

WOMEN'S WAGES IN MANUAL WORK.

IN an article which first appeared in the *Economic Journal* for December, 1891, and which has recently been reprinted in *Problems of Modern Industry*, Mr. Sidney Webb presents the results of an investigation made by him concerning the causes of the "alleged differences in the wages paid to men and women for similar work." The facts which the writer had to present were so few in number that no sweeping generalization could be made from them. But, though no definite conclusion could be arrived at, the facts seemed to suggest that, so far as manual work is concerned,

the frequent inferiority of woman's earnings is due, in the main, to a general but not invariable inferiority of productive power, usually in quantity, sometimes in quality, and nearly always in nett advantageousness to the employer.¹

This explanation of the lower wages paid to women would, the writer thinks, be even more true in the United States than in England.

Custom is presumably less powerful in regulating wages in the United States than in England, and in the United States the proportion which the average earnings of women in manufacturing industries bear to those of men is, as we have seen, considerably higher than in this country. Where competition rates of wages prevail, and especially where the women are protected by strong Trade Unions, they often earn wages equal to those of men for equal work.²

The suggestion that the lower wages paid to women have at least a partial justification in the inferiority of women's work has received the approval of several eminent economists in both England and America. Professor William Smart,³ Mr.

¹ *Problems of Modern Industry*, p. 63.

² *Ibid.*, p. 64.

³ "Women's Wages," in *Studies in Economics*, pp. 116 ff.

John A. Hobson¹ and Hon. Carroll D. Wright² have all agreed that the inferiority of women's work is a leading cause of the lower wages paid to them. This inferiority, it is said, may show itself in several ways and may itself be due to other causes than natural inability; but, whatever be the explanation, where men and women do the same work, the women "seldom reach man's level in quantity and quality."³ Until recently this theory of women's wages has lacked adequate confirmation. Mr. Webb acknowledged that the facts cited by him were too few in number to enable definite conclusions to be drawn from them, and none of the later exponents of the theory have furnished us with many additional illustrations.

The importance of the theory is almost self-evident. No one of its supporters has pretended that it is the only explanation of the difference which usually exists between men's and women's wages; and Mr. Webb implies, at least, that in other than manual work this is probably not the chief cause of dissimilarity. Popular opinion has, however, been directly opposed to the views expressed by the above writers; and the general feeling that employers discriminate against women in the payment of wages has found expression in writings on the labor problem, in the reports of labor bureaus and commissions, and even in legislation, to such an extent that it seems worth while to investigate the matter still further, in order to see how far the theory in question can be sustained by statistical evidence.

I.

The Eleventh Annual Report of the Commissioner of Labor (1897), entitled *Work and Wages of Men, Women and Children*, gives us an opportunity of testing by a large number of facts the theory advanced by Mr. Webb, and of observing how far his prediction, that the theory would be found more true for the United States than for England, is realized. The report itself was prepared with a view of making possible a

¹ *Evolution of Modern Capitalism*, pp. 299-304.

² "Why Women are Paid Less Than Men," *Forum*, XIII, 633.

³ *Evolution of Modern Capitalism*, p. 302.

comparison of the wages paid to men, women and children. It furnishes us with a statement of the wages paid to employees in the various establishments;¹ gives the estimates of employers or foremen as to the relative efficiency of the men, women and children employed;² furnishes a comparison of the earnings of women and children with those of men, in cases where the efficiency is the same;³ gives the reasons of employers for hiring women and girls rather than men, and states whether their employment is increasing;⁴ and also gives the number of hours of the working week in each establishment.⁵

Like all statistical material, these tables need to be used with great caution; and all conclusions drawn therefrom must be accepted with reservation. The statements of employers and foremen, as to the relative efficiency of their employees and the reasons given for employing females, must be received with some allowance for imperfect knowledge or unintentional errors. The report itself gives the warning⁶ that there is reason to believe that differences in the character of the work performed by the men and the women existed in some instances where no distinction was specified by the employer; and we shall later have occasion to note that this difference may pertain to the amount, as well as to the character, of the work performed. It is quite improbable that the real grounds of the preference for female labor are always correctly stated. Many of the reasons given explain nothing. Thus, it is obviously a contradiction to state that men and women are equally efficient in the performance of a certain kind of work, and then to say that the women are "better adapted" for its performance. To state that women are "cheaper" than men is doubtless a sufficient reason for preferring them, if their efficiency is the same; but it does not go far towards explaining why their wages are less. Yet, although the reasons given cannot be regarded as entirely reliable, they may at times save us from attributing an inferiority to women's work when it does not exist.

¹ Table I, pp. 35-513.

² Table II, pp. 514-547.

³ Table III, pp. 548-582.

⁴ Table IV, pp. 583-610.

⁵ Table VI, pp. 639-645.

⁶ P. 26.

Information as to the relative efficiency of the men and the women could be obtained from only 436 establishments, out of a total of 931 from which other facts given in the report were obtained. But these 436 establishments are pretty well distributed throughout the chief manufacturing states, and represent all the leading industries in which women are employed. The investigation may, therefore, be considered as, on the whole, tolerably complete and satisfactory.

The grades of efficiency of the operatives in these 436 establishments are indicated by an alphabetical classification — A, B, C, D, *etc.*, in which "A" indicates the highest degree of efficiency, "B" the next highest, and so on. Accordingly, if we find men and women performing the same work in the same establishment, and both designated by "A," we know that they are supposed to be equally efficient and to possess this efficiency in the highest degree. If, however, we find men and women performing the same kind of work, but with the men designated by "A," while the women are in grade "B," we know that the women are less efficient workers than the men. This seems to dispose of the question of efficiency, but unfortunately it does not do so in all cases. When we come to discuss the question of piece work, we shall see that the above classification is open to criticism. With these remarks explanatory of the report, we may now turn to a consideration of the facts furnished by the investigation.

II.

The class of occupations known as "domestic and personal service" is represented in the report by forty-four establishments. Eighteen of these report as to the efficiency of the employees, and of these eighteen only six (four laundries and two bakeries) furnish instances of men and women of the same degree of proficiency performing the same kind of work. In the laundries the operatives in question are either ironers, washers or clerks. The average earnings of the fourteen men are 23 per cent higher than those of the twelve female

employees;¹ in the restaurants, male cooks receive average earnings 24.6 per cent in excess of those paid to females. There is apparently no reason for doubting that the efficiency of the women employees was equal to that of the men in these occupations, except that among the ironers piece wages seem to prevail, although in some instances the men work by piece and the women by time. This makes it probable that in this sub-occupation the women are not equal to the performance of the same amount of work that the men accomplish. It is also to be noted that in one instance, where men and women are engaged as pastry cooks, the hours of work are longer for the men than for the women. The managers of the laundries claim that the women are "better adapted" to perform the work than are the men, although one manager also explains that they are "cheaper." In the restaurants the women are said to be "cheaper," although in one case they are also said to be "better adapted."

In the manufacture of bakery and confectionery goods, only nine establishments out of forty-eight report as to the efficiency of their employees, and only four of these establishments record instances of men and women of equal efficiency performing precisely the same work. There are five instances in these establishments where the average wages of forty women are lower by 10 per cent than are the wages of thirty-one men performing the same work, and one instance where the same average wages are paid to four women shippers as are paid to one man for the same work. It is to be noted, however, that in this case the man's efficiency is of the third grade, represented by "C," while the other male shippers are in grades "A" or "B." All the women shippers are in class "C," and time wages prevail for all employees. One of these factories reports, as its reason for preferring women, that they are "cheaper"; another, that they are "better adapted"; a third, that they are "better adapted, cheaper and work more steadily"; while the fourth does not state the grounds of its preference.

¹ Throughout this paper all of the figures given pertain to adults — male and female workers eighteen or more years of age.

In the manufacture of paper boxes it would seem that the efficiency and skill of the female operatives should be fully equal to that of the men and that here, if anywhere, the theory of equality of wages for equality of work should show itself. But the facts serve neither to prove nor to disprove the theory. Out of a total of thirty factories represented in the report, only three report as to the efficiency of their employees, and only two of these furnish examples of men and women of equal efficiency performing the same work. In a Minnesota factory we find four male workers receiving average wages of \$7.75 per week, while fifteen females possessing "equal efficiency" receive on an average only \$5.30½, or 46.1 per cent less than the men. The men work on time, the women on piece, wages. In the other factory, a New York establishment, we find thirteen male workers receiving average wages of \$6.68½, while the twenty-three females receive \$8.49½, or 27.1 per cent higher than the average paid to men. Both piece and time wages prevail for both sexes, and in both cases the women receive the higher pay. The highest wages paid to the men are \$10.87; the lowest, \$3.50. The highest wages paid to the women are \$13.03; the lowest, \$5.00. The Minnesota firm claims that the women are "better adapted and more industrious," while the New York firm merely says that they are "better adapted."

In the manufacture of brooms and brushes, there are four instances in two establishments where sixty-nine men receive wages higher by 55.6 per cent than do the seventy women workers of like efficiency. The difference in wages is considerable in the case of the New York factory, where time wages prevail, but is very great in the Maryland establishment, where both sexes are employed at piece rates.

The boot and shoe industry is one of the largest occupations in which women find employment, and in New England women have been employed in large numbers in this industry since early in the century.¹ The present report gives evidence

¹ As early as 1829, \$60,000 were paid out annually to women engaged in the boot and shoe manufacture at Lynn, Massachusetts. — Wright, *Wages and Prices*, 1752-1880, p. 19.

concerning twenty-eight establishments, in which 2442 adult males and 1183 females are employed. Only seven of these establishments, however, report as to the efficiency of their employees, and of these only six furnish us data for a comparison of men's and women's wages for the same work performed with supposedly equal efficiency. In the six establishments given there are fifteen instances of this kind. In four instances, sixteen women receive average wages higher by 6.4 per cent than do the nine men performing the same kind of work. In the other eleven instances the men receive higher wages, the difference in their favor being 28.1 per cent. There are forty-nine men and fifty-nine women covered by these eleven instances. The branches of the occupation in which the men receive the higher wages are stitching, finishing, heel-making, skiving, sole-cutting and vamping. The women receive more than the men as stitchers, buttonhole-makers and vampers. Both time and piece wages are paid, but the piece rates are more noticeable in those branches in which women are most largely employed, especially stitching and vamping. The reasons usually given for the employment of women are that they are "better adapted" or "cheaper"; though one establishment, which pays less to the women than to the men, says the women are "neater and more rapid."

In the manufacture of "canned and preserved fruits, vegetables and meats," there are two instances in which seventeen women obtain wages higher by 15.7 per cent than do four men who do the same work with equal efficiency. But there are only three establishments, out of nineteen reporting, which furnish instances of men and women engaged in the same occupations. The instances just given are cases where men are competing with women in what are essentially the women's branches of the industry.

Fifty-six establishments engaged in the manufacture of cigars, tobacco and snuff, are considered in the report. Only twenty-eight of these report as to the relative efficiency of their employees, and of these only thirteen give instances of

men and women of the same degree of efficiency performing the same work. In the thirteen establishments there are twenty-six such instances. In six cases thirty-five female workers receive average wages higher by 14.3 per cent than do twenty-three male workers engaged at the same tasks. In the other twenty instances, the average wages of the 321 men employed are 20.4 per cent higher than the average wages of the 469 women who are their competitors. The same general superiority of men's wages has been observed by Mr. Webb in the English cigar establishments. He explains it as due to the better quality of cigars made by the men, although he confesses that the superiority of men's work is not so clear here.¹ In the absence of direct proof to the contrary, it would seem that the greater neatness and deftness of the women should give them an advantage in this industry. But it is worthy of note that the majority of cases where the women receive the higher wages are among the lower grades of efficiency, "B" or "C." The statement that men generally receive the higher wages is supported by illustrations from every branch of the tobacco manufacture, while the instances where women receive the higher wages are confined to cigar-makers, carton-makers and strippers. Seven of the thirteen establishments say, as a reason for employing women in preference to men, that the women are more easily controlled; three say that they are less liable to strike; two, that they are more reliable; two, that they are neater; three, that they are better adapted; two, that they are cheaper; two, that they are more rapid; and single instances are given where the women are more industrious, more easily procured, more careful or learn more rapidly than do the male operatives.² Of the twenty instances where the men earn more than the women, seventeen are cases where both men and women are employed at piece work; two, where both are paid by time; and one, where the mode of payment is not given. Of the six instances where the women receive the higher wages, two are

¹ *Economic Journal*, I, 639; *Problems of Modern Industry*, pp. 51, 52.

² In some instances more than one reason is given.

cases of piece work ; one, of time wages ; two, of the combination of the two modes of remuneration for both sexes ; and one, of failure to name the method of remuneration.

The fact that the higher wages are usually paid to men is well illustrated in the manufacture of clothing. In one Missouri establishment engaged in making cloaks, thirteen tailors in grades "A," "B" and "C" receive average wages much in excess of the sixteen tailoresses who are reported as performing the same work with equal efficiency, while seven tailoresses in grade "D" receive slightly higher wages than do three men in the same class. The owner of this establishment reports that the women are "better adapted" for the work and are "more easily controlled" than the men. There is another instance in the clothing industry where women receive the higher pay. Three forewomen and designers for dresses and cloaks receive average weekly wages of \$41.66½, while the one man similarly employed receives but \$30. The women are said to be "better adapted"; and one might readily doubt whether in this instance, at least, the work is the same for both sexes. A North Carolina establishment has four men and four women engaged in selling clothing and dry goods. The women are said to be as efficient as the men and to be better adapted to the business; but they receive on the average only \$4.00 per week, while the men receive \$11.00. Taking the clothing industry as a whole, so far as represented in this report, we find five instances where the men are paid wages 45.6 per cent higher than those received by women and two instances where the women receive wages 20.3 per cent in excess of those paid to male workers of the same degree of efficiency.

In the printing and publishing business, there are five instances in which women earn more than men, the difference in their favor being on an average 16.4 per cent. There are, furthermore, four instances where their wages are equal to those paid to men; but, on the other hand, there are twenty instances where the wages of the men exceed those of the women by 26.6 per cent.

In the manufacture of rubber and elastic goods, the wages of men and women approach somewhat nearer to equality. In five instances the women receive higher wages, the difference in their favor being, however, only 3.8 per cent ; and in one instance the same wages are paid to men and women. In only four instances do the men receive higher wages for the same work, the excess amounting to 11.3 per cent. But, since only two industries in this branch of manufactures report as to the efficiency of their employees, no conclusion of wide application is possible.

It is rather startling to find that in the manufacture of tinware and sheet-metal goods the women receive the higher wages, in the only cases where men and women of equal efficiency are found as competitors. But the instances of such competition are only two in number, and these are found in only two establishments out of five investigated. The difference in favor of the women is reported as 7.7 per cent ; but an inspection of the figures from which the percentage is drawn shows the difference to be accidental and to be due to that source of so many statistical fallacies, the simple average. Thus, in one of the instances given, seventy-eight men engaged as solderers earn wages ranging from \$3.00 to \$7.00 per week, the average being \$5.09 ; while thirty women similarly employed have the same upper and lower limits to their wages, but the average in this case is found to be \$5.23½. In the other instance one male painter receives \$5.00 per week, while four women who receive from \$4.50 to \$6.00 for the same work earn on an average \$5.62½ per week. It is also to be noted that in both these instances the men and women are placed as regards efficiency in the second class, that indicated by "B." Only men are found in the "A" class.

In mercantile pursuits, the fact that men generally receive higher wages than women, even when they perform the same work with apparently the same efficiency, is quite easily demonstrated. In the book and stationery trade there is one instance where one man and three women receive equal wages for equal work, and one instance where the men receive the

higher wages. In selling general merchandise, insurance and sewing machines, and in miscellaneous trades, the men receive, in all cases of equal efficiency, the higher wages; but only eight instances of such efficiency, scattered throughout the same number of establishments, are given.

In the dry-goods trade there are two instances, in two establishments, where four men and three women receive the same pay for equal work; seven instances, in six establishments, where eighty-six women receive wages 12.5 per cent higher than those paid to eighty-five men; and 111 instances, in seventy-four establishments, where the men's wages are 61 per cent higher than the wages of the women, who are said to be equally efficient. Here, again, we find that it is invariably in the lower grades of efficiency, "B," "C" or "D," that the women receive wages equal to or higher than those paid to men. Practically all the instances where men and women are engaged in performing the same work are among salesmen and saleswomen, and time wages is the only method of payment.

III.

It is the textile industries, however, which afford the best opportunity for testing the theory under discussion, by means of the application of statistics. It is in these industries that women have been longest employed and are still found in the greatest numbers.

In the New England states, the chief center of the textile manufacture, we are confronted with the phenomena of long-established industries; traditional methods of work, and to some extent traditional modes of living; a highly developed system of factory legislation, devised in the interests of the working classes; strong trade unions among the male workers, and in some places organized female labor as well. On the other hand, we have in the cotton manufacture of the Southern states an opportunity to study comparative wages where there is an absence of all those restrictions on competition which characterize the industries of New England. Fortunately, the report with which we are dealing gives us much fuller information con-

cerning the textile industries, especially the cotton manufacture, than for any other industry or group of industries. The number of factories which have reported as to the relative efficiency of their male and female employees, the number of instances of "equal efficiency" given and the large number of employees of both sexes show that the results of the investigation are not merely accidental. In the cotton industry, for example, the investigation covers eighty-six factories. Sixty-three of these establishments report as to the efficiency of their employees, and fifty-five of them furnish instances of men and women performing the same work with what is said to be equal efficiency. The eight factories which do not furnish such instances are, for the most part, small establishments. The total number of adult males in these eight factories is only sixty and of adult females, fifty-two. In the fifty-five mills which furnish examples of men and women of like degrees of efficiency performing the same work, there are fifty-six instances where the women receive higher wages than do the men. The average wages of these women are 8.6 per cent higher than the corresponding average for men. In 195 instances the men receive average wages 17.6 per cent higher than the wages paid to the women who perform similar work, while in thirty-six instances men and women receive equal wages for equal work. Owing to the importance of this industry and the number of instances of equal efficiency cited, we shall examine these figures somewhat in detail.

In speaking of women's wages in the cotton industry of England, Mr. Webb says:

Perhaps the clearest case of similar work is that of the Lancashire cotton weavers, where men and women often perform exactly the same work side by side in the same shed, under practically the same Factory Act restrictions. Here the piece-work rates are the same for women as for men, and clever women often get through more work, and thus earn higher weekly wages than some of the men. A similar equality of task wages appears to prevail in cotton-weaving in France.¹

¹ Problems of Modern Industry, pp. 54, 55.

Whatever may be the truth concerning the wages of cotton weavers in England and France, the investigation of the Department of Labor does not show that any such equality in the remuneration of men and women exists among American cotton weavers. There are nineteen instances, in ten mills, where 201 female operatives receive the same average wages as do 169 men performing the same work with the same degrees of efficiency. There are, furthermore, twenty-nine instances, in twenty-one mills, where 753 women employed at weaving receive higher wages than do the 585 men who perform the same work with equal efficiency. On the other hand, there are ninety-nine instances, in forty-three factories, where 3015 men receive higher average wages than those paid to 5560 women who do the same work and are said to be equally efficient.

No other branch of the cotton manufacture furnishes so many instances of men and women performing the same work as does the business of weaving. Nearly all the principal sub-occupations—spinning, carding, speeding, warping, *etc.*—furnish examples of equality of wages in a few instances, but in the great majority of cases the inferiority of women's wages is clearly demonstrated. The table on the opposite page shows the terms of competition between men and women, for the cotton manufacture as a whole and for all the leading branches of the industry as well.

It is interesting to notice the geographical distribution of the various cases within the industry where the women receive wages equal to or higher than those paid to men for the same work performed with equal efficiency. As already noted, the cotton factories are situated, for the most part, either in the New England or the South Atlantic states, especially the Carolinas and Georgia. Now, of the thirty-six instances in this industry, where men and women receive equal wages for equal work, thirty-one are in the South and only five are in New England. Of the fifty-six instances in which the women receive higher wages than are paid to men, twenty-four are in New England, twenty-four in the South and eight in the

COMPARISON OF WAGES OF MEN AND WOMEN IN THE COTTON MANUFACTURE.

OCCUPATION.	MEN AND WOMEN RECEIVE EQUAL WAGES.				MEN RECEIVE HIGHER WAGES.				WOMEN RECEIVE HIGHER WAGES.			
	FACTORIES.	INSTANCES.	MEN.	WOMEN.	FACTORIES.	INSTANCES.	MEN.	WOMEN.	FACTORIES.	INSTANCES.	MEN.	WOMEN.
All branches	20	36	235	238	47	195	3951	7036	29	56	888	1113
Weaving	10	19	169	201	43	99	3015	5560	21	29	585	753
Spinning	1	1	5	8	7	20	82	563	3	3	12	17
Carding	1	2	19	3	7	12	47	52				
Speeding	2	2	5	4	7	10	67	116	4	4	15	32
Warping	2	2	4	2	3	3	8	26	1	1	13	38
Dressing					3	7	78	74				
Doffing	1	1	1	2	2	4	43	52				
Finishing					3	3	40	19				
Twisting					1	1	1	1	2	3	37	15
Beaming									1	2	54	101
Slubbing	1	1	4	1	4	4	34	55	1	1	3	1
All other	7	8	28	17	6	32	536	518	4	13	169	156

Middle and Western states. Of the 195 instances in which the men receive the higher wages, forty-nine are in the South, 135 in New England and eleven in the Middle and Western states. These facts seem to give some support to Mr. Webb's statement that, "where competition rates of wages prevail, and where the women are protected by strong Trade Unions, they often earn wages equal to those of men for equal work."¹ The cotton industry in the South is of recent development, and the high demand for labor has enabled women, as well as men, to secure high wages.² Custom is doubtless largely responsible for the lower rate of wages paid to women in New England, where the industry has been long established. In the South both male

¹ *Economic Journal*, I, 649; *Problems of Modern Industry*, p. 64.

² Nominal wages are, of course, lower for both sexes than in the New England states. But the labor cost per spindle is somewhat higher in the South than in Massachusetts. — Cf. *Labor Bulletin* of Massachusetts, No. 5 (January, 1898), p. 5.

and female labor is unorganized, while in New England the men have the assistance of strong trade unions. In many places the women do not belong to the same unions as the men, and in many others they are entirely unorganized, so that they are less able to enforce a demand for higher wages. It is also to be noticed that, in those instances where men's wages are higher than women's, the difference is much greater in New England than in the South, where it is often insignificant.

The results of the investigation which have thus far been presented do not seem to bear out the conclusion of Messrs. Webb, Smart, Hobson and Wright, that where men and women perform the same work and do it equally well, their wages are usually the same. Among the cotton weavers, where Mr. Webb thinks the conditions of employment are practically the same for both sexes, we find that out of a total of 147 instances, representing 6514 women and 3769 men, in only nineteen instances, or 12.92 per cent of the total number, do men and women receive equal wages. The 201 women represented by these nineteen instances form only 3.08 per cent of the entire number of women weavers. In twenty-nine instances, or 19.73 per cent of the total number, the women earn more than the men; but there are only 753 women included in this class, and these constitute only 11.56 per cent of the total number of women engaged in weaving. In the other ninety-nine instances, comprising 67.34 per cent of the total number, the men earn the higher wages. The women here comprise 85.36 per cent of the total number of women weavers. The other branches of the cotton industry make an even less favorable showing for the women employees, as can readily be seen in the above table.

There is still another way of testing Mr. Webb's theory, that women usually do inferior work and that, where their wages are inferior to men's, it is because their work is inferior. If this were true in the cotton industry, we might expect that those instances where the women earn wages as high as, or higher than, those paid to men would generally occur in the lower grades of efficiency. On the contrary, of the thirty-six

instances of equal remuneration for men and women, twenty-three are in grade "A"; while of the fifty-six instances where the women receive the higher pay, twenty-six are in class "A" and seventeen in class "B." No final conclusions can be drawn from these facts, but they do not seem to bear out the idea that women's wages in the cotton industry are lower because their work is inferior.

Of the eighty-six industries engaged in the manufacture of cotton goods, included in the investigation, all but eight report the employment of women in the mills to be increasing. The reasons given by superintendents and managers for employing women are, in sixty-six instances, that they are more easily controlled; in seventeen, that they are more reliable; in thirteen, that they are cheaper; in eleven, that they are more industrious; in nine, that they are more rapid; in five, that they are neater; in two, that they are more careful; and in one each, that they are less liable to strike and are cleaner.¹

The other textile industries present fewer instances of men and women engaged in doing similar work and possessing equal efficiency as workers, but, so far as the facts are given, they reveal the same results as in the cotton industry. In the manufacture of cotton and woolen goods there are, in eight factories, fifteen instances where men earn wages 20.9 per cent higher than do women for the same work, four instances (one among finishers and three among weavers) where the women earn 9.8 per cent higher wages than do the men and one instance, among the weavers, of equality in wages. In the manufacture of hosiery, knit goods and underwear, there are represented eighteen factories in which equal efficiency is recorded. In seven instances the women receive the higher wages, the difference in their favor being 7.7 per cent; but in eighteen instances the wages of the men exceed those of the women by 23.1 per cent. In the manufacture of jute goods there are two instances where men earn more than the women and two instances where their wages are equal. In the silk industry, represented by seven establishments, there are seven-

¹ In some instances more than one of the above reasons are given.

teen instances of equal efficiency. One of these is among spinners, one among winders and the other fifteen among weavers. In eleven instances the men receive the higher wages, in five instances the higher wages go to the women and in one instance the wages are equal. Where men's wages are higher, the difference is 20.8 per cent; where women's wages are higher, the difference is only 9.4 per cent. In the manufacture of woollen and worsted goods, there are ninety-nine instances where the men earn wages higher by 34.3 per cent than do the women, who are said to be equally efficient. In only ten instances do the women receive the higher wages, and the difference in their favor is slight, only 5.5 per cent. Eight of these instances are among weavers, one among spoolers and one among finishers. Of the thirty instances in the textile industries other than cotton where women's wages equal or exceed the wages paid to men, sixteen are in the highest grade of efficiency and seven in the next highest. The others are scattered through the grades "C," "D" and "E."

IV.

The statistics thus far presented show, for all the leading industries in which manual labor is employed, (1) that men's wages are generally superior to those paid to women, even where the work is the same; (2) that in those instances where the women receive higher wages than the men, the difference in their favor is much less than the difference in favor of the men in those instances in the same industries where the men's wages are higher; (3) that while women's wages are more nearly equal to men's in the textile industries, especially in weaving, even here men's wages are unquestionably superior; (4) that in the great majority of instances within the textile industries, where the women receive wages as high as, or higher than, the men, the competition between the sexes takes place within the higher grades of efficiency, "A" and "B," and, therefore, does not indicate an inferiority in women's work. We must now turn to a consideration of certain facts which may serve to modify the conclusions to which our work has thus far led us.

Mr. Webb has pointed out that among the Lancashire cotton weavers, where the women apparently earn wages equal to those paid to men, the payment is by piece;¹ and he further states that weaving "appears to be nearly always paid at equal rates, whatever the material or locality."² In this country it is not easy to determine conclusively whether the wages of men and women are more nearly equal in occupations where piece wages prevail than in those where time wages are the rule. Time wages predominate in the majority of American industries, and are unquestionably much more commonly employed than in English industries. In certain branches of some industries, however, payment by piece is the rule in the United States, as well as in England, and this is especially true of weaving. Some of the New England cotton mills pay for weaving partly by piece and partly by time, and there are a few instances where the men are paid by time and the women by piece. But among all the eighty-six industries engaged in the cotton manufacture, included in the investigation of the Department of Labor, there is but one, I believe, where weaving is paid for entirely by time.

The question now arises, in cases where men and women are engaged in the performance of similar work and are said to be equally efficient, and where the mode of payment is by piece, whether differences in wages are to be explained by a difference in the rate of payment per piece or by a difference in the quantity produced within a given time. To this question the report itself affords no direct answer. It would certainly seem that any comparison of efficiency should be based on quantitative, as well as qualitative, measurements. The introduction to the statistical tables says that the data as to relative efficiency of employees "represent the best judgment of the best informed officials or foremen of each establishment."³ Doubt is expressed as to whether the report always distinguishes between the grades of work in an occupation where women and children may be doing lighter work than the male

¹ Problems of Modern Industry, p. 52.

² *Ibid.*, p. 54.

³ P. 26.

employees ; but it implies, at least, that in other respects the statements as to relative efficiency may be relied upon.

It now appears that this is not the case, at least so far as piece work is concerned. In answer to an inquiry concerning this point, the Commissioner of Labor remarks that

it was impossible to take account of piece rates. . . . In the Report "equal efficiency" is a term which applies more to quality of work done than to quantity. The determination of the efficiency of the parties involved in the investigation was, of course, by foremen. I am satisfied that in most cases their idea of efficiency involved quality more than quantity, — that a woman might weave goods just as well and produce just as good a quality in her results as a man, although she might not weave so many yards in a day ; hence there would be a variation in the pay, although the piece rates were the same. It has been our experience that wherever men and women work at piece rates, they are paid the same for the same quantity of product, but time worked, quantity, and other reasons might work a variation in the amount paid to each in the aggregate.¹

From this explanation it would appear that, in cases where men and women receive different compensation for performing the same work, the difference in wages may, after all, be due to a real difference in the amount of work performed — that, in all probability, this is the real explanation for differences in wages in those occupations where piece rates prevail. If this be true, the report gives much greater support to the theories of Messrs. Webb, Hobson, Smart and Wright than seems to be the case from a mere examination of the tables. Of the 781 instances recorded where men and women perform the same work "with the same degrees of efficiency," 217 are instances of payment by piece rates. There are, furthermore, 167 instances where both time and piece wages are paid — in some cases the men being paid by time and the women by piece, in other cases both modes of payment being applied to both sexes. In all these instances where differences in earnings exist, they might be explained, in part at least, by difference in productivity. The following table shows for the entire

¹ Personal letter from Hon. Carroll D. Wright, August 23, 1898.

group of industries the modes of payment and the relative standing of the men and women as respects their earning capacity.

WAGES AND MODE OF PAYMENT — ALL INDUSTRIES.

RELATIVE WAGES PAID TO MEN AND WOMEN.	TOTAL NUMBER OF INSTANCES OF EQUAL EFFICIENCY.	TIME WAGES.	PIECE WAGES.	TIME AND (OR) PIECE WAGES.	MODE OF PAYMENT NOT GIVEN.
Men earn more than women	595	279	147	133	36
Women earn more than men	129	35	52	31	11
Men and women receive equal wages	57	30	18	3	6
Total	781	344	217	167	53

Dropping out of consideration the fifty-three instances where the mode of payment is not specified, we find that in over half the remaining instances the amount of work performed enters as a cause — perhaps the chief cause — of differences in wages. The number of instances of equal wages is small, almost insignificant, when compared with the number of instances where such equality does not exist. The number of instances where the women earn higher wages than the men is also small, when compared with the instances where the men's earnings are higher; but it is interesting to note that the proportion is higher where women are given an opportunity to earn high wages on the piece-rate plan than it is in the case of time wages. This fact is emphasized by the table on the following page, which shows the modes of payment and the relative earnings of men and women in the seven leading industries in which women are employed.

Returning now to the textile industries and examining the instances of equal efficiency in the business of weaving, in the light of our recent discovery as to piece rates, we find that nearly all of the 242 instances of so-called equal efficiency

WAGES AND MODE OF PAYMENT—SEVEN LEADING INDUSTRIES.

INDUSTRY.	RELATIVE WAGES PAID TO MEN AND WOMEN.	INSTAN- CES OF EQUAL EFFI- CIENCY.	TIME WAGES.	PIECE WAGES.	TIME AND (OR) PIECE WAGES.	MODE OF PAY- MENT NOT GIVEN.
Boots and shoes	Men earn more	11	1	1	6	3
	Women earn more	4		3	1	
Cigars, tobacco and snuff	Men earn more	20	2	17		1
	Women earn more	6	1	2	2	1
Cotton and woolen goods	Men earn more	15	1	5	6	3
	Women earn more	4	1	1	1	1
	Wages equal for men and women	1				1
Cotton goods	Men earn more	195	49	59	75	12
	Women earn more	56	9	25	15	7
	Wages equal for men and women	36	14	17	1	4
Silk and silk goods	Men earn more	11		10	1	
	Women earn more	5		4	1	
	Wages equal for men and women	1	1			
Hosiery, knit goods and underwear	Men earn more	18	5	1	8	4
	Women earn more	7		2	3	2
Woolen and worsted goods	Men earn more	99	42	26	23	8
	Women earn more	10	3	7		

must be considered equal only as respects the quality, and not the quantity, of the work. The table on the opposite page indicates a general inferiority of women's work in this branch of the textile manufacture.

Although over one-third of the total number of instances of equal wages paid to men and women which are given in the report are found in this one branch of the textile manufacture, these instances constitute only about $8\frac{1}{2}$ per cent of the total number of instances of "equal efficiency" found in weaving; and if to these we add the further instances where the women

WAGES AND MODE OF PAYMENT FOR WEAVING.

INDUSTRY.	RELATIVE WAGES PAID TO MEN AND WOMEN.	INSTANCES OF EQUAL EFFICIENCY.	TIME WAGES.	PIECE WAGES.	TIME AND (OR) PIECE WAGES.	MODE OF PAYMENT NOT GIVEN.
All textile industries	Men earn more	177	1	98	66	12
	Women earn more	46	2	30	9	5
	Wages equal for men and women	20		19		1
Bags and bagging	Men earn more	3		3		
	Women earn more					
Carpets	Men earn more	2		2		
	Women earn more	2		2		
Cotton and woolen goods	Men earn more	13		6	5	2
	Women earn more	3		1	1	1
	Wages equal for men and women	1				1
Cotton goods	Men earn more	99		52	39	8
	Women earn more	29		19	7	3
	Wages equal for men and women	19		19		
Silk and silk goods	Men earn more	11	1	7	3	
	Women earn more	4		3	1	
Woolen and worsted goods	Men earn more	49		28	19	2
	Women earn more	8	2	5		1

earn the higher wages, we still have only 27.27 per cent of the total number. In other words, in an occupation in which the women employed outnumber the men and one which is universally regarded as suited to the employment of women, in those cases where the same rates per piece are paid to women as to men, the superiority of men's work is shown by the fact that in nearly three-fourths of the instances cited their wages are higher than those paid to their female competitors. This, like the other facts as to piece wages cited above, certainly

gives strong support to the opinion that the lower wages of women in manual occupations are the direct result of their lower productivity.

The same conclusions cannot be applied with the same degree of certainty to occupations where time wages prevail, but there are reasons for doubting even here whether the term "equal efficiency" can be made to exclude all differences in the producing power of the men and women. When we turn to Table VI of the report, where the number of working hours per week is given, we find that twenty-two instances, out of the 279 where men earn higher wages than do the women and where both sexes are employed at time wages, can be explained by a difference in the number of hours worked—the women putting in from one and a half to twelve hours less time per week than the men. It is highly probable, if not certain, that this means lower productivity on the part of the women. We have, as a further indication, if not proof, of the inferiority of women's work, the fact that outside of the industries where women are most largely employed and where piece rates prevail, the tendency towards equality of wages, or even higher wages for women, is quite generally found to exist in the lower grades of efficiency. Reference has already been made to this fact in the case of the manufacture of bakery and confectionery goods, in cigar and cigarette manufacturing, in the clothing industry, in the manufacture of tinware and sheet metal goods and in the dry-goods trade. But the same thing is true in the manufacture of bags and bagging, of dress trimmings, of gloves and mittens, of rubber and elastic goods, of watch and clock machinery, and of kindling wood. It is also true of library work and of the book and stationery trade.

In all these industries—although in a few instances women earn wages as high as, or even higher than, the men in the same occupations—the competition takes place in the lower grades of efficiency, while in the upper grades men alone are employed; or, if men are employed along with women, their earnings are higher.

V.

The American investigation furnishes considerable support to the opinions of the English investigators, that men and women seldom come into direct competition, even when employed in the same establishments. This is naturally the first point to be determined in framing an answer to the question, Why do women receive lower wages than men? If the work performed by men and women is not the same, the inequality of wages may be due, wholly or in part, to the inequalities of employment. The question then becomes, as Professor Smart puts it, "Why are men and women employed in different groups of employment?"¹

The supporters of the marginal productivity theory of wages naturally look to women's wages for confirmation of their views. Professor Smart, in his treatment of women's wages, clearly has this theory in mind. Since Jevons, says he,

we have looked for the measure of value in marginal utility; for the value of "production goods" in their marginal utility as instruments of production; and with these for the value of labour in the value of its marginal product, and not in any predetermined fund divided out among a variable number of workers.²

Accordingly, he looks to the price of an article, as the first thing to be considered in determining the value of the labor which helped to produce it. Although he rejects the notion that wages are low because goods are cheap, and points out that the initiative in reducing prices comes from producers, he is inclined to think that the explanation for the low wages of women rests in the fact that

women are in almost exclusive possession of certain branches of trade, and that in these branches the commodities made are recognized by public opinion as being "cheap." Common observation must confirm Mr. Webb's conclusion, that there are certain trades where men do not compete with women; indeed, that there is a

¹ Studies in Economics, p. 122.

² *Ibid.*, p. 111.

well-marked relegation of women workers towards certain ill-paid trades; while at the same time there is as well-marked a movement of men towards the better-paid trades.¹

As the investigation made by the Department of Labor took place in industries where both men and women were engaged in turning out a given product or series of products, we cannot very well find in it either confirmation or disproof of the statement that women are paid less than men, because they produce "cheap" commodities. If women stitchers and men lasters are employed in the making of the same shoes, we cannot well claim that the women are paid less than the men because their products are less valuable. However, if we can show that women are generally employed as stitchers and men as lasters, we may find a reason, if not a justification, for the lower wages paid to them. It is this view of the situation which the results of the American investigation apparently confirm. A search through Table I of the report, which gives the number of men, women and children employed in each subdivision of the industries investigated, reveals the fact that, outside of the textile manufactures, in the majority of the important industries, men and women are seldom employed in the same sub-occupations. The women's work, therefore, does not come into direct competition with that of men. In the manufacture of bakery and confectionery goods, the number of men and women employed is approximately the same (men, 1664; women, 1142), but in comparatively few instances do they perform the same work. In the manufacture of boots and shoes, the investigation covers twenty-eight factories, employing 2442 men and 1183 women; but the women are for the most part employed as pasters, upper stitchers or vampers — occupations in which men are seldom employed.

The manufacture of cigars, cigarettes, smoking-tobacco and snuff presents an exception to the general rule. There are fifty establishments, employing 3327 men and 2989 women, represented in the report; and in all of the important branches

¹ Studies in Economics, p. 122.

of the manufacture both sexes seem to be employed. Here we find no direct proof to confirm the opinion, cautiously expressed by Mr. Webb,¹ that the women do inferior work in this industry, although the facts as to piece rates and the prevalence of women in the lower grades of efficiency give indirect support to the notion that their work is less valuable to their employers.

In the textile industries there are more examples than elsewhere of men and women at work in the same branches of the industry; but even here by far the largest number of the women are employed as drawers-in, spinners, speeders, warpers and weavers, while the men absorb the majority of the other branches. In the cotton industry, for example, in the eighty-six establishments included in the report there are fifty-five occupations in which women are reported as employees, but in the majority of these occupations there are only a few women. Women are employed in sixty-five mills as weavers, in sixty as spinners, in fifty-nine as spoolers, in twenty-two as drawers-in, in twenty as speeders, in eleven as slubbing-frame tenders, in ten as doffers, in nine as drawing-frame tenders, in nine as twistors, in nine as winders, in eight as reelers and in five as carders. All other occupations are represented by less than five instances. In the largest establishment represented in this industry, a New Hampshire mill, there are 129 sub-occupations given, in but thirty-one of which women are employed. From this array of evidence one feels almost justified in acknowledging the truth of the strong statement with which Mrs. Webb enforces the more cautious conclusion of her husband.

We are so accustomed in the middle class to see men and women engaged in identical work, as teachers, journalists, authors, painters, sculptors, comedians, singers, musicians, medical practitioners, clerks or what not, that we almost inevitably assume the same state of things to exist in manual labor and manufacturing industry. But this is very far from being the case. To begin with, in over nine-tenths of the industrial field there is no such thing as competition

¹ Problems of Modern Industry, pp. 51, 52.

between men and women : the men do one thing and the women do another. . . . And even in those industries which employ both men and women, we find them sharply divided in different departments, working at different processes, and performing different operations.¹

VI.

It is somewhat difficult to summarize the conclusions to be derived from such a variety of considerations and such a multiplicity of facts, but perhaps it may be done in some such manner as the following :

1. In the majority of trades and industrial callings men and women do not compete for the same work to any considerable extent. Exceptions to this rule are found in the textile industries, in the manufacture of tobacco, of boots and shoes, and in the dry-goods trade. In all of these industries men and women are usually found performing the same work, though their competition is often limited to a few branches of the industry. Where they do not perform the same work, it is impossible to say how far differences in remuneration are due to sex and how far to inequality of work.

2. In the leading occupations in which women do compete with men for the same work, payment by piece rates seems to be the rule. In such cases the earnings of women are more often equal to those of men than where time wages are paid. Usually, however, the women are inferior to men in the quantity produced.

3. In occupations where time wages prevail and men and women perform the same work, the lower wages of women can in many instances be explained by a shorter working day for the women than for the men and by the fact that the competition takes place in the lower grades of efficiency. The women workers naturally tend towards these grades, while the higher grades are filled mainly by men. In such cases the women often earn wages as high as, or even higher than, the men do in these lower grades, but they seldom earn as much as men where the competition takes place in the higher grades.

¹ Problems of Modern Industry, p. 94.

4. Woman's natural disadvantage, due to her lower productivity, is increased by the force of custom. Where competitive rates of wages prevail, as in the textile industries of the South, women's wages are often equal to those of men.

5. In spite of the lower productivity of women, there seems to be a tendency to increase their employment in occupations in which they have been at work, as well as to employ them in new fields of industry. This is partly due to woman's greater tractability. It may also happen that the wages of women are lower, when compared with those of men, than is their productivity. Women's lower standard of living, their partial dependence on other means of support and their lack of combination prevent them from obtaining their true economic wages.

Finally, it must be repeated that these conclusions apply only to manual work. Doubtless they are in a degree applicable also to the higher callings; but here woman's inferiority is usually less, and the influence of custom, of the standard of living and of the irregular and temporary character of her employment is much greater.

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NEW LIGHT ON SEWARD.¹

THE appearance of a new life of William H. Seward, written on a large scale by a practiced hand, is an event in American historiography deserving more than the ordinary review; for a fit life of Mr. Seward must be not only an account of the chief happenings in a period of forty years, full of dramatic incident, but also a study of a character fascinating, unpredictable and elusive. Only one civilian of the two decades in which Seward found his greatest opportunities was more significant; none is so hard completely to understand. Furthermore, the period in which the nation woke up to the Civil War and then carried it through is one about which the details already published are endless, so that it grows harder to make a contribution to the body of cogent facts; and at the same time it is a period on which bold and original sketching is necessary, in order to bring out clearly the great figures against the familiar background. Dr. Bancroft has attempted a great and difficult task; but he has worthily performed it, and by his historical handiwork has placed himself among the small body of recognized American historians.

First of all, the book is from beginning to end interesting, not simply because of the vitality, spirit and real greatness of the subject, but because the writer has himself been absorbed in the task, and from chapter to chapter feels, and makes the reader feel, the actuality of the man. When one gets into the book, one forgets both the thousand pages of reading matter and the art of the writer in the fascination of the narrative. The sustained interest is aided by the skillful arrangement and just proportions of the book: half the space is properly given to the eight years of Seward's service as Secretary of State, where we have his ripeness, his fruition and his greatest service.

The charm of the book, aside from the really winning personality which it presents, is in the directness and truthfulness of the style. But Dr. Bancroft has a poniard of his own, which he occasionally sticks into his statesman.

¹ The Life of William H. Seward, with portraits. By Frederic Bancroft. New York and London, Harper & Brothers, 1900.— 2 vols., 553, 576 pp.