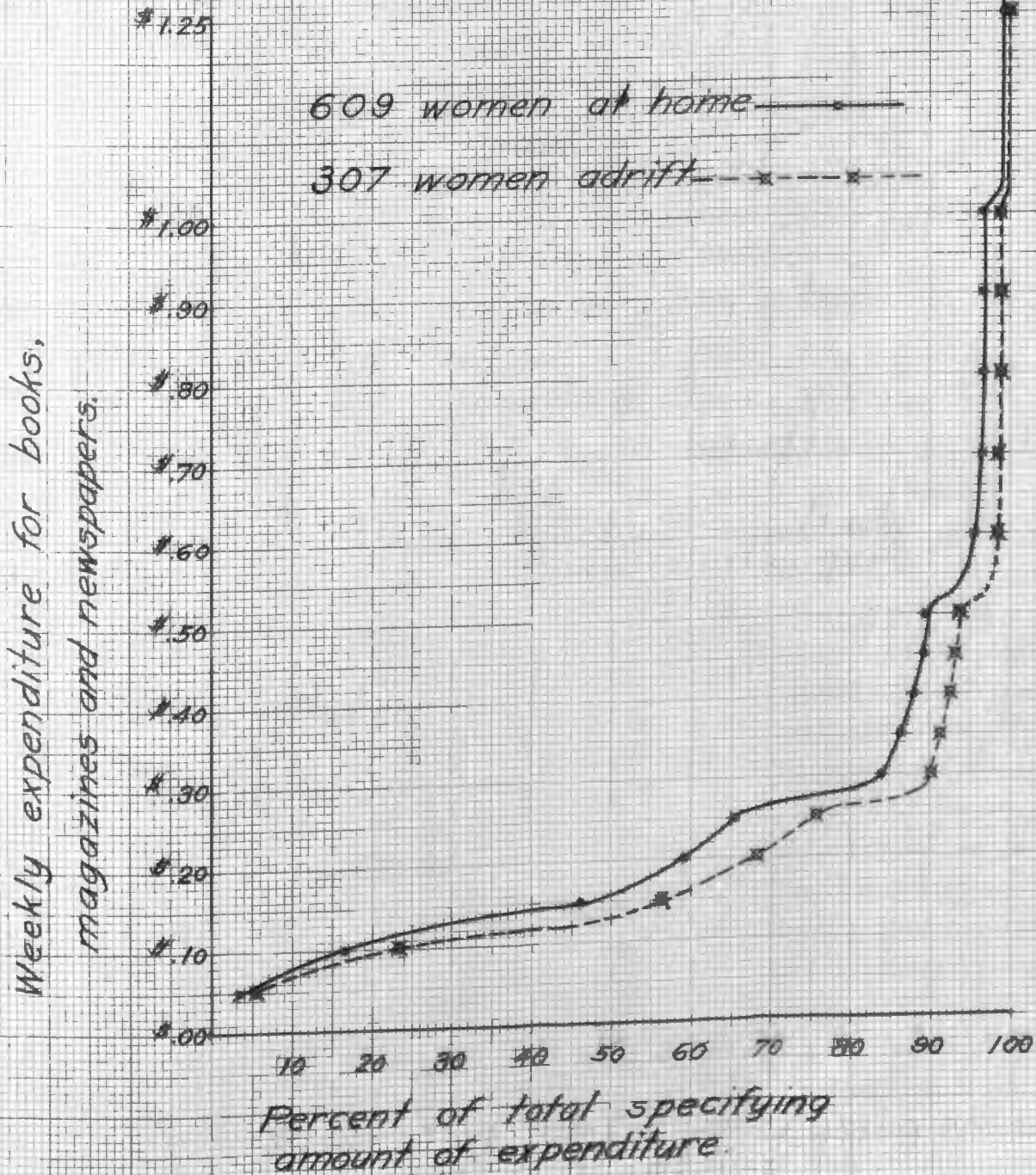


PLATE 38.

39 Comparative weekly expenditure of women at home and adrift for BOOKS, NEWSPAPERS AND MAGAZINES.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

{After revision of improbable returns.}

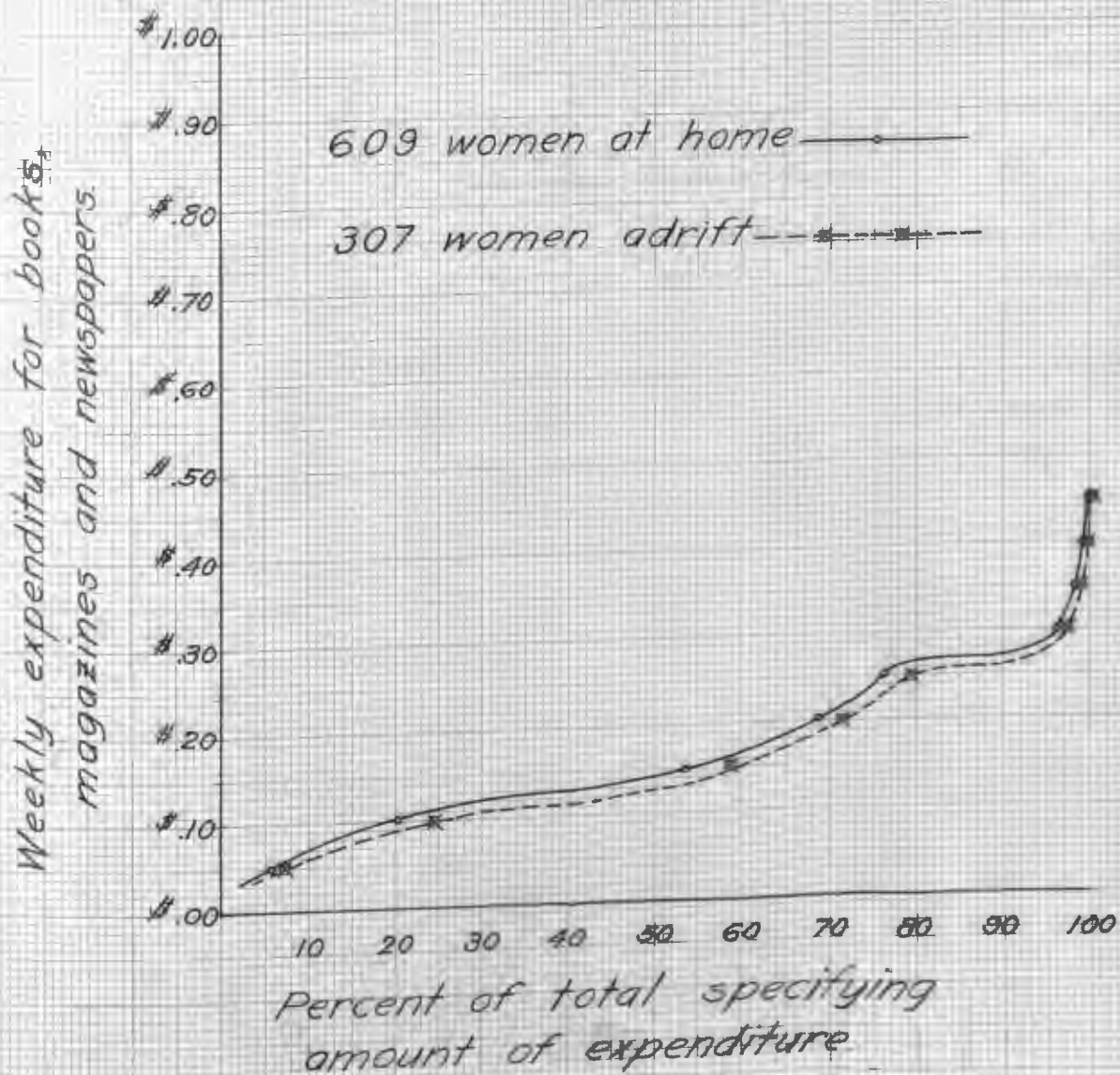


PLATE 39

(less than \$12.50 per week) who reported expenditures, was smaller, amounting to only 50.8 per cent.

An attempt was made in editing to reduce the palpably improbable replies to within the means of the girl reporting. The rigor of the process of editing will be seen from its effect upon the average expense of all reporting an expenditure, which fell from 18 cents per week, as originally reported, to 14 cents after revision.

Such as they are, the returns are presented in Table 108 and Plates 38 and 39. The unedited replies are of value in calculating the differential between the standard of living of women adrift and those of women at home earning the same wage. (9) The average revised expense per capita of 1,731 women adrift is 8 cents per week.

The figures are of small value in fixing a minimum allowance for reading matter. Since the public library, particularly that of Minneapolis, with its many branches, supplies gratis all books and periodicals which any working girl might care to read, and is open long enough in the evening to make it possible for practically every worker to draw books at some time during the day, newspapers are the only expense to be provided for in a minimum allowance for reading matter. Six cents per week will buy a daily paper on week days: to be deprived of the Sunday edition is not an intolerable hardship. If the girl prefers, she can buy a five cent weekly, or two ten cent monthly magazines. Six cents, therefore, appears a

(9) Cf. chapter V.

liberal interpretation of the phrase "reasonable living" for this item of expenditure. The minimum subsistence allowance need make no provision for it; the newspapers which the public library do not furnish, the working woman can obtain from others who have finished reading them.

Little attention was paid to reading matter as an item of expenditure by the Kentucky, Baltimore, St. Louis, or Kansas City investigations. The brush-makers' wage board of Massachusetts allowed 8 cents and the social workers of the same state, 7 cents. The average of the recommendations of the six Washington wage conferences was 9 cents. The largest allowance was 19 cents per week, made by Miss Gleason in Portland, and was designed to cover "education and reading." It will be seen that the estimate of ten cents returned by the Twin City boards is higher than any other except that of Miss Gleason.

Allowances
of other
investiga-
tions

5. Recreation

Recreation, of all items in the budget, is the one for which a minimum allowance is most difficult to make. In comparing the standards of living of women at home and adrift, we have seen that expenditures for amusements are the most elastic of the habits (11)

(10) For references to this and the other investigations named cf. notes on page 447, supra.

(11) Chapter V, 380.

of consumption, and that they are caught by example rather than dictated by convention. Moreover, individuals differ greatly as to the minimum vacation and amusement which they require for

Difficulty
of estimating
minimum expendi-
ture for recrea-
tion

health of body and mind. On this subject expert opinion can hardly be said to exist. No budget of amusements could be so formed as to escape criticism from many quarters,

both as to its content and gross expenditure which it contemplated. Nor can the question be satisfactorily settled by reference to consumption statistics for the latter are usually far from accurate.

a. Amusements

The replies to inquiry 15 of the cost of living schedules, "How much do you spend for amusements per week?" were very inaccurate. A fundamental difficulty in answering the question lay in

deciding what constituted "amusements."

Editing
the
replies

There appeared to be a general tendency to include purchases of gum, candy, ice cream,

picnic lunches, and other luxuries, as well as car fare spent at other times than when going to work, under the term "amusements" in addition to theater tickets and moving picture shows. Another difficulty was introduced by the large proportion of the women enumerated who failed to answer the question. Among the 1,731 females adrift, this fraction amounted to one-fifth of the total. This silence it is impossible to interpret. Some who did not fill in the question doubtless spent nothing. Many others did not attempt to average an expense so variable as amusements and simply left the question unanswered without intending to convey the idea

that they habitually spent nothing. The nature of the replies will be seen from the following table:

Table 109.

Summary of replies of employees as to expenditures for amusements.

Expenditure for amusements per week	Adrift				At home	
	Total earning less than \$12.50		Earning \$6.50 and less than \$8.50		Earning \$6.50 and less than \$8.50	
	Number	Per cent of total answering	Number	Per cent of total answering	Number	Per cent of total answering
Total answering	1379	100.0	465	100.0	1074	100.0
Spending nothing	225	16.3	84	18.1	101	9.4
Total reporting an expense	1154	83.7	381	81.9	973	90.6
Amount not specified	35	2.5	11	2.4	30	2.8
Specifying amount	1119	81.2	370	79.5	943	87.8
Per cent answering of total schedules		79.5		81.3		88.0
Average expense for all specifying (revised)		\$.41		\$.33		\$.57
Average for all answering (revised)		\$.34		\$.26		\$.50

It is quite impossible to determine what proportion meant that they were not in the habit of spending money on amusements. It is significant, however, that the proportion failing to answer was much smaller among women at home, whose reported expenditures were higher. Of those answering 18 per cent of the wage class \$6.50 and under \$8.50 who were adrift definitely stated that they spent nothing, as compared with 9.4 per cent of the same class at home. By no means all of the girls reporting that they spent nothing went without recreation, for many of them had sweethearts. Additional light is thrown on the question by two studies of the federal Bureau of Labor. An inquiry into family budgets in 1903 indicated that from 60 to 95 per cent of the families of American working men spend money on amusements.

(12)

More significant was the intensive study made in 1910 of the living conditions of 142 women adrift in the Twin Cities. Of these women thirteen had absolutely no expense for amusements and recreation.

"This means that calls on^a friend were prohibited if they cost carfare; that no amusement could be indulged in, however small the cost. Twenty-seven others spent nothing; but did not lack for amusements, as some one else bore the expense, and 60.6 per cent spent an average of 20 cents a week for their pleasure. There is a

(13) U.S. Bureau of Labor, Eighteenth annual report, 444-445. The data from three of the more populous states and from Minnesota were as follows:

State	Families investigated	Per cent spending for amusements and vacation
New York	471	77.3
Pennsylvania	398	62.8
Massachusetts	253	95.3
Minnesota	40	95.0

very natural craving for relaxation and amusement from the day's work but those who do light housekeeping have little time or strength to indulge to any great extent even if the question of money was not always present. The older women, from about 28 years and over, do not seem to care to go about in the evening, as the day's work calls for all their strength and vitality. The younger women, however, go to dances, the 10, 20, and 30 cent vaudeville, the skating rinks, the nickelodeons, and to the parks and lakes in summer." (13)

The replies of those who reported an expenditure for amusements and specified its amount are presented in Table 110 and Plates 40 and 41, both as originally reported and as later revised by reducing improbable returns to within the means of the girl reporting. The fall in the average weekly expense from \$.50, as originally reported, to \$.41 as revised, indicates the rigor of the process of editing. The unrevised answers are of value in studying the differential between the standard of living of dependent and self-supporting women of the same age. The revised returns are presented as suggestive only and not as accurate. As they stand, the expenditure commonest reported is 50 cents per week. Eighty-five per cent of the total adrift spend this amount or less. The average for those specifying an expenditure is 41 cents and the median very much less, about 28 cents. A more significant figure is the average expense for all answering, whether spending or not, which amounts to 34 cents per week. This is not to be accepted as a measure of the expense per capita of the class of self-dependent women, a figure which, because of the failures to answer the question, cannot be

Table 110.

Expenditure for amusements of females employed in mercantile and manufacturing establishments in the Twin Cities.

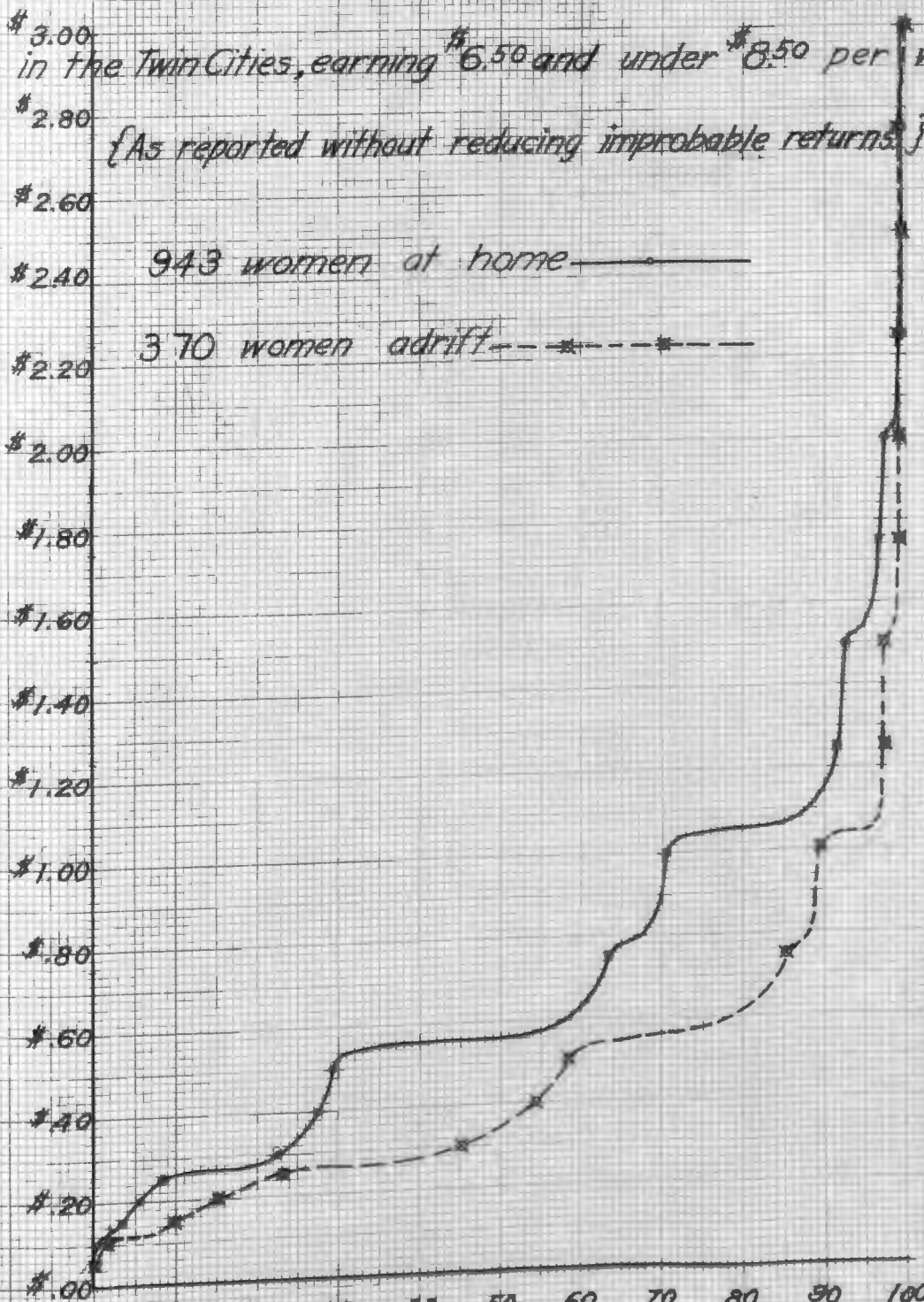
Expenditure for amusements per week	As originally reported				After reducing in probable replies			
	Adrift		At home		Adrift		At home	
	Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50	Total earning under \$12.50	Earning \$6.50 & under \$8.50	Earning \$6.50 & under \$8.50	Earning \$6.50 & under \$8.50	
	Number	Cumulative per cent	Cumulative per cent	Cumulative per cent	Number	Cumulative per cent	Cumulative per cent	Cumulative per cent
Total reporting an expenditure and specifying its amount	1119				1119			
Less than \$.05	1	.1	.3		3	.3	.5	.1
.05 and under .10	8	.8	1.1	.6	15	1.6	1.9	.6
.10 " " .15	79	7.9	10.0	3.5	94	10.0	11.9	3.3
.15 " " .20	42	11.7	15.1	5.4	52	14.6	18.4	5.4
.20 " " .25	92	19.9	23.2	8.5	114	24.8	29.8	9.6
.25 " " .30	224	39.9	45.1	22.7	257	47.8	56.0	26.1
.30 " " .40	71	46.2	54.8	27.9	93	56.1	69.3	32.5
.40 " " .50	25	48.4	58.3	29.3	30	58.8	72.8	34.1
.50 " " .75	327	77.6	85.3	63.5	293	85.0	94.3	71.9
.75 " " 1.00	47	81.8	89.5	70.3	56	90.0	97.0	79.0
1.00 " " 1.25	157	95.8	97.3	91.7	90	98.0	99.7	95.2
1.25 " " 1.50	4	96.2	97.3	92.3	3	98.3	99.7	95.7
1.50 and over	42	100.0	100.0	100.0	19	100.0	100.0	100.0
Average for all specifying		\$.504	\$.420	\$.650		\$.414	\$.325	\$.565

40. Comparative weekly expenditure for AMUSEMENTS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

{As reported without reducing improbable returns}

Expenditure per week for amusements.



Percent of total reporting an expenditure and specifying how much.

PLATE 40.

41. Comparative weekly expenditure for AMUSEMENTS of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.

{After revision by reducing doubtful returns.}

Expenditure per week for amusements.

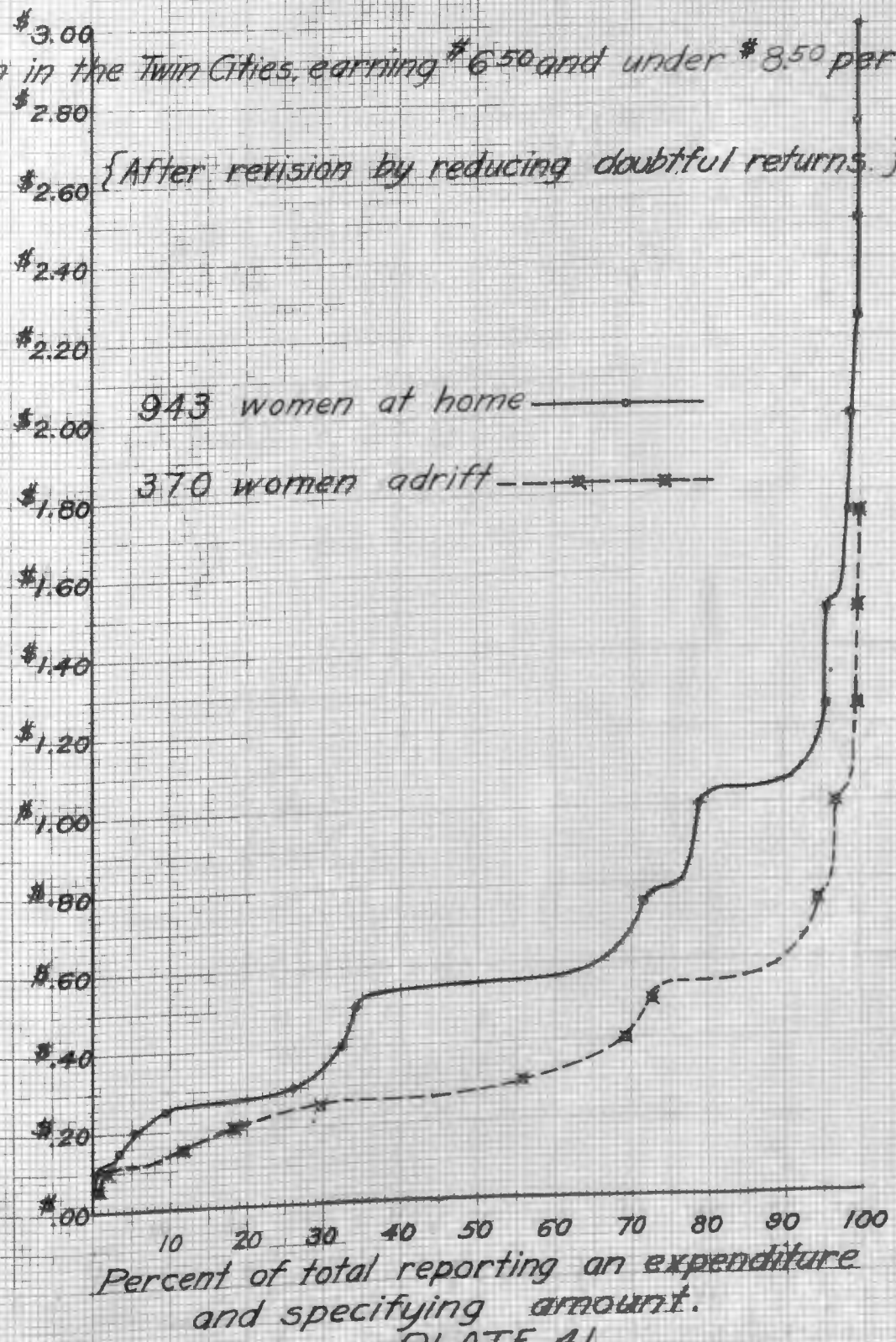


PLATE 41.

calculated, but is probably still less.

Careful study of Table 110 and its accompanying plates would seem to establish the conclusion that a considerable proportion of self-dependent women in the Twin Cities - at least one-sixth of the total - spend nothing on amusements; that the sums disbursed are irregular in amount and in frequency; that of those who do habitually spend money for amusements the great majority keep within 55 cents a week, and that many more than half of the total either spend nothing or do not exceed 25 cents.

Under the circumstances an allowance of 25 cents appears to satisfy the demands of convention and to place within the reach of the wage-earner as much as is enjoyed by the average woman of her position. This was the sum recommended by the Minimum for the Twin Cities Twin City manufacturing and Duluth boards. Fifteen cents a week could hardly be denied the worker on the plane of bare subsistence. The proportion suggested by the figures as spending less than 15 cents is between 20 and 40 per cent, perhaps about one-third.

Allowances for amusements have seldom been separately made by minimum wage investigations. The Massachusetts brush-maker's board allotted but 9 cents⁽¹⁴⁾ for the purpose. The average Allowances of the recommendations of the six Washington of other investigations wage conferences was 19 cents, almost exactly equal to that of the St. Louis study (20 cents).

(14) For references to this and the other investigations named cf. notes on page 447, supra.

b. Vacation

The custom of allowing vacation on pay to women on wages or a small salary is not a common one in the Twin Cities, altho
(15)
practiced by a few of the high-grade stores. In factories it is

Vacation ex-
pense must be
saved during
year

almost unknown. If vacation be considered an essential of "reasonable living" as defined by the statute, it must therefore be provided for by sav-
ings during the working year. An obvious minimum

limit to the vacation allowance is the cost of living for a week.

The expenditures for vacation of Twin City store and factory women are exhibited in Table 111, Table 113, and Plate 43. The phrasing of the question on the schedule was unfortunate. It read "How much did you spend for your last vacation?" and was given varying interpretations. Many women understood it to ask for vaca-
tion expenses during the past year and replied that they had had

Interpret-
ing the
replies

none. Others interpreted the inquiry literally and set down the cost of a railroad trip taken two years before. There is no means of telling what

kinds of expense are included in the replies, whether, for instance, the cost of board given by friends visited is included, or whether, if the vacation was spent quietly at home, ordinary living expenses for the week were charged to its cost. Much more likely the vacation expenses reported are those extraordinary ones not paid into the accustomed channels, and the "vacations" mentioned are those which involve change of scene. Assuming that the re-
plies were made in good faith, the returns of Table 113 represent

(15) U.S. Bureau of Labor, Report on condition of women and child wage-earners, Vol. V, 129.

the extraordinary expenses attending 839 vacations, taken by as many working women during a time probably exceeding a year. Evidently costly vacations would be remembered longest and the proportion of them in Table 113 carried forward from previous years is probably too high. Averages based upon them would also be too high, and must therefore be used with caution.

A fourth of the women adrift and a fifth of those at home failed to reply, as will be seen from the following table.

Table 111 .

Summary of replies to question on vacation expenses

Expenditure for "last vacation".	Adrift				At home	
	Total earning under \$12.50		Earning \$6.50 and under \$8.50		Earning \$6.50 and under \$8.50	
	Number	Per cent of total answering	Number	Per cent of total answering	Number	Per cent of total answering
Total schedules answering	1304	100.0	435	100.0	971	100.0
Spending nothing	410	31.4	157	36.1	337	34.7
Total reporting an expenditure	894	68.6	278	63.9	634	65.3
Amount not specified	55	4.2	26	6.0	30	3.1
Specifying amount	839	64.4	252	57.9	604	62.2
Per cent of total schedules answering		75.0		76.1		79.5
Average expense for all answering		\$10.76		\$8.25		
Average for all specifying		\$16.02		\$13.39		

Table III .

Summary of replies to question on vacation expenses

Expenditure for "last vacation".	Adrift		At home			
	Number	Per cent of total answering	Number	Per cent of total answering	Number	Per cent of total answering
Total schedules answering	1304	100.0	435	100.0	971	100.0
Spending nothing	410	31.4	157	36.1	337	34.7
Total reporting an expenditure	894	68.6	278	63.9	634	65.3
Amount not specified	55	4.2	26	6.0	30	3.1
Specifying amount	839	64.4	252	57.9	604	62.2
Per cent of total schedules answering		75.0		76.1		79.5
Average expense for all answering		\$10.76		\$8.25		
Average for all specifying		\$16.02		\$13.39		

Failure to answer is to be interpreted as meaning either that the girl spent nothing or that she could not state how much. Since of those answering only about 5 per cent made no estimate

Frequency of vacations

of the cost of a vacation which they stated they had taken, the majority of the failures to reply probably mean that no extra expenditure for vaca-

tion was incurred. Assuming for a moment that all of the 427 women adrift of Table 111 who did not answer, spent nothing, the proportion of the total who did undergo extra vacation expense would be a little over half. It appears a legitimate inference that at least half the women adrift did incur extraordinary expense in connection with vacation. Or, expressing it differently, the average woman adrift, oftener than once in two years, takes a vacation, the extraordinary expenses of which range around \$12.

A glance at Table 112 will show that the mode expense is \$10, and that approximately half of the vacations reported cost in extraordinary expense this amount or less. The median expense

Expenditures as reported

may be read from the curves of Plate 42. It amounts to approximately \$12. Trips costing over \$100 were reported by two schedules. Obviously

a self-supporting woman on a small salary can take such a vacation only once in years. The inclusion of these costly vacations unduly affects the average. Three-fourths of the vacations reported cost less than \$25.

It is noteworthy that between women at home and women adrift as a class there is almost no difference in the reported

Vacations of women at home and adrift.

expenditures for vacation, either in the proportion incurring vacation expense or in

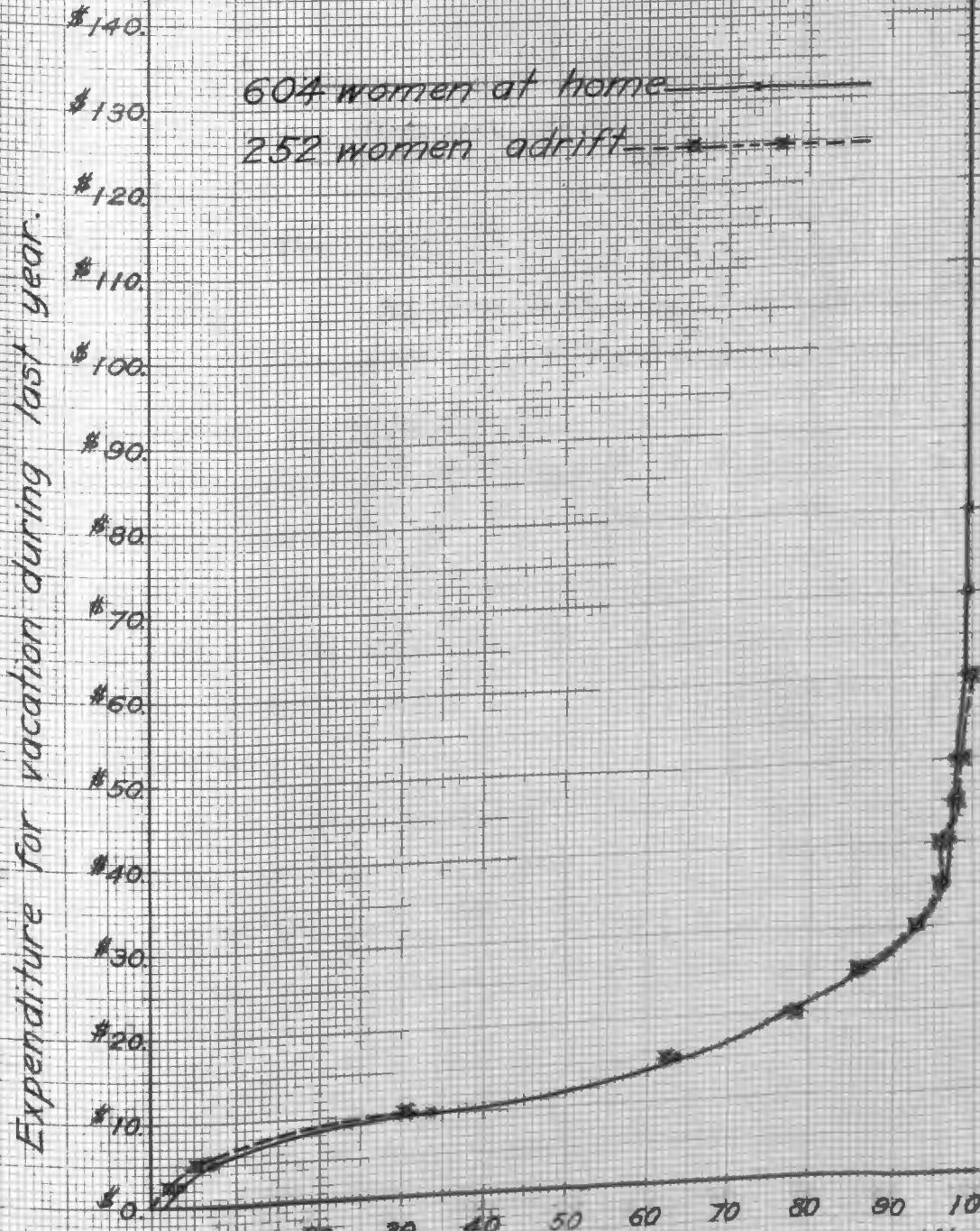
Table 112.

Expenditure for last vacation of females employed in mercantile and manufacturing establishments in the Twin Cities.

Expenditure for last vacation	Number	Adrift		At home
		Total earning under \$12.50	Earning \$6.50 and under \$8.50	Earning \$6.50 and under \$8.50
		Cumulative per cent	Cumulative per cent	Cumulative per cent
Total specifying amount of expense	839			
Less than \$2.50	20	2.4	2.0	13.3
\$2.50 and under \$5.00	30	6.0	5.2	7.1
5.00 " " 10.00	147	23.5	30.6	33.5
10.00 " " 15.00	211	48.7	62.3	63.7
15.00 " " 20.00	157	67.4	78.2	77.9
20.00 " " 25.00	71	75.9	85.3	86.0
25.00 " " 30.00	119	90.1	94.0	93.3
30.00 " " 35.00	33	94.0	96.0	96.3
35.00 " " 40.00	10	95.2	96.0	97.3
40.00 " " 45.00	14	96.9	98.0	97.6
45.00 " " 50.00	4	97.4	98.8	97.9
50.00 " " 60.00	13	98.9	100.0	99.4
60.00 " " 70.00	6	99.6		99.7
70.00 and over	4	100.0		100.0
Average for those specifying expense		\$16.02	\$13.39	
Median for those specifying expense			12.00	\$12.00

42. Comparative annual expenditure for VACATION of women at home and adrift.

Women in the Twin Cities, earning \$6.50 and under \$8.50 per week.



Expenditure for vacation during last year.

Percent of total reporting on expenditure for vacation and specifying amount.
 PLATE 42.

the range of such expense. The greater means of dependent women are offset by the pleasanter homes they enjoy which render vacation expenses less necessary.

An allowance for extraordinary vacation expense approximating that enjoyed by half of the self-supporting women adrift might by inference be fixed at \$12.00 every two years, or say 12 cents a week. This, however, is extraordinary expense only.

Minima for
the Twin
Cities

To it should be added the cost of board and lodging during a week's rest in the house where the girl is staying, amounting on the average to \$4.73 or 9 cents to be laid aside out of every week's wages.

Twenty-one cents per week would therefore be a reasonable allowance for vacation under a liberal construction of the statute. It would insure to the wage-earning women a week of quiet in her accustomed abode, at some time during one year, and a vacation costing \$16.73, including all expenses, the next year. From the imperfect data at hand this appears to represent the standard at present enjoyed by the average self-supporting working woman.

A minimum subsistence allowance for vacation would be one week's board, room and washing, amounting to ⁽¹⁶⁾\$4.35 per year or 8 cents per week. This makes no provision for extra expense beyond the cost of quietly resting in the girl's accustomed quarters.

The proposed allowances for amusement and vacation in combination give 46 cents under a liberal, and 23 cents under a strict construction of the language of the statute. The former closely

(16) Cf. Chapter VI, p 443.

approximates the allowances of the Minnesota advisory boards, thirty-five, fifty, and forty-five cents. The provisions made by the other minimum cost-of-living investigations varied widely:

Allowances of other investigations	<p>(17) the Kentucky, Baltimore, and Kansas City studies made no allowance for recreation, the St. Louis study apportioned for this purpose 30 cents out of its weekly wage of \$8.53; the Massachusetts brush-makers' wage board allotted 24 cents, and the social workers of the same state, 54 cents. Miss Gleason's estimate for Portland, Oregon, was 48 cents, and the average of the recommendations of the Washington wage conferences, 42 cents. Forty-five to 50 cents a week, or about \$26 a year, seems to be the consensus of opinion as to the minimum expenditure for recreation consistent with health and happiness.</p>
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6. Summary of allowances for
miscellaneous expenses

The allowances proposed in the present chapter for each item of miscellaneous expense, under a liberal construction of the phrase "necessary comforts and conditions of reasonable life," and under a construction so strict as to approximate the level of bare subsistence are summarized in the following table.

(17) For references to this and the other investigations named of. notes on page 447 , supra.

Table 113.

Item	Minima under liberal construction of statute		Minima of subsistence	
	Per week	Per annum	Per week	Per annum
Car fare	\$.50	\$26.00	\$.30	\$15.60
Doctors' bills	.10	5.20	.07	3.64
Dentists' bills	.17	8.84	.12	6.24
Oculists' bills	.04	2.08	.03	1.56
Church gifts	.13	6.76	.10	5.20
Lodge and club dues and insurance	.06	3.12	—	—
Books, magazines and newspapers	.06	3.12	—	—
Amusements	.25	13.00	.15	7.80
Vacation	<u>.21</u>	<u>10.92</u>	<u>.08</u>	<u>4.16</u>
	\$1.52	\$79.04	\$.85	\$44.20

C H A P T E R IX

EFFECT OF THE PROPOSED NINE-DOLLAR
MINIMUM WAGE IN MINNESOTA.

The length of this paper precludes more than the barest summary of the preceding chapters.

While the prevailing rates of wages in the three large cities of Minnesota are higher than in the East and South, the number of females receiving less than a living wage is so large as to be ground for grave social concern. The median wage of all females in stores and factories is \$8.53. Over one-half (56.1 per cent) earn less than the promulgated \$9.00 living wage; 38.5 per cent receive less than \$7, the lowest estimated cost of reasonable living; and one-eighth of the total earn less than \$6.

A large proportion of these low-paid workers are living away from home and presumably supporting themselves. Two-thirds of the female store and factory employees live at home with parents or relatives. Of the remaining one-third, most of whom are believed to be dependent on themselves entirely, 46 per cent earn less than \$8.50 per week, and 17 per cent less than \$6.50. The number of these women adrift in the Twin Cities earning less than \$6.50 per week is estimated at 1,300 in trade and manufacturing alone. These underpaid, self-dependent women constitute a distinct class whose

Summary of
preceding
chapters -
wages

The class of
self-supporting
women

dangerously low standard of living can be reached by a minimum wage.

If the theory of wage determination presented in Chapter V be accepted, the minimum standard reasonable for this class of underpaid self-supporting women is that below which only one-fourth of the dependent women wage earners exist.

Analysis of the none too satisfactory data available (chapters VI, VII, and VIII) indicates that the cost to an independent woman of maintaining this minimum standard of health and respectability is \$7.00 per week. The commission's \$9.00 allowance is shown to approximate the average enjoyed by dependent women wage earners living at home.

The allowances for the principal items of expenditure on which these two minima are based were as follows:

Table 114.

Summary of minimum allowances for important items in the standard of living.

Item	Minima under liberal construction of state		Minima of subsistence	
	Per week	Per year	Per week	Per year.
Room and board	\$5.00	\$260.00	\$4.00	\$208.00
Laundry	.50	26.00	.35	18.20
Clothing	2.00	104.00	1.73	90.00
Miscellaneous expense	1.52	79.04	.85	44.20
Total	\$9.02	\$469.04	\$6.93	\$360.40

Briefly the weekly allowance of \$9.00 will bring the self-supporting woman, at prices prevailing in 1914, the use of a small but satisfactory single room, board of three substantial meals and occasional extra lunches, the privilege of sending out much of her washing, clothing apparently equal in quantity and quality to that worn by dependent women as a class, car rides to and from work, an annual visit to the dentist and the doctor, regular attendance at church, membership in a sick benefit association, newspaper on week days, and an expenditure for amusements and vacation rather greater than enjoyed at present by class of self-supporting women. In short the \$9.00 wage permits the maintenance of a thoroly respectable standard, a standard as high as that of the average dependent woman.

Standard permitted by the \$9 allowance

The \$7.00 wage, on the other hand, represents the bare level of respectable subsistence. It allows no margin for the unexpected. Its \$4.00 per week for food and lodging suffices, at the prices of 1914, to purchase board of three meals, often none too well cooked, and half of a double room. Its recipient must do the greater part of her own washing. Her clothes will be of the plainest, sufficiently in fashion, however, to pass without comment among her friends. For miscellaneous expenses it provides only the smallest amount which will satisfy the demands of respectability set the worker by her social position. In general, it makes possible for her a manner of living as good as that of the poorest quarter of the class of dependent women wage earners, just as the \$9.00 wage makes possi-

By the minimum subsistence allowance

ble a standard attained by less than half of the women at home.

Both of these estimates it is to be noted are based upon the assumption that there are no periods of unemployment. The assumption admittedly does not apply to many workers, yet in the absence of definite knowledge of the length of seasons of unemployment, it is simply impossible to make quantitative allowance for it. Seasonal unemployment is a problem distinct from minimum wage, and the latter may not justly be charged with its solution. The woman earning the \$9.00 wage can lay by sufficient to tide her over a limited season when her wages cease per force. Obviously a worker on the level of respectable subsistence must cut below the standard of decency if her \$7.00 wage is stopped even a few weeks.

Providing no unemployment

Purpose of present chapter

The present chapter aims to show the probable effects of the enforcement of the proposed minimum rates upon industry in Minnesota.

In studying the probable effects of the compulsory payment of the commission's nine-dollar minimum rate it must be remembered that the order of October, 1914 applied only to "females and minors of ordinary ability." (1) The commission thus studiously avoided committing itself upon the vexed question of the wages of learners and apprentices. Since no statistics are available as to the proportion of all female store and factory employees who are

(1) Minnesota Minimum wage commission, First biennial report, 46-49. The phrase was obviously intended to mean "experienced" workers, as distinct from beginners. It is repeatedly employed in the act as the opposite of "learners and apprentices."

experienced, except what may be gathered by inference from the age returns (cf. p. 228), it is difficult to determine the effect of the commission's order upon the expenses of the businesses employing women. It is plain, however, that the sponsors of the law contemplated no material difference in the minimum rates for experienced and inexperienced workers, since the minimum wages for both are to be "living wages" and there can be little difference in the minimum cost of living to a girl just beginning as a learner and the same girl after a year's experience.

Burden imposed upon industry by the \$9.00 minimum

Assuming a flat rate applicable to all females alike, the effect of the increase on the present charge for female labor becomes as shown in the following table:

Table 115 .

Effect on the cost of female labor in stores and factories of the enforcement of a flat minimum wage rate, assuming that no employees were discharged.*

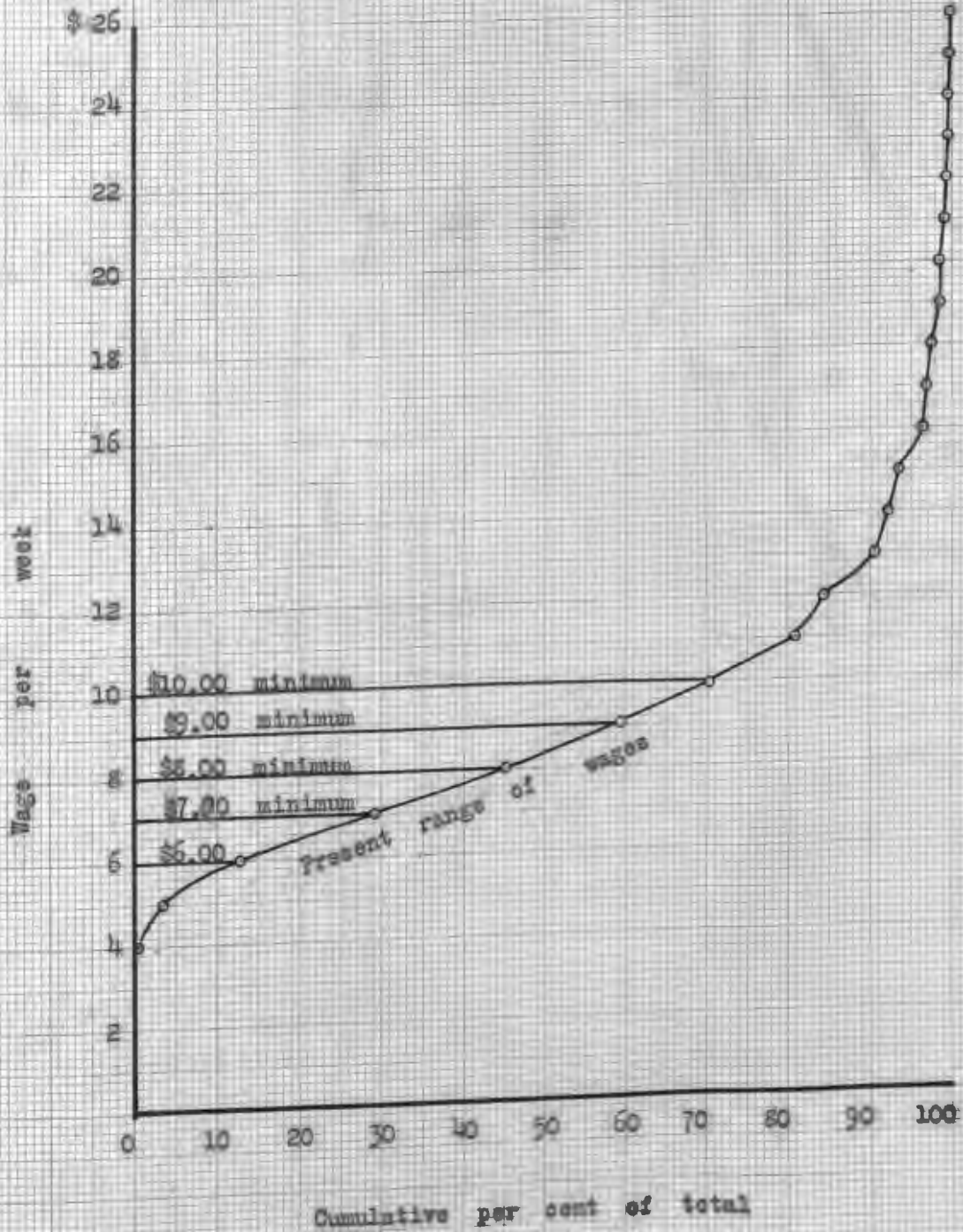
Flat minimum rate	Per cent of increase in female labor cost		
	Total, manufacturing and mercantile.	Mercantile	Manufacturing
If minimum were \$10.00	23.5	23.9	22.7
9.00	15.7	16.4	14.9
8.00	9.3	10.0	8.6
7.00	4.5	5.1	4.0
6.00	1.6	1.9	1.3

* Based upon employers' wage reports, for which more accurate average wages may be calculated.

PLATE 43

Effect upon the aggregate wages of female labor of enforcing certain blanket minimum time rates, assuming that no workers are discharged.

Females employed in stores and factories in the Twin Cities and Duluth.



Assuming that no girls were discharged, the enforcement of the commission's \$9.00 minimum upon all employees would thus increase the total wages paid to females in stores and factories in the Twin Cities and Duluth by 16 per cent. The effect of

With flat rate flat \$8, \$7, and \$6 rates would be to increase the total charge for female labor by 9.3, 4.5, and 1.6 per cent, respectively. The effect upon the female

labor cost of stores would be slightly higher than upon that of factories, because of the somewhat higher wages paid at present by the latter. Had the commission followed the recommendation of the advisory boards, and fixed \$6.00 as the minimum rate for learners during the first six months and \$7.00 during the second six months, in addition to its \$9.00 wage for experienced workers, the effect would have been to increase the charge for female labor by some-

thing like 2.8 per cent. ⁽²⁾ This figure of approximately 3 per cent is purely a guess. It assumes that 35 per cent of all employees were learners and

With graded labor apprentices of less than one year's experience. The fact that half the females employed in factories were under 21 years is the only basis on which the assumption of inexperience is made. Nevertheless, the figure is highly suggestive. It indicates that with low minima for apprentices and learners, even the \$9.00 minimum for experienced workers might not place a prohibitive tax on industry. How much an increase in the charge for female labor increases the entire labor bill, and how much an increase in the

(2) Assuming that 40 per cent of the employees earning less than \$9.00 were learners of less than six months' experience, and 30 per cent of from six to twelve months experience.

latter affects the cost of unit product is a matter to be determined for individual businesses. In industries which, like textile and garment manufacture, rely in Minnesota almost wholly on female labor, the effect of the minimum wage in raising costs will be more apparent.

The severity of the burden laid upon industry would thus depend largely upon the relative minimum rates for inexperienced and experienced employees. If the letter of the law were carried out and practically the same minimum rates fixed for learners and apprentices as for adult experienced help, the increased female labor charge would be one-twentieth if the \$7.00 subsistence level were enforced, one-tenth if the rate were around \$8.00, and one-sixth if it were \$9.00. If, on the other hand, rates for beginners proportionate to their productivity were ordered, the tax might amount to less than 5 per cent of the female labor cost, even if a high minimum for experienced help were adopted.

It was a singular fact that opposition to the law was much more active among retail merchants than among manufacturers, for retail merchants, of all employers, are those least likely to be seriously handicapped by the enforcement of a minimum wage. Within the confines of any area which is an economic unit, the enforcement of a uniform minimum wage must have an effect precisely similar to that of a tax upon product, or an employers' liability law, or a law requiring the safe-guarding of dangerous machinery. Such a law operates upon all producers alike, slightly increasing the cost per unit product. The increased cost doubtless restricts the sale of the article to some extent and in so far reduces the profit

Effect on
manufacturers

of the business; but by far the greater part of the tax, or the cost of installing safety devices, or of paying the injured employee is taken out of the pockets of the public in the form of higher prices. A minimum wage in force throughout the United States should have no injurious effect upon manufacturers, save perhaps to place them under a slight disadvantage in competing abroad. A minimum wage operative within the limits of a single state would, however, undoubtedly handicap manufacturers within the state who were subject to competition from other states. In Washington and Oregon, where the minimum wage has met with less opposition, the manufacturing industries employing women do not bulk large in the industrial life of the community, or if as in the case of salmon canning on the Columbia River or of fruit and vegetable canning, they are of importance, they are freer from serious competition elsewhere by reason of the peculiar natural advantages which they enjoy. The manufacturing industries employing women in Minnesota, however, are growing in importance, and a number of factories manufacturing garments, fur goods, knit goods, millinery, and boots and shoes might be seriously handicapped in competition with Eastern producers if their female labor cost were increased 15 per cent or even 9 per cent, as would be the effect of enforcing a uniform \$9.00 and \$8.00 minimum wage respectively.

As for the retail merchant, the area of his economic unit is highly circumscribed. Aside from the competition of mail order houses, the merchants of the Twin Cities need fear little from the enforcement of a minimum wage. The number of people who will travel to Chicago to shop rather than pay 5 per cent more in Minneapolis,

St. Paul, and Duluth is surely insignificant. An \$8.00 or even a \$9.00 minimum wage would no more cut into the profits of the retailer than the rise of cotton prices during recent years has done.

Effect on merchants The increased labor cost would simply be shifted on to the consuming public in the form of higher prices. Indeed, if the minimum wage affected materially the incomes of working women the sales of retailers of all kinds would probably actually increase in volume. Sales of clothing merchants would be quite certain to increase. It is a familiar fact that no market is more satisfactory than a prosperous working population.

The commission's wage orders of October, 1914, were drawn with time rates of payment in mind. The order addressed to manufacturers in cities of the first class directs that "no employer shall employ any woman or minor of ordinary ability on any

Commission's orders based on time rates manufacturing occupation at a weekly wage rate of less than \$8.75." The application of the minimum wage to occupations customarily paid by the piece, may be accomplished by fixing a minimum piece rate through act of the commission or by requiring that the employer show from his pay-roll that the ordinary worker, week in and week out, earns the minimum rate. To leave to the employer the discre-

Application of piece rates tion of determining where the minimum piece rate should be would introduce endless difficulties of interpretation into the enforcement of the law, and would prove a cloak for the dishonest employer. The

(3)

Massachusetts commission in its decree in the brush-making industry avoided the difficulty by providing that where piece rates yielded less than the minimum time rate the latter should apply. The most satisfactory solution appears to be that evolved under the wages-board system in Australia. Here the wages-board for a particular industry generally has authority to determine minimum piece rates as well as time rates.

(4)

The effect of a minimum piece rate upon wages prevailing in an industry is wholly different from that of a minimum time rate enforced in the same industry. It will be seen from Plate 44, that a piece rate minimum affects the wages of all employees

alike, whether skilled or unskilled. The premium on diligence and efficiency is as great after the enforcement of a minimum piece rate as before.

The operator of a power sewing machine who before the promulgation of the wage order was able to earn twice as much as her less efficient neighbor, will receive an increase of wages proportionately as great as her neighbor's. On the other hand, where a minimum time rate of wages is promulgated, the result is as shown in Plate 43 .

The average wage rises because of the wage of the lowest paid employees is materially increased, but the median wage may not rise at all and the wages received by more efficient employees remain exactly where they were before the issuance of the order.

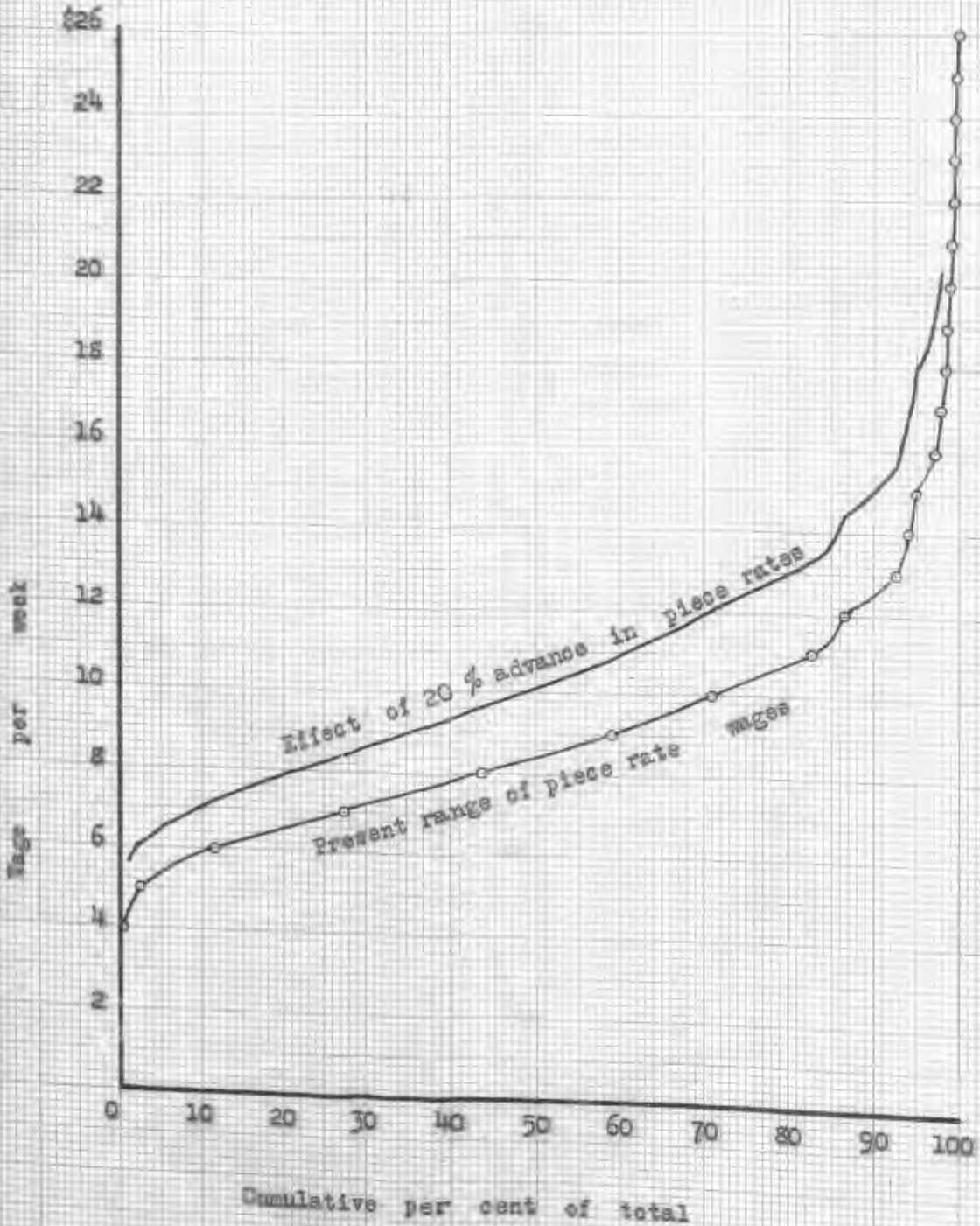
(3) Massachusetts Minimum Wage Commission, Bul. 3, Statement and decree concerning the wages of women in the brush industry in Massachusetts, 15. A minimum time rate of 15½ cents per hour was fixed, and it was provided (sec. 4) that in any case a piece rate yields less than the minimum time rate, persons employed under such a rate shall be paid at least 15½ cents an hour.

(4) Victoria, Factories and shops act, 1912, sec. 143. Reprinted in U.S. Bureau of Labor Statistics, Bul. 167, 214.

PLATE 44

Effect upon the aggregate wages of female labor of enforcing a 20 per cent advance in piece rates, assuming that no workers are discharged.

Females employed in all factories in the Twin Cities and Duluth



It is probably true that if the minimum time rate is set at a point sufficiently high to affect the wages of a material fraction of the employees in an industry, the better paid employees will ultimately feel its effect in the shape of higher earnings; but it would doubtless take time, perhaps years, for the effect of the increase in the wages of the poorer paid employees to make itself manifest in the wages of the more skilled.

The advantage most often urged in defense of the modern competitive industrial system is the premium which it places upon efficiency, individual initiative, and industry. The minimum piece rate still makes possible this premium on efficiency; the minimum time rate tends to obliterate it. It seems, therefore, highly desirable that wherever the piece system prevails a minimum wage order should take the form of minimum piece rates rather than minimum time rates. It is not known how widely the piece rate system prevails in the factories of Minnesota. It is possible to increase its use. There can be small doubt that if an alternative were offered in the promulgated wage order between minimum time and piece rates, employers generally would seek to take advantage of the piece rate minimum, with the view to preserving the discipline and morale of their employees. Even in mercantile employments individual enterprise may be stimulated by the use of the draw account system of payment, by which the saleswoman gets a certain bonus or percentage in addition to her flat weekly rate, if she can so increase her sales that the flat rate is within a stated percentage of the sales. This system is now used by one of the

largest department stores in Minneapolis and attracts favorable
 (5) attention. The manager of this store says in favor of the plan:

Draw account
 system in
 retail stores

"The old idea that paying commissions on the total volume of sales tended to make clerks neglect duties other than selling is fast giving way before the realization that the aim of the store is to sell goods and that the clerk who is able to increase her daily sales is so valuable a servant that her time had best be spent exclusively in selling, leaving to beginners the work of tending stock." The suggestion is offered that careful studies by boards upon which employees and employers were represented in equal numbers, appointed for each division of retail merchandising, might increase the use of systems of payment based upon the amount of sales. If this were possible, one of the chief objections urged against the minimum wage, namely, that it destroys the incentive to individual efficiency, would be removed and the effect of the minimum rate, when enforced, would be that shown in Plate 44 rather than in Plate 43. .

It will be seen that criticism of the commission's \$9.00 living wage must depend very largely upon whether it applies to time or piece paid occupations. A piece rate, such that an experienced worker of ordinary physique and intelligence could in an average week's labor earn \$9.00, might not be excessive. Indeed if the "experienced worker" be qualified so as to include

\$9.00 not
 excessive
 as piece
 rate

(5) The federal labor bureau's investigation of 1910 found that "commissions on sales as a regular thing were not given the saleswomen in Minneapolis and St. Paul." U.S. Bureau of Labor Statistics, Report on the condition of woman and child wage-earners, Vol. V, 128.

only employees long in the service of a firm, it is probable that \$9.00 is not above the figure now actually prevailing in the Twin Cities.⁽⁶⁾

The greatest difficulty disclosed by the brief experience of the commission in the determination and enforcement of a minimum wage, is the problem of the relative rates to be paid learners and apprentices, and experienced help. The terms "learner" and "apprentice" were stated by the law to include inexperienced adult females as well as minors.⁽⁷⁾ As pointed out in chapter I, the minimum wages for learners and apprentices must be, like those of experienced workers,⁽⁸⁾ "sufficient for living wages," and the only ground recognized by the law for different minimum rates for inexperienced workers was^a possible difference in their cost of living. But if \$9.00 per week is the minimum of decency for an experienced worker of 25 years, must it not also be the minimum for a beginner of 30?

This provision, making it impossible for the commission to fix a minimum for beginners materially different from that for experienced employees, is a peculiarity of the Minnesota law, not found in most of the other American minimum wage statutes. In Massachusetts the wage board is directed to determine "suitable minimum wages" for learners and apprentices and for minors.⁽⁹⁾ In its decree fixing minimum wages in the brush

No variation of minima in Minnesota for learners and apprentices

(6) The median wage of all females employed in manufacturing is \$8.71.

(7) Minnesota, Laws of 1913, chap. 547, sec. 20, clause (c).

(8) Ibid, sec. 6

(9) Massachusetts, Laws of 1912, chap. 706, sec. 5. (as amended by chap 673, Acts of 1913)

industry, the Massachusetts commission arbitrarily set the wage of apprentices and learners at 65 per cent of the minimum for experienced operatives. ⁽¹⁰⁾ Essentially the same power is vested in the commissions of Colorado, ⁽¹¹⁾ Nebraska, ⁽¹²⁾ Oregon, ⁽¹³⁾ and Washington. ⁽¹⁴⁾ The language of the statutes of California ⁽¹⁵⁾ and Wisconsin ⁽¹⁶⁾ is vague on the point, but seems to imply, as the Minnesota law directs, that the minimum wages of learners, apprentices, and minors must all be based upon the cost of living.

Unless modern society is prepared to assume the responsibility of educating every boy and girl to a pitch of efficiency which will enable him or her to earn a living wage upon entering industry, there must continue to be a large number of beginners working for wages less than those received by experienced employees. The individual employer can hardly be expected to go to the expense and trouble of training applicants for employment in his factory and at the same time paying them a living wage unless he is assured of their services when they have become efficient. A child may be born into the world with the right to live and to exercise his faculties, but

Employers
cannot train
learners gratis

- (10) Massachusetts Minimum Wage Commission, Bul. 3, 15.
 (11) Colorado, Laws of 1913, chap. 110, sec. 2.
 (12) Nebraska, Laws of 1913, chap. 311, sec. 5.
 (13) Oregon, Laws of 1913, chap. 63, sec. 4.
 (14) Washington, Laws of 1913, chap. 174, sec. 14.
 (15) California, Laws of 1913, chap. 324, sec. 6, clause 1.
 (16) Wisconsin, Laws of 1913, chap. 713, sec. 1729s-7 and 1729s-8.

he is not born with the right of earning next day a \$9.00 living wage. To expect to make over, by a single act of the legislature, the fabric of modern society to the extent of shifting from parents, or the state as foster parent, to the individual employer the task of training the child is madness. If the people of Minnesota are agreed that no woman ought to have to work at the outset for less than \$9.00 a week, then they must establish trade schools which will fit her to earn \$9.00 a week on the scale of efficiency which prevails in industry. It may well be that industry ought to pay part of the cost of maintaining such schools and a wise government would doubtless cooperate with private employers to the end that the instruction given might be suited to the demands of the industrial world. But employers cannot be expected, individually, to undertake the education of their help unless reasonably assured of their services in the future.

The commission early recognized that the provisions of the law in regard to minimum rates for inexperienced employees were unworkable. The sub-committee on apprentices and learners of the Twin City manufacturing board, under the chairmanship of Dr. J.S. Young of the University of Minnesota, recommended a minimum for apprentices and learners much below the cost of living.

"Your sub-committee is sensible of the fact," they reported, "that there can be little difference in the minimum cost of living among different classes of workers, whether learners or journeymen; but they are constrained to recommend a lower wage for the first because the learner is being taught for a time at the expense of the employer. Common sense should be applied to the situation. The interests of the worker and employer are not identical but mutual.

"The law states: 'Each advisory board shall recommend to the commission an estimate of the minimum wages sufficient for

Law un-
workable

living wages for learners and apprentices.'

"In view of the above consideration and the law as quoted, your sub-committee begs leave to recommend:

"1. That the length of time to pass the learner's state be approximately 12 months and varied by the commission as the conditions in the different industries may seem, on thorough investigation, to justify.

"2. That the minimum wage for the first 6 months be fixed at \$6 per week; for the second 6 months, at \$7 per week."

The commission's orders of October, 1914, deal only with wages of "women and minors of ordinary ability," i.e. of ordinary experience. It is planned to apply to the legislature for amendment of the section relating to the wages of learners and apprentices, should the constitutionality of the law be upheld.

The most feasible method of incorporating into modern industrial life the idea of a living wage is to make it applicable to adult experienced help of average ability, both mental and physical, and to direct that beginners and apprentices shall receive that fraction of the wage of adult experienced employees that the service

Wage of learners should be proportioned to productivity

which they render constitutes of the production of the worker earning the living wage. In the case of minimum piece rates, the application of such a principle becomes very simple. A piece

rate of 38 cents per brush, sufficient to enable an experienced brush-maker, week in and week out, to earn \$8.75, will yield to a beginner in the same factory a sum exactly proportionate to his productivity. If he learns more rapidly than his neighbor who started work on the same day, he reaps the advantage of his superior industry and intelligence. As fast as his efficiency increases his wage increases, and when he shall have attained that degree of skill

recognized by the wage board as that normal to an experienced worker in the industry, then and not till then he earns the living wage. In industries, therefore, where the piece rate prevails there is no need of fixing particular minimum rates for learners and apprentices.

Piece rate wage

In the case of businesses in which the time rate system of payment prevails, the determination of a beginning wage is a matter of difficulty. Since the time required to learn one occupation may be vastly greater than that necessary to master another, it is impossible to fasten upon every manufacturing industry a single learner's wage, as was contemplated by the manufacturing advisory board. The initial wage of learners must be determined separately for each industry, possibly for each occupation within the industry. The schedule circulated by the commission among the employers of the state asked, "What, in your opinion, is the number of months required to pass the stage of learner and of apprentice in your line of business?" The answers varied all the way from two weeks in the case of the condiment and pickle manufacture to five years in certain occupations in printing and engraving. The sub-committee of the Twin City manufacturing board on wages of apprentices and learners averaged together all the replies received to the question, and finding that the result came out at about twelve months, set this period as the approximate time required to pass the stage of learner. For the first six months the minimum wage recommended was \$6.00, and for the second six months, \$7.00.

Time rate wage

In striking contrast to this rule of thumb procedure were the two hundred odd wage boards in existence in New South Wales at

the same time. In Australasia, the home of the minimum wage, it is the universal custom in those states where the wages-board system prevails to appoint a board for each industry. This board determines the minimum rate for beginners of both sexes of all degrees of experience. The successful application of the law in the United States, if it does not follow the Australian precedent of creating a separate board for each industry, must at least recognize the necessity of studying each industry in itself.

A still more serious consequence would attend a failure properly to adjust wages of learners and apprentices to the wages of adult experienced workers. If the wage of inexperienced employees in a particular industry is made too high, then it becomes to the advantage of the employer to take on as few new hands as possible. This puts a premium temporarily upon the service of experienced operatives and may have the effect of raising their wages. Ultimately, however, a shortage of labor will develop. As experienced operatives die or retire from the industry, there will be no new generation of young employees to take their places. If, on the other hand, the initial minimum is placed too low, so that the wage paid by the employer is actually less than the service he receives from the beginner, it will obviously pay him to employ beginners as largely as possible. The social effects of this tendency are to draw children into industry at an early age and to decrease the demand for the labor of older experienced employees. Such has actually been the result in Portland, where the initial rate for minors of \$6.00 a week was so much lower than the minimum for adult experienced employees of \$9.25 that the employers found it to their advantage to keep the younger

employees learners, under the definition of the law, by transferring them from one department to another before they had completed a period of learnership. ⁽¹⁷⁾ In either case, whether the differential between the wages of adult experienced help and of minors, or of learners and apprentices of any age, is placed too high or too low, the social effects are harmful. It is necessary, therefore, to evaluate with great care the services of the beginner in terms of the productivity of the experienced worker, and to so adjust the wage during the progressive stages of apprenticeship that the relation between earnings and productivity will be constant.

(17) U.S. Bureau of Labor Statistics, Bul. 176, Effect of minimum wage determination in Oregon, 8. "Girls under 18 years of age have increased, especially in the errand, bundle-wrapper, and cashier occupations, but not in the more skilled work of selling, sewing, or of the office. These first-named occupations tend to become the sphere for minors to the exclusion of adult women with or without experience, a result, in all probability, of the minimum wage determinations."

C O N C L U S I O N

To conclude, the Minnesota minimum wage commission's living wage of nine dollars a week is considerably in excess of the minimum necessary for respectable existence on the standards that prevail among working people in the Twin Cities. The wisdom of the commission's recommendation depends, therefore, upon whether or no the wage must apply to learners and apprentices, and, if rates for the latter, graded according to productivity, are to be permitted, upon the degree of experience required to reach the stage where the minimum is to be paid.

In the event that courts and legislature decline to give relief from the unworkable provision of the law that the wages of learners of all degrees of experience must be "living wages," the commission's figure of nine dollars is utterly impossible. If applied as a blanket rate to learners and apprentices as well as to experienced help, the nine-dollar wage would increase the charge against industry for female labor by approximately 16 per cent, and would place a prohibitive handicap upon manufacturers who must meet competition from the East and South. In this event it will be necessary to construe the law narrowly and to fix the minimum wage at what we have called the level of bare subsistence, which amounts to seven dollars a week. The enforcement of even a seven-dollar minimum would increase the female labor charge in

manufacturing as a whole by approximately 4 per cent, and in mercantile industry by 5 per cent.

If the amendments which the commission purposes to obtain from the legislature are enacted so that the initial wage of learners and apprentices may be made proportionate to their productivity, a nine-dollar minimum rate for adult workers of years of experience might put no great strain upon the industry affected. Especially would this be true where the nine dollar minimum applied to piece work with the provision that two-thirds or three-fourths of the adult experienced workers must earn the living wage. It will be remembered (Plate 20) that the present median wage of women of 25 years and older is over \$9.50 per week. It is improbable, however, that the commission had in mind a definition of experienced workers which included so high a degree of experience. In the orders of October, 1914, no definition of the phrase "women and minors of ordinary ability," the class to whom the minima were to apply, was ⁽¹⁸⁾ given, but in view of the recommendations of the advisory boards ⁽¹⁹⁾ and the interpretations placed upon

(18) Minnesota Minimum Wage Commission, First biennial report, 46-49.

(19) Supra., 535-536.

the terms "learner" and "apprentice" by the other state commissions, (20) it is highly probable that the commission contemplated that its rates of \$9.00 and \$8.75 would apply after a learning period of approximately one year. If this is to be the policy of the commission, the nine dollar minimum rate appears again somewhat high. Reference to Plate 20 will show that as far as can be inferred from the known relation of age and wage, the median wage of females of

(20) The Utah law declares: "The learning period of apprenticeship shall not extend for more than one year." Utah, Acts of 1913, chap. 63, sec. 1, in U.S. Bureau of Labor Statistics, Bul. 167, 205.

The decree of the Massachusetts commission in the brush industry declares: "The rate for learners and apprentices shall be 65 per cent of the minimum, and the period of apprenticeship shall not be more than one year." Massachusetts, Minimum Wage Commission, Bulletin No. 3, 15.

Order No. 5 of the Industrial Welfare Commission of Oregon directs that no person shall pay "inexperienced adult women workers at a rate of wages less than \$6 a week, and the maximum length of time such workers may be considered experienced in any industry shall not exceed one year." In the case of milliners and dressmakers' apprentices, a pre-apprenticeship period of one month is permitted, during which the employer may fix what compensation he sees fit. U.S. Bureau of Labor Statistics, Bul. 167, 64.

In Washington "a flat rate of \$6 per week has been established for all minors." First biennial report of the Industrial Welfare Commission, 10. For beginners, termed uniformly "apprentices," whether minors or adults, licenses are issued for a limited period at graded rates. The period of apprenticeship is fixed as follows:

Mercantile business	1 year.
Telephone and telegraph	9 months.
Laundries	6 months
Factories	6 weeks to 1 year
Millinery and dressmaking	1 year

In millinery and dressmaking a pre-apprenticeship period is permitted of from 3 to 4 months at a nominal wage. Ibid., 61 to 67.

one year's experience is less than \$9, or even than \$8.50. If this be true, the commission's proposal amounts to pushing up the wage of the poorest paid worker of this class of from one to two years' experience above the level now attained by half of them, a very substantial change. As we have seen, the added burden imposed upon industry by such a change is in the neighborhood of 3 per cent of the present female labor cost. (21)

To justify the determination of a nine-dollar wage for adult experienced workers, it would therefore seem wiser to extend the term of the learning period perceptibly so that when the nine-dollar wage was received by the worker she would be producing more. If, as seems more likely, the commission shall deem it best to fix the period of learning at a year, more or less, and the minimum for experienced workers shall be paid immediately thereafter, a stricter construction of the term "living wages" would be advisable. A minimum of \$8 per week would result in raising the wages of a material proportion of the experienced workers. Eight dollars a week is higher than our estimated minimum of respectable subsistence and makes possible provision for a few weeks of unemployment. If it were found that industry easily adjusted itself to the change, the minimum might, without great difficulty, be raised to a higher figure.

If the restraining hand of the injunction be removed, and the commission permitted to resume its functions, the path of wisdom will lie in endeavoring to fit the minima for both experienced and inexperienced workers to the needs of each particular

(21) Assuming a \$6 rate for the first 6 months and a \$7 rate for the second 6 months.

occupation. Advisory boards for each industry will be needed: in some cases for particular occupations within the industry. To these must be left the determination of the length of the period of learning or of apprenticeship, and the gradation of the wage of learner and of apprentice in terms of the productivity of the experienced worker receiving the living wage. A reasonable rate to be received by the latter, if the term of learning be approximately a year, is eight dollars per week, a sum which would apparently place no serious handicap even upon manufacturers competing with the East; and which is sufficient, on the basis of 1914 prices, to provide the minimum of goods necessary to health and respectability. Where the character of the industry permits, minimum piece rates will prove more elastic than time rates. Those to whom eight dollars appears too low may bend their efforts to secure a higher minimum when industry shall have demonstrated the power to adjust itself to the initial rate.

APPENDIX I

PERSONNEL OF THE THREE
ADVISORY BOARDS AS ORIGINALLY CONSTITUTEDPersonnel of Twin City Mercantile Board.

W. F. Houk (Chairman)	State Labor Commissioner and ex-officio chairman of Minimum Wage Commission.
J. S. Mitchell	Secretary and treasurer, L. S. Donaldson and Co., department store, Minneapolis.
D. Draper Dayton	Treasurer, the Dayton Company, department store, Minneapolis.
William C. Whitney	Director, Minneapolis Dry Goods Company.
Louis J. Holtzermann	President and treasurer, Holtzermann's Chicago Store, small department store, Minneapolis.
Ernest V. Hutchison	President, The Leader Mercantile Co., department store, Minneapolis.
Frank Schlick	Vice president and treasurer, Field, Schlick and Co., retail dry goods, St. Paul.
W. L. Mayo	Secretary, Schuneman and Evans, department store, St. Paul.
George S. McLeod	Vice president and treasurer, Emporium, department store, St. Paul.
Samuel Dittenhofer	Vice president, Golden Rule, department store, St. Paul.
C. S. Cook	S. S. Kresge Co., 5 and 10¢ store, St. Paul.
Miss Elise M. Bartz	Clerk, Power's Merrantile Co., department store, Minneapolis.

- Miss Carrie Erickson Employee, Minneapolis.
- Miss Beatrice McDermott Buyer, L. S. Donaldson and Co., department store, Minneapolis.
- Mrs. Ethelyn L. Huston Welfare director, L. S. Donaldson and Co., department store, Minneapolis.
- Mrs. D. J. Evans Mother of secretary of minimum wage commission.
- Mrs. H. A. Tomlinson St. Paul
- Mrs. Mary L. Quinlan
- Miss Mable Cooper St. Paul
- Miss Lillian Powell Employee, department manager, Mannheimer Bros., department store, St. Paul.
- Miss Emily Child Student, friend of secretary of the commission.
- Miss Lillian M. Turner Clerk, Mannheimer Bros., department store, St. Paul.
- Frank Hoffman Statistician, State Bureau of Labor, Former labor leader.
- Father John A. Ryan Author of "A Living Wage." Father of the Minnesota minimum wage law. Professor of Ethics and Economics in St. Paul Seminary.
- Miss Agnes Doherty Teacher, St. Paul high schools. Active in women's welfare work.
- Miss Gratia Countryman Librarian, Minneapolis Public Library.
- Charles H. Preston Assistant Professor of Economics, General Extension Division, University of Minnesota.

The following sub-committees were appointed:

Cost of room and board Father Ryan, chairman;
Mrs. Evans, Miss Powell, Messrs. Dayton and Schlick.

Clothing Miss Doherty, chairman;
Tomlinson, McLeod, McDermott, Holtzermann.

Miscellaneous expenditures Miss Countryman, chairman;
Whitney, Cook, Cooper.

Apprenticeship F. E. Hoffman, chairman;
Mayo, Quinlan, Mitchell.

Personnel of Twin City Manufacturing Board.

Stanley W. Miller, Chairman,

Manager, Crex Carpet Co.,
manufacturers of grass carpets,
St. Paul.

E. J. Couper

Vice president, Northwestern
Knitting Co., Minneapolis. Presi-
dent, Minneapolis Civic and Com-
merce Association, 1915-1916.

Dawson Bradshaw

Bradshaw Brothers, wholesale
millinery, Minneapolis.

Frank Heywood

President and manager, Hey-
wood Manufacturing Co., paper boxes
and envelopes, and printing, Minne-
apolis.

Theodore W. Griggs

Griggs, Cooper and Co., and
Sanitary Food Products Co., whole-
sale grocers and manufacturers of
confectionery and crackers, St. Paul.

Theodore W. Schulze

Secretary, Foot, Schulze and Co., manufacturers and wholesalers of boots and shoes, St. Paul.

Dr. Anna H. Phelan

Assistant Professor of Rhetoric, University of Minnesota. Wife of Dr. R. V. Phelan, Instructor in Economics, University of Minnesota.

Mrs. Jessie Hawe

Minneapolis

Miss Harriet Clark

Clerk in Pillsbury Flour Mills, Minneapolis.

Miss Florence Rood

Teacher, St. Paul public schools.

Mrs. Albert H. Hall

Wife of prominent Minneapolis lawyer (Hall, Tautges, and Sapiro) and politician.

Miss Emma Maag

Employee, Crex Carpet Co., grass carpets, St. Paul.

John J. O'Connor

Secretary, Minneapolis Associated Charities.

Miss Caroline Manning

Inspector, Department of Labor.

Sherman W. Child

Young lawyer, Minneapolis.

Dr. J. S. Young

Associate Professor of Political Science, University of Minnesota.

John B. Sanborn

Markham and Sanborn, lawyers, St. Paul.

Miss Evans also served as secretary of the manufacturing board.

The following sub-committees of the manufacturing board were appointed:

Board, room, and clothing

Sherman W. Child,
chairman;

Miller, Hawe, O'Connor, Phelan.

Miscellaneous expenditures

J.B. Sanborn, chairman;

Heywood, Griggs, Mrs. Hall, Maag.

Apprenticeship

J.S. Young, chairman;

Couper, Schulze, Rood, Clark, Manning.

Personnel of Duluth Advisory Board.

W. J. McCabe

Board of Trade. Manager, McCabe Bros., grain commission men.

Mrs. Emma Stensby

Buyer, John J. Moe and Sons, department store.

Miss Mary Cheska

Miss Nora Ryan

Department manager, Geo. A. Gray and Co., department store.

I. Freimuth

I. Freimuth and Co., department store, next largest in town.

C. A. Tyson

W. C. Mitchell

President, Randall, Gee and Mitchell Co., grain dealers.

Miss Victoria Eriksen

State factory inspector, Bureau of Women and Children.

Miss Pearl Hunt

Mrs. F. C. Bowman

Physician's wife.

B. Silberstein

Silberstein and Bondy, large department store. Politician.

M. Stack

M. K. Stack and Co., department store.

- W. E. McEwen
Labor leader, former State Labor Commissioner, former Mayor of Duluth, editor and publisher The Labor World.
- Mrs. T. J. Davis
Wife of leading attorney, club woman, charity worker.
- Geo. A. Gray
Geo. A. Gray and Co., select department store. "Considered a kind employer and progressive."
- B. P. Neff
Manager of all the Patrick companies. Secretary of F. A. Patrick and Co., wholesale dry goods, manufacturers of mackinaws and other woolen products. Treasurer "Glass Block" - largest department store in Duluth.
- J. J. Moe
John J. Moe and Sons, small department store in West End of Duluth.
- Miss Mary M. Parsons
Cashier, I. Freimuth and Co., department store.
- Miss Duffy
Clerk, Glass Block department store.
- Mrs. A. A. Kerr
Wife of manager of Loose-Wiles Biscuit Co.
- Elmer Blu
Young attorney, firm of Crasweller, Crasweller and Blu.
- Mrs. T. B. Chapman
Physician's wife and club woman.
- Miss Margaret Culkin
Daughter of a leading attorney; society social worker.
- H. D. Final
Vice-president, Marshall, Wells Hardware Co., wholesale hardware,
- John B. Heimick
Secretary and treasurer, Union Match Co.
- M. F. Jamar
Manager, Patrick-Duluth Woolen Mill Co.
- Miss H. M. Larson

R. A. Horr

Treasurer and manager, Stone-
Ordean-Wells Co., wholesale gro-
cers.

Miss Hilda Tykson

Forewoman

Miss Mae McDonald

Miss Nora Murphy

Miss Minnie Schaefer

Duluth sub-committees:

Board, room, and clothing.

Miss Culkin, chairman;

Stensby, Cheska, Ryan, Freimuth, Peterson, Schaefer,
Tyson, Larson.

Miscellaneous expenditures.

W.C. Mitchell, chairman;

Erickson, Hunt, Chapman, Bowman, Silberstein, Stack, Jamar.

Apprenticeship.

W. E. McEwen, chairman;

Davis, Gray, Neff, Final, Horr, Moe, Parsons, Duffy, Kerr,
Tyson, Murphy, McDonald.

A P P E N D I X II.

INCREASE IN WAGES IN SPECIFIED
INDUSTRIES IN THE UNITED
STATES AS REPORTED BY THE UNITED STATES BUREAU OF LABOR.

(1) IN ALL INDUSTRIES.

The federal labor bureau formerly computed a weighted index number for all wages, as it has long done for retail prices. The general wage index was, however, discontinued after 1907, as it was felt that the number of industries included was hardly sufficient. The following table, quoted from Bulletin 77, United States Bureau of Labor, p. 7, gives the weighted wage index for 1890 to 1907.

Table 1.

Base: 1890 - 1899 100.0

Year	Wages per hour	Full-time weekly earnings	Year	Wages per hour	Full-time weekly earnings
1890	100.3	101.0	1900	105.5	104.1
1891	100.3	100.8	1901	108.0	105.9
1892	100.8	101.3	1902	112.2	109.2
1893	100.4	101.2	1903	116.3	112.3
1894	97.9	97.7	1904	117.0	112.2
1895	98.3	98.4	1905	118.9	114.0
1896	99.7	99.5	1906	124.2	118.5
1897	99.6	99.2	1907	128.8	122.4
1898	100.2	99.9			
1899	102.0	101.2			

Side by side with indices for the average wage per hour, the bureau published indices for the number of hours per week of full time which are available as far back as 1890. More important than either of these are the actual earnings per week of full time, for which the bureau has been publishing indices since 1910. The effect of an increase in the relative wage per

hour in raising actual earnings may in some cases be more than offset by a decrease in the number of hours worked; hence it may not be assumed that the actual earnings of employees have increased since 1890 in the ratio indicated by the indices for relative wages per hour. In examining the latter, the changes in number of hours worked per week must be kept in mind⁽¹⁾

In 1913 the base on which the indices were calculated was changed from 1890 - 1899 = 100.0 to 1913 = 100.0. The reasons which induced the bureau to make the change were two. Changes in the scope of the inquiry made the old data not entirely comparable. More establishments in each industry were included in the bureau's list of correspondents and new occupations within the industry were distinguished. In addition, the methods of computing the index were changed in 1913. Formerly the index for an industry was computed by weighting each occupation by the number of its workers only. Since 1913 the index has been computed by actually multiplying the wage of each employee by his working time, and averaging the results. The indices are, there-

(1) Indices for the full-time earnings cannot be calculated as some have attempted to do by multiplying together the indices for relative wage per hour and number of hours worked per week.

fore, arithmetic averages of all employees covered.

To measure the rate of change in wages in the country as a whole in order to compare and check the reported increases in women's wages in Minnesota, the writer has converted the indices published by the bureau for 1913 and 1914 on the base 1913 = 100.0 into equivalent indices on the old base, 1890 - 1899 = 100.0. These indices are presented in the following tables.

(2) IN SPECIFIC INDUSTRIES EMPLOYING CHIEFLY MEN.

Table 2

Index numbers of relative wages per hour of employees in the lumber, mill work, and furniture industries.

Year	Lumber manufacturing ⁽²⁾	Mill work ⁽³⁾	Furniture manufacturing ⁽⁴⁾
1890	101.9	99.2	100.5
1	101.4	100.4	101.5
2	101.5	100.1	102.5
3	99.9	100.0	101.1
4	97.0	97.0	99.4
1895	97.0	98.1	97.9
6	97.4	99.3	97.7
7	97.7	100.0	100.2
8	101.5	101.7	98.0
9	104.5	104.1	102.0
1900	105.4	105.9	102.4
1	108.6	108.6	107.3
2	112.1	112.5	114.1
3	114.2	116.5	115.2
4	112.3	115.7	117.5

(2) United States Bureau of Labor, Bul. 153, 154.

(3) Ibid., 156.

(4) Ibid., 158.

Table 2 (con.)

Index numbers of relative wages per hour of employees in the lumber, mill work, and furniture industries.

Year	Lumber manufacturing	Mill work	Furniture Manufacturing
1905	116.3	116.7	121.0
6	124.4	120.6	125.7
7	129.6	124.5	127.3
8	118.7	123.4	129.5
9	121.6	124.9	126.7
1910	130.0	127.8	130.5
11	129.9	129.0	132.1
12	131.5 ⁽⁵⁾	132.3 ⁽⁵⁾	135.1 ⁽⁵⁾
13	136.9 ⁽⁵⁾	135.5 ⁽⁵⁾	140.3 ⁽⁵⁾

Table 3

Index numbers of relative wages per hour of employees in nine occupations in the car-building industry, 1900, 1910, and 1913, with percentages of increase.

Base: 1890 - 1899 = 100.0

Occupation ⁽⁷⁾	1900	1910	1913 ⁽⁸⁾	Per cent of increase	
				1900 - 1913	1910 - 1913
Cabinet-makers	106.9	131.2	142.0	32.8	8.2
Carpenters and car builders	100.6	130.9	136.9	36.1	4.6
Laborers	100.5	122.6	136.3	35.6	11.2
Machine woodworkers	101.7	125.9	140.8	38.5	11.8
Machinists	100.6	136.0	140.8	40.0	3.5
Painters	97.3	122.2	135.8	39.8	11.1
Pipe fitters	99.1	129.6	144.5	45.8	11.5
Tinners	103.4	150.3	157.0	51.8	4.4
Upholsterers	98.1	132.3	146.7	49.5	10.9

(5) The indices here presented for 1913 are recalculated on base 1890 - 1899 = 100, from the base 1913 = 100, as published by the labor bureau.

(6) United States Bureau of labor. Bul. 163, Appendix, 11.

(7) No index is given for the industry previous to 1910.

(8) Index numbers here presented for 1913 are recalculated on base 1890 - 1899 = 100.0 from the base 1913 = 100.0, as published by the labor bureau.

Table 4.

Index numbers of relative wages per hour and full-time weekly earnings of employees in industries employing chiefly men, 1910 - 1913.

Base: 1913 = 100.0

Industry	1910	1911	1912	1913	Per cent of increase 1910 - 1913
Car-building ⁽⁹⁾					
Wages per hour.	91.0	94.0	94.1	100.0	9.9
Full-time earnings	91.8	94.3	94.3	100.0	8.9
Lumber manufacturing ⁽⁹⁾					
Wages per hour	94.6	94.9	96.2	100.0	5.7
Full-time earnings	94.9	95.3	96.7	100.0	5.4
Mill work ⁽¹⁰⁾					
Wages per hour	94.2	95.3	97.7	100.0	6.2
Full-time earnings	94.9	96.2	98.0	100.0	5.4
Furniture manufacturing ⁽¹²⁾					
Wages per hour	92.7	94.5	96.5	100.0	7.9
Full-time earnings	96.1	97.3	98.2	100.0	4.1
Iron and Steel manufacturing ⁽¹³⁾					
Blast furnaces					
Wages per hour	88.6	90.2	92.3	100.0	12.9
Full-time earnings	90.5	91.3	90.8	100.0	10.5
Bessemer converters					
Wages per hour	84.9	81.2	89.8	100.0	17.8
Full-time earnings	88.0	83.9	90.2	100.0	13.6

⁽⁹⁾ United States Bureau of Labor, Bul. 163, 11.

⁽¹⁰⁾ United States Bureau of Labor, Bul. 153, 10.

⁽¹¹⁾ Ibid., 83.

⁽¹²⁾ Ibid., 109.

⁽¹³⁾ United States Bureau of Labor, Bul. 168, 8. No indices are given by the bureau for the entire industry.

Table 4 (con.)

Index numbers of relative wages per hour and full-time weekly earnings of employees in industries employing chiefly men, 1910 - 1913.

Base: 1913 = 100.0

Industry	1910	1911	1912	1913	Per cent of increase 1910 - 1913
Iron and steel man- ufacturing (continued)					
Open hearth furnaces					
Wages per hour	88.2	88.2	91.9	100.0	13.4
Full-time earnings	88.2	85.6	90.8	100.0	13.4
Blooming mills					
Wages per hour	83.9	84.8	89.5	100.0	19.2
Full-time earnings	84.8	85.8	89.8	100.0	17.9
Plate mills					
Wages per hour	88.8	85.6	91.6	100.0	12.6
Full-time earnings	87.7	84.5	91.1	100.0	14.0
Standard rail mills					
Wages per hour	88.9	89.2	89.6	100.0	12.5
Full-time earnings	91.3	88.6	89.4	100.0	9.5
Bar mills					
Wages per hour	92.8	89.0	89.9	100.0	7.8
Full-time earnings	93.8	89.3	90.2	100.0	6.6
Sheet mills					
Wages per hour	85.6	93.5	96.4	100.0	16.8
Full-time earnings	86.0	93.4	96.1	100.0	16.3
Tin plate mills					
Wages per hour	85.0	95.0	96.4	100.0	17.7
Full-time earnings	85.0	94.9	96.3	100.0	17.7

(14) U. S. Bureau of Labor, Bul. 168, 8.

Table 5

Index numbers of relative wages per hour of employees in 5 industries employing women largely, 1890 - 1914.

Base: 1890 - 1899 = 100.0

Year	Hosiery and Underwear manufacturing ⁽¹⁵⁾	Boot and shoe manufacturing ⁽¹⁶⁾	Cotton goods manufacturing ⁽¹⁷⁾	Woolen and worsted goods manufacturing ⁽¹⁸⁾	Silk goods manufacturing ⁽¹⁹⁾
1890	105.6	98.5	101.6	99.6	98.6
1	106.9	97.5	99.4	99.3	93.2
2	100.3	99.3	99.2	100.7	98.6
3	100.1	100.6	105.0	105.7	102.0
4	96.7	99.8	98.9	94.9	102.9
1895	102.8	101.4	98.2	95.3	101.5
6	99.3	100.5	104.1	98.1	106.5
7	96.1	100.7	100.4	100.4	99.1
8	96.4	100.5	96.7	103.3	98.4
9	93.2	101.8	95.8	102.3	97.4
1900	95.4	104.1	108.4	111.3	98.4
1	102.0	104.1	108.8	111.9	98.1
2	111.0	108.0	113.3	114.9	101.4
3	117.6	113.2	117.5	118.7	102.6
4	114.8	116.9	117.1	115.4	101.8
1905	119.9	119.9	118.7	119.3	102.5
6	126.9	121.8	131.3	122.1	106.1
7	133.4	128.0	149.8	135.3	112.1
8	133.7	125.5	148.4	128.1	109.2
9	134.1	130.4	143.0	129.0	110.5
1910	135.5	129.6	147.7	132.5	112.5
11	135.8	131.7	149.1	133.3	113.3
12	143.7	132.8	164.1	149.1	117.1
13	155.0 ⁽²⁰⁾	143.6 ⁽²⁰⁾	164.9 ⁽²⁰⁾	145.7 ⁽²⁰⁾	124.9 ⁽²⁰⁾
14	160.2 ⁽²⁰⁾	145.0 ⁽²⁰⁾			

⁽¹⁵⁾ U. S. Bureau of Labor, Bul. 154, Appendix, 127.

⁽¹⁶⁾ Ibid., Appendix, p 119.

⁽¹⁷⁾ U. S. Bureau of Labor, Bul. 150, Appendix, 178.

⁽¹⁸⁾ Ibid., Appendix, 180.

⁽¹⁹⁾ Ibid., Appendix, 183.

⁽²⁰⁾ The indices here presented for 1913 and 1914 are recalculated on base 1890 - 1899 = 100, from the base 1913 = 100 as published by the bureau. Averages of 3 computations are used based on 3 overlapping years (1910, 1911, and 1912) for which both bases were available.

Table 6

Index numbers of relative wages per hour and full-time weekly earnings of employees in industries employing women largely, 1910 - 1913.

Base: 1913 = 100.0

Industry	1910	1911	1912	1913	Per cent of increase
Cigar manufacturing ⁽²¹⁾					
Wages per hour	not given	91.9	95.7	100.0	8.8 ⁽²⁶⁾
Full-time earnings	not given	not given	not given	not given	
Men's clothing manufacturing ⁽²²⁾					
Wages per hour	not given	86.0	88.1	100.0	16.3 ⁽²⁶⁾
Full-time earnings	not given	90.3	92.3	100.0	10.7 ⁽²⁶⁾
Cotton goods manufacturing ⁽²³⁾					
Wages per hour	89.8	90.3	99.3	100.0	11.4
Full-time earnings	87.0	87.5	98.9	100.0	14.9
Woolen worsted goods manufacturing ⁽²⁴⁾					
Wages per hour	91.5	91.1	102.1	100.0	9.3
Full-time earnings	92.5	92.8	102.3	100.0	8.1
Silk goods manufacturing ⁽²⁵⁾					
Wages per hour	89.5	90.8	94.5	100.0	11.7
Full-time earnings	90.8	91.9	94.7	100.0	10.1

(21) U. S. Bureau of Labor, Bul. 161, 63.

(22) Ibid., 11.

(23) U. S. Bureau of Labor, Bul. 150, 14.

(24) Ibid., 98.

(25) Ibid., 145.

(26) Percent of increase, 1911 - 1913.

Table 7

Index numbers of relative wages per hour and full-time weekly earnings of employees in the hosiery and underwear industry and the boot and shoe industry, 1910 - 1914.

Base: 1913 = 100.0

Industry	1910	1911	1912	1913	1914	1910-1914 Per cent of in- crease
Hosiery and underwear manufacturing ⁽²⁷⁾						
Wages per hour	87.2	87.5	93.0	100.0	103.2	18.3
Full-time earnings	90.6	91.1	94.8	100.0	102.0	12.6
Boot and shoe manufac- turing ⁽²⁸⁾						
Wages per hour	89.8	91.8	92.5	100.0	100.8	12.2
Full-time earnings	91.9	93.7	93.1	100.0	100.0	8.8

⁽²⁷⁾ U. S. Bureau of Labor, Bul. 154, 80

⁽²⁸⁾ Ibid., 10.

A P P E N D I X III

Wages of females over 15 years of age in selected industries in Minnesota, according to the Census of Manufactures of 1890.

Wage per week	Textiles (a)				Chemicals and allied products (b)			
	Entire industry		Woolen mills		Hosiery and knitting mills		Number	Cumulative per cent
	Number	Cumulative per cent	Number	Cumulative per cent	Number	Cumulative per cent		
Total	149		77		72		21	
Under \$5.00 per week	72	48.3	52	69.5	20	27.8	16	76.2
\$5.00 and under 6.00	36	72.5	21	94.8	15	98.6		
6.00 " " 7.00	23	87.9	3	98.7	20	76.4	2	85.7
7.00 " " 8.00	14	97.3			14	95.8		
8.00 " " 9.00	2	98.6			2	98.6	1	90.5
9.00 " " 10.00	1	99.3			1	100.0	1	95.3
10.00 " " 12.00								
12.00 " " 15.00	1	100.0	1	100.0			1	100.0
Average weekly earnings; "operatives and skilled," not including piece workers.		\$4.74		\$4.47		\$5.52		\$4.67

(a) U. S. Census of 1890, Vol. 6, 146 - 155

(b) Ibid., 303-304.

Wages of females employed in stores and
factories of the Twin Cities in 1910, compiled from
the U. S. Bureau of Labor's report.

Wage per week	Mercantile and manufacturing					Mercantile			Manufacturing		
	Total num- ber	per cent	cumu- lative per cent	At home num- ber	Adrift num- ber	Total num- ber	At home num- ber	Adrift num- ber	Total num- ber	At home num- ber	Adrift num- ber
Total	375	100.0		234	141	166	101	65	209	133	76
Under \$2.00	1	.3	.3	1		1	1				
2 and under 3	1	.3	.6		1	1		1	7	5	2
3 " " 4	16	4.3	4.9	13	3	9	8	6	28	19	9
4 " " 5	40	10.6	15.5	25	15	12	6	6	33	26	7
5 " " 6	55	14.7	30.2	39	16	22	13	9	49	31	18
6 " " 7	83	22.2	52.4	49	34	34	18	16	28	15	13
7 " " 8	55	14.7	67.1	31	24	27	16	11	33	22	11
8 " " 9	58	15.5	82.6	38	20	25	16	9	33	22	11
9 " " 10	58	15.5	82.6	38	20	25	16	9	33	22	11
10 " " 11	24	6.4	89.0	13	11	10	6	4	14	7	7
11 " " 12	24	6.4	89.0	13	11	11	6	5	12	6	6
12 " " 13	23	6.1	95.1	12	11	11	6	5	12	6	6
13 " " 14	4	1.1	96.2	2	2	2	1	1	2	1	1
14 " " 15	4	1.1	96.2	2	2	2	1	1	2	1	1
15 " " 16	4	1.1	96.2	2	2	3	2	1	2	1	1
16 " " 17	5	1.3	97.5	2	3	3	2	1	2	1	1
17 " " 18	5	1.3	97.5	2	3	4	3	1	1	1	
18 " " 19	5	1.3	97.5	2	3	4	3	1	1	1	
19 " " 20	3	.8	99.6	3		3	3				
20 " " 21	3	.8	99.6	3		3	3				
21 " " 22	3	.8	99.6	3		3	3				
22 " " 23	3	.8	99.6	3		3	3				
23 " " 24	3	.8	99.6	3		3	3				
24 " " 25	3	.8	99.6	3		3	3				
25 " " 26	3	.8	99.6	3		3	3				
26 " " 27	3	.8	99.6	3		3	3				
27 " " 28	3	.8	99.6	3		3	3				
28 " " 29	3	.8	99.6	3		3	3				
29 " " 30	3	.8	99.6	3		3	3				
30 " " 31	3	.8	99.6	3		3	3				
31 " " 32	3	.8	99.6	3		3	3				
32 " " 33	3	.8	99.6	3		3	3				
33 " " 34	3	.8	99.6	3		3	3				
34 " " 35	3	.8	99.6	3		3	3				
35 " " 36	3	.8	99.6	3		3	3				
36 " " 37	3	.8	99.6	3		3	3				
37 " " 38	3	.8	99.6	3		3	3				
38 " " 39	3	.8	99.6	3		3	3				
39 " " 40	3	.8	99.6	3		3	3				
40 " " 41	3	.8	99.6	3		3	3				
41 " " 42	3	.8	99.6	3		3	3				
42 " " 43	3	.8	99.6	3		3	3				
43 " " 44	3	.8	99.6	3		3	3				
44 " " 45	3	.8	99.6	3		3	3				
45 " " 46	3	.8	99.6	3		3	3				
46 " " 47	3	.8	99.6	3		3	3				
47 " " 48	3	.8	99.6	3		3	3				
48 " " 49	3	.8	99.6	3		3	3				
49 " " 50	3	.8	99.6	3		3	3				
50 " " 51	3	.8	99.6	3		3	3				
51 " " 52	3	.8	99.6	3		3	3				
52 " " 53	3	.8	99.6	3		3	3				
53 " " 54	3	.8	99.6	3		3	3				
54 " " 55	3	.8	99.6	3		3	3				
55 " " 56	3	.8	99.6	3		3	3				
56 " " 57	3	.8	99.6	3		3	3				
57 " " 58	3	.8	99.6	3		3	3				
58 " " 59	3	.8	99.6	3		3	3				
59 " " 60	3	.8	99.6	3		3	3				
60 " " 61	3	.8	99.6	3		3	3				
61 " " 62	3	.8	99.6	3		3	3				
62 " " 63	3	.8	99.6	3		3	3				
63 " " 64	3	.8	99.6	3		3	3				
64 " " 65	3	.8	99.6	3		3	3				
65 " " 66	3	.8	99.6	3		3	3				
66 " " 67	3	.8	99.6	3		3	3				
67 " " 68	3	.8	99.6	3		3	3				
68 " " 69	3	.8	99.6	3		3	3				
69 " " 70	3	.8	99.6	3		3	3				
70 " " 71	3	.8	99.6	3		3	3				
71 " " 72	3	.8	99.6	3		3	3				
72 " " 73	3	.8	99.6	3		3	3				
73 " " 74	3	.8	99.6	3		3	3				
74 " " 75	3	.8	99.6	3		3	3				
75 " " 76	3	.8	99.6	3		3	3				
76 " " 77	3	.8	99.6	3		3	3				
77 " " 78	3	.8	99.6	3		3	3				
78 " " 79	3	.8	99.6	3		3	3				
79 " " 80	3	.8	99.6	3		3	3				
80 " " 81	3	.8	99.6	3		3	3				
81 " " 82	3	.8	99.6	3		3	3				
82 " " 83	3	.8	99.6	3		3	3				
83 " " 84	3	.8	99.6	3		3	3				
84 " " 85	3	.8	99.6	3		3	3				
85 " " 86	3	.8	99.6	3		3	3				
86 " " 87	3	.8	99.6	3		3	3				
87 " " 88	3	.8	99.6	3		3	3				
88 " " 89	3	.8	99.6	3		3	3				
89 " " 90	3	.8	99.6	3		3	3				
90 " " 91	3	.8	99.6	3		3	3				
91 " " 92	3	.8	99.6	3		3	3				
92 " " 93	3	.8	99.6	3		3	3				
93 " " 94	3	.8	99.6	3		3	3				
94 " " 95	3	.8	99.6	3		3	3				
95 " " 96	3	.8	99.6	3		3	3				
96 " " 97	3	.8	99.6	3		3	3				
97 " " 98	3	.8	99.6	3		3	3				
98 " " 99	3	.8	99.6	3		3	3				
99 " " 100	3	.8	99.6	3		3	3				
100 and over	2	.5	100.0	2		2	2				

U. S. Bureau of Labor, Report on condition of women and child wage earners, Vol. V, Wage-earning women in stores and factories, 258 - 267.

A. H. LINDEKE
W. F. HOUK
ELIZA P. EVANS,
SECRETARY

STATE OF MINNESOTA
Minimum Wage Commission

CAPITOL, ST. PAUL

APPENDIX IV.

DEAR SIR:—

The inclosed "questionnaire" was compiled by the members of the Twin City Manufacturing and Mercantile Advisory Boards of the Minimum Wage Commission and adopted by the Duluth Advisory Board. These Boards are to recommend to the Minimum Wage Commission a minimum wage for women and minors engaged in the manufacturing and mercantile trades in the Twin Cities and Duluth, the said wage to be based upon the cost of living.

Both the Wage Commission and the Boards desire to be fair in fixing a minimum wage and they ask that the information furnished represent present industrial conditions. A wage will be fixed for workers of ordinary ability and a less wage for learners and apprentices.

If the questions are fully answered the employer need not appear before the Advisory Boards. Attention is called to the following section of the minimum wage law:

Sec. 4. The commission shall specify times to hold public hearings at which employers, employes or other interested persons may appear and give testimony as to wages, profits and other pertinent conditions of the occupation or industry. The commission or any member thereof shall have power to subpoena witnesses, to administer oaths, and to compel the production of books, papers, and other evidence. Witnesses subpoenaed by the commission may be allowed such compensation for travel and attendance as the commission may deem reasonable, to an amount not exceeding the usual mileage and per diem allowed by our courts in civil cases. Chap. 547—General Laws 1913.

The "questionnaire" is to be filled out and returned to the Secretary of the Minimum Wage Commission, Eliza P. Evans, Room 234, State Capitol, St. Paul, Minn., within two weeks of its receipt.

If more blanks are needed please notify the secretary.

ELIZA P. EVANS,
Secretary



Minnesota Minimum Wage Commission.

Sec. 4. The commission shall specify times to hold public hearings at which employers, employees, or other interested persons may appear and give testimony as to wages, profits and other pertinent conditions of the occupation or industry. The commission or any member thereof shall have power to subpoena witnesses, to administer oaths, and to compel the production of books, papers, and other evidence. Witnesses subpoenaed by the commission may be allowed such compensation for travel and attendance as the commission may deem reasonable, to an amount not exceeding the usual mileage and per diem allowed by our courts in civil cases. Chap. 547—General Laws 1913.

Mercantile Employer's Schedule

1. Kind of store? _____
(NOTE:—Department, suit or other specialty.)

2. Firm name? _____

3. City or Town? _____

4. Total number of male employees? _____

(a) 21 years of age and over _____

(b) Under 21 years of age _____

5. Total number of female employees? _____

(a) 18 years of age and over _____

(b) Under 18 years of age _____

Total number of employees _____

NOTE:—A "learner" is one engaged in any occupation, not learning a definite trade, but simply becoming proficient through experience in one line of work.

An "apprentice" is one learning a definite trade or craft.

6. Average number of employees on monthly pay roll:

NOTE:—Base answers on pay roll nearest to date.

Pay roll nearest to (a)	Number of females 16 years of age and over. (b)	Number of males under 21 years of age. (c)	Number of males and females under 16 years of age on pay-roll. (d)	Total (e)
April 15, 1913				
May 15, 1913				
June 15, 1913				
July 15, 1913				
August 15, 1913				
September 20, 1913				
October 20, 1913				
November 20, 1913				
December 20, 1913				
January 20, 1914				
February 20, 1914				
March 15, 1914				

7. NOTE:—Answer the following, based upon pay roll nearest to April 1st, 1914.

Weekly rates of pay, not including commissions (a)	Number of employees in each class or department receiving each specified sum.						Total (h)
	Cash girls, messengers, bundle wrappers and packers (b)	Inspectors (c)	Saleswomen (d)	Alteration department (e)	Millinery department (f)	Office employees (g)	
Under \$2							
\$2.00							
2.50							
3.00							
3.25							
3.50							
3.75							
4.00							
4.25							
4.50							
4.75							
5.00							
5.25							
5.50							
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8.75							
9.00							
9.25							
9.50							
9.75							
10.00							
10.25							
10.50							
10.75							
11.00							
11.50							
12.00							

8. In addition to the above flat rates of pay, are commissions or bonuses allowed?.....

9. If so, what amount was paid to women and minors earning \$12.00 or less per week, for the year ending April 1st, 1914? \$.....

10. What average weekly sales would a woman have to maintain in order to draw a flat weekly wage in each of the following departments?

(NOTE:—These questions should be answered even though no women received the exact wage specified.)

Item	Department.					
	Notion (a)	Handkerchief (b)	Glove (c)	Lace (d)	Suit (e)	Millinery (f)
Average amount of weekly sales required to yield a flat weekly wage of \$7.00?	\$	\$	\$	\$	\$	\$
Commission allowed on sales above the average sales specified %	\$	\$	\$	\$	\$	\$
Are commissions allowed throughout the year?						
Number of weeks for which commissions are allowed (if not allowed throughout the year)?						
Weekly rate of pay at which commissions begin if allowed on sales in excess of the stipulated amount?	\$	\$	\$	\$	\$	\$

11. Give the number of females earning per week of full time:

NOTE:—Include learners and apprentices in answering questions numbered 11 and 12.

Weekly Wage	Number of females	Weekly Wage	Number of females
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

12. Give the number of males under 21 years of age earning per week of full time:

Weekly Wage	Number of males	Weekly Wage	Number of males
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

APPRENTICES AND LEARNERS.

(See above definitions.)

13. Give number of female apprentices and learners earning per week of full time:

Weekly Wage	Number of females	Weekly Wage	Number of females
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

14. Give number of male apprentices and learners under 21 years of age earning per week of full time:

Weekly Wage	Number of males	Weekly Wage	Number of males
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

15. What educational opportunities do you provide for apprentices and learners?.....

.....

.....

.....

16. Assuming that a minimum wage scale and apprenticeship and learner period will be fixed by law, kindly answer the following questions:

(a) What would you recommend as the minimum rate of wages per week of full time for female apprentices and learners? \$.....

(b) What would you recommend as the minimum rate of wages per week of full time for male apprentices and learners under 21 years of age? \$.....

(c) What in your opinion is the average number of months required to pass the learner's stage in your line of business?.....

(d) What in your opinion is the average number of months required to pass the apprenticeship stage in your line of business?.....

NOTE:—The above questions were compiled by the Mercantile Advisory Board of the Twin Cities and adopted by the Duluth Advisory Board. They are to be answered and returned to Eliza P. Evans, Secretary, Minnesota Minimum Wage Commission, Room 234, State Capitol, St. Paul, Minnesota, on or before May 16th, 1914 within two weeks of their receipt

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Manufacturing Employer's Schedule

1. What lines of goods do you manufacture?.....
2. This schedule is made out for what line of goods?.....

(NOTE:—If you manufacture more than one line of goods kindly answer the following questions for each line of goods.)

3. What is your firm name?.....
 4. City or town?.....
 5. Total number of male employes?.....
 - (a) 21 years of age and over.....
 - (b) Under 21 years of age.....
 6. Total number of female employes?.....
 - (a) 18 years of age and over.....
 - (b) Under 18 year of age.....
- Total number of employes.....

NOTE:—A "learner" is one engaged in any occupation, not learning a definite trade, but simply becoming proficient through experience in one line of work.

An "apprentice" is one learning a definite trade or craft.

NOTE:—Include learners and apprentices in answering questions number 7 and 8.

7. Give the number of females earning per week of full time:

females		females	
Weekly Wage	Number of males	Weekly Wage	Number of males
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

8. Give the number of males under 21 years of age earning per week of full time:

Weekly Wage	Number of males	Weekly Wage	Number of males
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

APPRENTICES AND LEARNERS

(NOTE:—See above definitions.)

9. Give number of female apprentices and learners earning per week of full time:

Weekly Wage	Number of females	Weekly Wage	Number of females
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

10. Give number of male apprentices and learners under 21 years of age earning per week of full time:

Weekly Wage	Number of ^{males} females	Weekly Wage	Number of ^{males} females
Less than \$2.00		\$ 7.00	
\$2.00		7.25	
2.25		7.50	
2.50		7.75	
2.75		8.00	
3.00		8.25	
3.25		8.50	
3.50		8.75	
3.75		9.00	
4.00		9.25	
4.25		9.50	
4.50		9.75	
4.75		10.00	
5.00		10.25	
5.25		10.50	
5.50		10.75	
5.75		11.00	
6.00		11.25	
6.25		11.50	
6.50		11.75	
6.75		12.00	

11. What educational opportunities do you provide for apprentices and learners in addition to shop training?

12. Assuming that a minimum wage scale and apprenticeship and learner period will be fixed by law, kindly answer the following questions:

(a) What would you recommend as the minimum rate of wages per week of full time for female apprentices and learners? \$ _____

(b) What would you recommend as the minimum rate of wages per week of full time for male apprentices and learners under 21 years of age? \$ _____

(c) What in your opinion is the average number of months required to pass the learner's stage in this line of manufacturing? _____

(d) What in your opinion is the average number of months required to pass the apprenticeship stage in this line of manufacturing? _____

NOTE:—The above questions were compiled by the Manufacturing Advisory Board of the Twin Cities, and adopted by the Duluth Advisory Board. They are to be answered and returned to Eliza P. Evans, Secretary, Minnesota Minimum Wage Commission, Room 234 State Capitol, St. Paul, Minnesota, on or before ~~May 9th, 1914~~ ^{within two weeks of their date}

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H. M. Larson
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Miss Hilda Tykson
Miss Mae McDonald
Miss Nora Murphy
Miss Minnie Schaefer

EMPLOYEE'S SCHEDULE.

The information asked for below is to be used for the purpose of arriving at an average living wage, and will be held in the strictest confidence by the wage commission. In order that the information be accurate please answer each question as correctly as possible.

1. Whom do you work for?.....
2. Do you live with your parents.....
3. Wages per week?.....
4. What are you spending for room rent per month?.....
5. What are you spending for food per week?.....
6. How much did you spend for clothing during the last year?
7. How much do you spend for car fare per week?.....
8. How much do you spend for laundry per week?.....
9. What did you spend for doctor bills last year?.....
10. What did you spend for dentist bills last year?.....
11. What did you spend for oculist bills last year?.....
12. How much do you give the church per week?.....
13. What do you spend for insurance per year?.....
14. What do you spend for lodge or club dues per year?
15. How much do you spend for amusements per week?
16. How much did you spend for your last vacation?.....
17. How much do you spend for books, magazines, newspapers, etc., per week?.....
18. How old are you?.....
19. Are you a learner or apprentice?.....

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