

McGill University
Faculty of Arts

Department of Economics and Political Science

**INDUSTRIAL OCCUPATIONS
OF WOMEN**

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Changes in the
Industrial Occupations of Women
In the Environment of Montreal during
the Period of the War, 1914-1918

~~ENID M. PRICE, B.A.~~

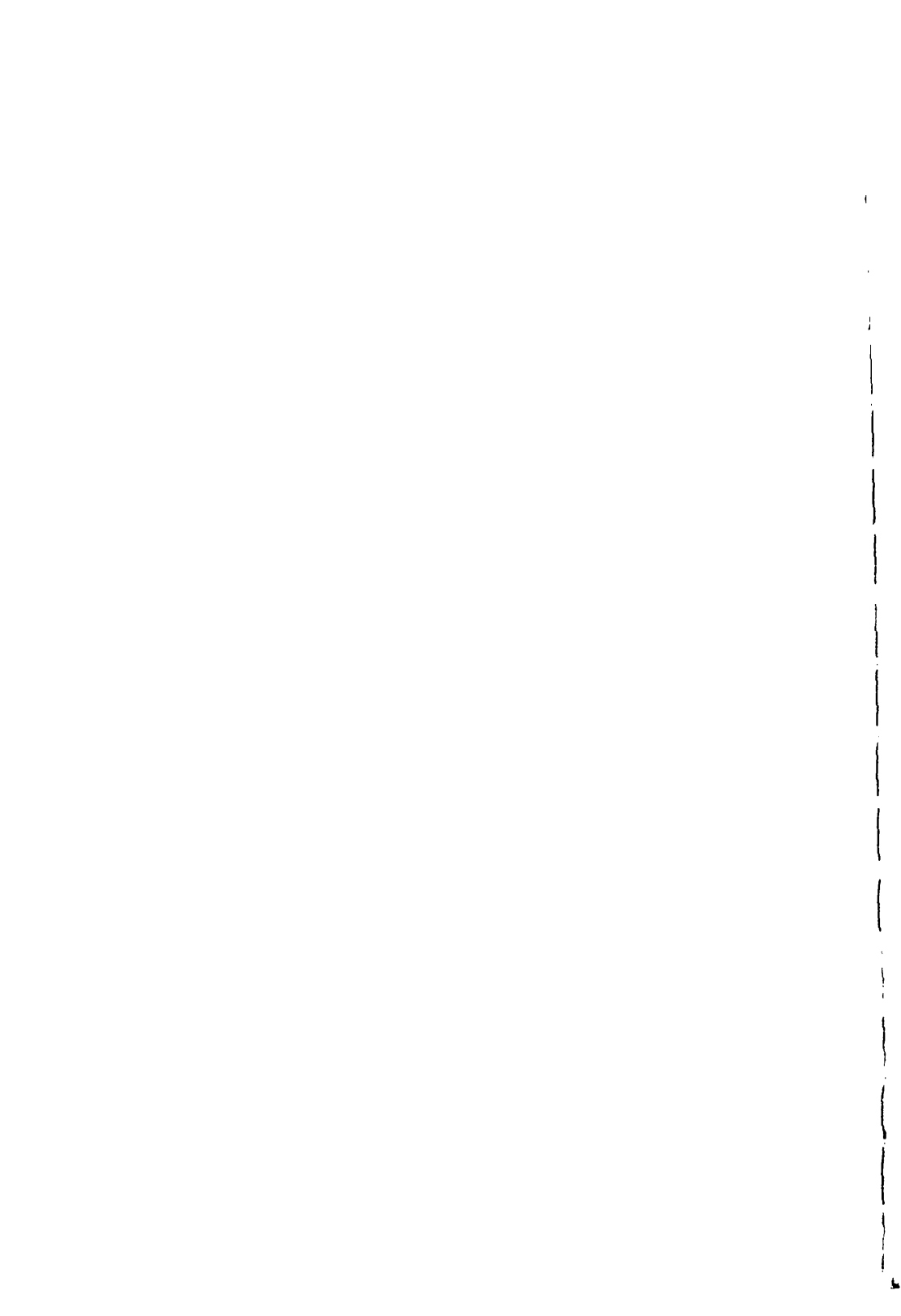
Enid M. Price

This thesis embodies the results of an investigation made as
Graduate Research Scholarship Work for the Canadian
Reconstruction Association and is submitted in
partial fulfillment of the requirements for the
Master of Arts Degree.



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PREFACE.

In the summer of 1918, the Canadian Reconstruction Association offered post-graduate scholarships for economic research to McGill University, the University of Toronto, and the University of Manitoba. The scholarships were to be held by women graduates of Canadian universities and the subjects for investigation were to be connected with the home-making or the industrial employments of women. Miss Price's interesting and able thesis on "The Changes in the Industrial Occupations of Women in the Environment of Montreal during the War Period, 1914-1918" is the first published result of these economic studies.

The scholarships were offered in the belief that the careful, sympathetic and trained investigation of women's work by women graduates is one of the most effective methods by which the economic and industrial well-being of women may be secured. The data collected and presented will lead, it is believed, to further study and a clearer understanding of women's employments. We have learned during the past five years some part of what may be achieved in the increased volume of industrial output by unity of purpose and effort. Learning to understand each other's work and working conditions is even more essential to progress. It is for this reason specially that Miss Price's thesis is commended to Canadian women, and to those in particular who are university graduates.

MARJORY MacMURCHY,
Head, Women's Department
Canadian Reconstruction Association.

May 26, 1919.

ACKNOWLEDGEMENTS.

The writer of this report wishes to take this opportunity of expressing her sincere appreciation of the interest and kindly co-operation of the executive and clerical staffs of all the munition plants, banks, factories, and other establishments which were visited. She realizes that without their assistance the compilation of these statistics would not have been possible.

Montreal. Canada. May, 1919.

CHANGES
IN THE
Industrial Occupation of Women
IN THE
Environment of Montreal during
the Period of the War, 1914-1918.

INTRODUCTORY NOTE

Purpose and Scope of the Investigation .

It is the purpose of this thesis to set forth the results of a personal investigation into the changes, brought about by the war, in the industrial activity of Montreal. It is a matter of common knowledge that the war industries were partly maintained by the labour of women. What is not known, however, is to what a great extent women have entered employments which had previously been reserved almost exclusively for men. The writer therefore proposes by investigating such occupations and industries as munition plants, railway shops, factories, wholesale houses, departmental stores, banks, civil and municipal services, and other places where women are known to be employed, to determine ;

First, how many men and women relatively were employed before 1914, and what was the change, if any, during the war period.

Secondly, what was the comparative remuneration received by the men and women workers before the war and what is it at present.

Thirdly, from where were these women drawn? Was it from domestic life, from domestic service, from the school teaching profession or from other industrial employment?

Fourthly, owing to the large proportion of French-Canadians in this district, it was thought that it would be of considerable interest to inquire as to their numbers in the industrial world.

Fifthly, what is the proportion of married women workers in Montreal?

The above information is then amplified in regard to the respective industries which have been considered. Following this description and explanation are comparative statistical tables which set forth the conditions existing in the several industries. Below each table is a general survey and summary of the figures there set forth, and such conclusions are drawn as may present themselves as worthy of special note.

The next section of the thesis is devoted to the comparative views and opinions of the employers regarding the changes involved in their respective industries, and the future outlook for women.

As a preliminary it is proper to explain with some accuracy the area included in this study. The city of Montreal is situated on the island of Montreal at the head of ocean navigation of the St. Lawrence River. It is the terminus of the great inland waterways which stretch from the head of Lake Superior. The population of the city as returned in the Canadian Census of 1911 was 466,197. As there is no annual census taken in the city of Montreal it is impossible to obtain an official statement as to the population in 1918. It is estimated, however, by Dr. M. O. Ward, Chief Statistician of the Montreal Health Department, that the population of Montreal proper for 1918 was about 640,000. But as usually happens in the case of large modern cities the statutory limits of the municipality do not necessarily cover the full area of the inhabited district. In and about Montreal itself there are independent municipalities in which large industries draw their workers from the city proper. Therefore, for the purposes of this investigation Montreal is considered to include all those independent municipalities which are closely connected with it. These comprise Outremont, Verdun, Westmount, Montreal West and La-chine. The population of this enlarged Montreal in 1911 was estimated to be about 710,750. Taking for

granted that the proportion of male and female inhabitants which existed in 1911 still remains the same, with a certain allowance made for the absence of men on active service, the estimated female population of the enlarged Montreal in 1918 would be about 408,350.*

Montreal is the largest city in Canada, and in many ways, owing to its natural situation the most important. It is one of the chief points through which pass the great railroads of the country, the Canadian Pacific, the Grand Trunk and the Canadian National systems. Here the first two railways make their headquarters.

Montreal is the financial centre of Canada and the commercial metropolis, containing the head offices of many of the largest Canadian banks. It is also the headquarters of the leading insurance companies, and the great financial and commercial houses.

There are no less than 1,400 industries in Montreal. These comprise immense shops where locomotives and railway cars are built, structural iron and steel works, sugar refineries, paper mills, and factories where electrical appliances, rubber goods, machinery, tobacco, boots and shoes, and textiles are made.

Early in 1915 many of the construction works, large and small, became munition plants. As the demand for fuses and shells increased, new plants came into being and were designed and erected especially for the purpose of munition production. Thousands of men and women were employed for the first time in this occupation and presented a unique field for the investigation of changed industrial conditions as brought about by the war.

*Method of reckoning the female inhabitants for 1918: The number of men who had gone overseas was added to the estimated population of 1918. This gave the population at it would have been in normal times. Knowing the proportion of male and female inhabitants existing in 1911, it was possible to estimate the number of female inhabitants in 1918.

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CHAPTER I.

Investigation of Munition Plants.

The writer first began investigations by visiting the munition plants. It was not possible to examine every one, but the largest were selected. The Imperial Munitions Board in Montreal declared the number of plants which were surveyed to be 35% of the munition plants of Montreal, but that the number of employees in these plants was 50% of the total munition workers in the city. The conditions existing in the plants which were visited are taken as representative of the whole. The elucidation of these plants is as follows:—

Plant No. 1.

This is a munition plant manufacturing shells. It was in existence before the war as a general machine shop. It employed at that time about 80 men and no women.

Female labor was hired for the first time on October the fifth, 1916, to help fill a contract for making fuses. Previous to that date there were 400 men in the plant engaged in the production of shells. Women numbering about 300 were added to the 400 male employees already in the service, and all began the manufacture of fuses.

It took these 700 workers about one year to fulfill the contract. During that time the highest wages paid to the women were \$.27½ per hour, the lowest wages were \$.18 per hour, while the average were \$.25 per hour.

The highest wage paid to the men was \$.40 per hour, the lowest was \$.22 per hour, and the average was \$.30 per hour, for the same work as that done by the women.

Out of these 300 women workers 15 were married. Almost all the women were French-Canadians.

The contract was completed by October, 1917, and most of the women were dismissed.

When the writer visited the plant in November, 1918, there were 1,400 employees at work. Of these 70 were women who were engaged in the inspection of shells and were called manual labourers. They were not operators as were the fuse makers. These women were taking the places of men. The highest wage received by them was \$.25 per hour, the lowest was \$.20 per hour, but most of the women received \$.25 per hour.

The nationality of the female workers was French-Canadian and many of them were married. No information was available as to how many of these women had never worked before, or what previous employment they had had.

The office staff in November, 1918, was composed of 20 men, 7 of which were designers, and 12 women. The highest salary received by the women clerks was \$15.00 per week and the lowest was \$12.00 per week, but most of the women received \$12.00 per week. The average male clerk's salary was \$15.00 per week.

Plant No. 2.

This is a munition plant which was erected as such early in 1916. It was given its contract by the Imperial Munitions Board and by June, 1916, it began the production of fuses. The production was carried on mainly by female labour which was introduced from the beginning with great success. The plant gradually increased its output and the number of its employees until it reached its capacity.

By August, 1917, the plant was producing the maximum number of fuses. At that time there were 3,000 employees in the plant. Of this number 2,400 were women. There were 260 additional women who were government inspectors, but cannot be included here as they were not employed by the company.

The highest wage paid a male labourer for a nine hour day was \$.63 per hour, the lowest was \$.23 per hour and the average was \$.34 per hour. The highest wage paid a female labourer was \$.23 per hour, the lowest was \$.19 per hour, and the average was \$.21 per hour. The women did much lighter work than

the men, but it was work of very great fineness and required considerable accuracy.

In the office staff of this plant there were 54 employees, 42 of which were male and 12 of which were female.

The highest salary received by a male clerk was \$100.00 per week, the lowest was \$6.00 per week, and the average was \$30.00 per week.

The female clerk's highest salary was \$25.00 per week, the lowest was \$12.00 per week and the average was \$19.00 per week.

The nationality of the women employed was proportioned as follows: 60% were English speaking, 35% were French-Canadian and 5% were foreigners.

Out of 4,464 women which were employed at some time by this plant, 25½% had never been employed previously, and 10% came from domestic service. There were no university graduates among the employees and only 10% had received a business college course. The proportion of married women was 26½%.

The contract for fuses was completed in September, 1918, and the women were gradually dismissed. The plant was then remodelled for the purpose of producing shells. Sixteen of the most efficient girls were retained to be trained in shell production. They were to be the nucleus of a greater venture. The cessation of hostilities put an end to all operations.

Plant No. 3.

Previous to the war this plant was engaged in construction work (stone, marble and mill work.) There were 200 men employed and no women. The highest wage paid at that time was \$.55 per hour, the lowest \$.25 per hour, and the average was \$.45 per hour.

The office staff at this time consisted of 9 male clerks and no female. The average salary of the clerical staff was \$25.00 per week.

The manufacture of munitions was begun in June, 1915, which was the production of shells. The maximum number of men employed in this work was about 2,500. The highest wage paid the men during the war period was \$.85 per hour, the lowest was \$.25 per

hour, and the average was \$.60 per hour. This average includes that of the piece workers whose rates varied with production.

No women were ever employed here because of the heavy work of manufacturing shells. Owing to the shortage of men, however, the plant was making necessary arrangements to commence the employment of women. The signing of the armistice made further planning unnecessary.

During the war period at one time there were 73 men and 19 women employed in the office staff. Only one of these women was married. The nationality of the female portion of the staff was mainly English speaking, only two were French-Canadians.

The average male clerk's salary was \$30.00 per week. The highest salary paid a female clerk was \$22.00 per week, the lowest was \$12.00 per week, and the average was \$18.00 per week.

This plant did not engage in any other business during the war except that of producing munitions.

Plant No. 4.

Previous to the war this plant was a Bridge Structure and General Engineering Works. There were 1,100 men employed in the plant but no women. The highest wage paid per hour to the men was \$.50, the lowest was \$.22½ and the average was about \$.30.

The pre war office staff was composed of 255 men and 18 women. This staff included clerks, engineers and draftsmen, but not the officials of the company.

The average male clerk's salary was \$19.00 per week. The highest salary received by a female clerk was \$17.32 per week, the lowest was \$8.10 per week and the average was \$11.76 per week.

Early in 1915 the manufacture of munitions was begun, and by degrees the number of workers was increased until 3,000 men were employed, who produced shells.

In November, 1918, the highest wage paid the men per hour was \$1.30, the lowest was \$.37½, and the average was \$.55. These rates were paid for piece work.

After July, 1918, 68 women workers were intro-

duced into the plant. The women were put at the same work as the men and were paid at the same rate. Very often the women surpassed the men, both in quality of workmanship and rapidity of production. This was remarkable for such work had hitherto been considered not only too heavy but too technical for a woman. The highest rate received by the women was \$1.30 per hour. This was a record, and was obtained by a young woman who had had previous experience in a boot and shoe factory in England. Her hand were very skilled at such work. The lowest rate received was \$.30 per hour, but the average was \$.45 per hour. It must be noted here that these rates varied with the production as they were paid for piece work.

As many as 30 out of these 68 women were married. Out of 85 women, who have been employed at some time in the plant 18 had never worked before, and 18 came from domestic service. There were no college graduates among the number, although there was one school teacher. Many of the women had previously been stenographers, laundresses, factory hands and munition workers.

The nationality of the 68 women workers was proportioned as follows: English speaking 20, French Canadians 45, Hebrews 3.

Besides producing munitions this plant was engaged in building keels for ships and other structural work. There were no women employed in this part of the plant, but there were 750 men. The highest hourly wage paid was \$.75, the lowest was \$.40, and the average was \$.50. Owing to the proximity of this part of the plant to the munition works the rates were unusually high.

The office staff during the war period numbered about 326. Out of this number 65 were women. The average male clerk's salary was \$30.00 per week. The highest salary paid a female clerk was \$23.07 per week, the lowest was \$8.07 per week and the average was \$13.85 per week.

There was no information available regarding the number of women office clerks who had not had previous employment. The opinion was expressed, though,

that nearly all the women were experienced office clerks. The proportion of married women on the office staff was 4 out of 65. Only 2 out of 65 women were French Canadian, the others being English speaking.

The char-women of this office staff numbered 7 and were paid from 25 cents to 30 cents per hour.

Since the cessation of hostilities the number of women in the plant rapidly diminished. The works itself is now seeking new activities, but in the meantime the employees are looking for new work.

Plant No. 5.

This plant is a subsidiary plant to No. 4 and was not in existence until early in 1916. It is a copper and brass plant and manufactured copper bands and shell casings for munitions.

There were 700 men employed in this munitions plant, and in August, 1917, 100 women were added to their number. The highest wage received by men was \$1.00 per hour, the lowest was \$.32½. This low wage is explained by the fact that there were some coolie labourers employed in the plant. The average wage paid men was \$.60 per hour. These rates were paid for piece work, and the amount received by the labourers varied according to the production.

The highest wage paid women per hour was \$1.30, this was a record rate and was obtained only once. The lowest wage was \$.30 per hour and the average was \$.45 per hour. These rates were paid for piece production and are the same as were paid to men.

Out of the 100 women workers there were 22 who had not had previous employment, 18 came from domestic service, the remaining 60 had been employed before. Here also a percentage of the women were married, the number being 18 out of 100.

The nationality of the women was proportioned as follows:—59 French-Canadians, 37 English speaking and 4 Italians.

As the shell work neared its completion this plant commenced commercial work. There were 250 men employed at this and no women.

The office staff of this plant numbered 44 male

clerks and 9 female clerks. The average male clerk's salary was \$26.35 per week and the average female clerk's salary was \$13.85 per week.

None of these female clerks were married, all of them were English speaking and all had had previous employment as stenographers.

Plant No. 6.

This plant was built expressly for munitions. In April, 1917, it received its first contract and began operations by manufacturing time fuses.

The total number of employees was 3,000, of which 500 were male and 2,500 female.

The highest wage paid to the male employees was \$1.20 per hour, the lowest was \$.25 per hour, and the average was \$.40 per hour. The highest wage paid to the female employees was \$.35 per hour, the lowest was \$.17 per hour and the average was \$.20 per hour.

The married women in the employ numbered 15%. As many of the records had been destroyed it was not possible to ascertain how many of the women had not had previous employment, how many had come from domestic service or the number of college graduates.

The nationality of the women was proportioned as follows:—65% were French Canadian, 25% were English speaking and 10% were foreigners.

The office staff in connection with the plant consisted of 40 male clerks and 25 female clerks.

The average salary received by the male clerks was \$22.00 per week. The highest salary received by the female clerks was \$25.00 per week, the lowest was \$12.00 per week and the average was \$15.00 per week.

There were two married women on the office staff. All of the women had had previous occupation, but none had been school teachers. The French Canadians numbered five and the English speaking women twenty.

This plant completed its time fuse contract by September, 1917, and as no further contracts were received it suspended operations and dismissed its employees by the end of the year.

Plant No. 7.

This munition plant was subsidiary to a railway shop. The manufacture of munitions was begun on October 13, 1914. (It will be noted that this plant was the first to commence the manufacture of munitions in Montreal.) It consisted of machining and assembling shrapnels. By March, 1916, the plant was at full strength and at that time employed 1,189 workmen. Out of that number 593 were English speaking, 508 were French Canadians and 88 were foreigners. The highest wages paid to these labourers were \$.38 per hour, the lowest were \$.12 per hour, and the average were \$.24 per hour. There were no women employed at this time.

By April, 1918, the manufacture of munitions ended. At that date there were 63 men employed and two single English speaking women. The men were paid wages ranging from \$.28 to \$.46 per hour, the average being \$.34 per hour. The women were paid \$.27 per hour.

The office employees in connection with this plant and shops numbered 61 male and 2 female in July, 1914. The nationality was proportioned as follows:—English speaking: 50 men and 2 women, French Canadian: 11 men.

The salaries of the men ranged from \$2.50 per week to \$32.00 per week, the average being \$12.00 per week. The women, who were both unmarried, were paid \$12.00 and \$13.00 per week.

In December, 1916, the male clerks numbered 30, of whom 24 were English speaking, 5 were French Canadian and 1 was foreign. The women numbered 8, 7 of which were English speaking and 1 was French Canadian.

The men received salaries ranging from \$3.50 per week to \$32.00, the average being \$15.00. The women were paid from \$8.00 to \$13.00 per week, the average being \$11.50. None of these women were married.

By October, 1918, the clerical staff numbered 36 clerks and 19 female clerks. The men were: 27 male Britishers, 7 French Canadians and 2 foreigners. Seventeen of the women were English and two were French Canadians. None of the women were married.

At this date the salaries paid the male clerks ranged from \$10.50 per week to \$38.00, the average being \$22.00. The salaries paid to the female clerks ranged from \$20.00 to \$21.50 per week, the average being \$20.50.

All the women employed in this plant and office had had previous situations.

Plant No. 8.

The company which erected this munition plant was in existence before the war. Previous to August, 1914, it employed about 600 men and 15 women. These latter were engaged in cleaning sacks and were paid for piece work. Their wages ranged from \$.20 to \$.27½ per hour, the average being \$.25 per hour.

In 1915 a special plant was erected for the purpose of producing munitions. By the summer of 1916 the plant contained the maximum number of workers which was 2,000. At that time it was impossible to obtain enough men to fulfill the contract to produce 9.2" shells, so 500 women were employed. They were used on both night and day shifts of 10 and 12 hours each.

The piece work hourly rate for the 9.2" shell was as follows:—the maximum wage earned by the men was \$1.00 per hour, the minimum was \$.35 and the average was \$.60. The maximum wage earned by the women was \$.42½ per hour, the minimum was \$.27½ and the average was \$.35.

For the 9.2" shell the day work hourly rate was as follows:—to the men the maximum wage paid per hour was \$.70, the minimum \$.25, and the average \$.35. To the women the maximum wage paid per hour was \$.27½, the minimum wage was \$.22½, and the average was \$.25.

The government objected to the women being employed on the night shift so the number of women workers was reduced to 250.

In the fall of 1917 a contract for 6" shells was begun. There were 1,925 men and 75 women employed for this work. The piece work hourly rate for this production was:—maximum wage earned by men equalled \$.80, minimum wage \$.35, average \$.57½. The

maximum wage earned by the women was \$.42½, minimum \$.27½, and the average \$.35.

The day work hourly rate paid for the same production was:—maximum to the men \$.75, minimum \$.30 and the average \$.40. To the women the maximum wage was \$.27½, the minimum \$.22½, and the average was \$.25.

This contract lasted until November, 1918. Of the women employed during this latter period 40% were married, 26% came from domestic service and none were being employed for the first time.

Their nationalities were:—50% French Canadian, 40% English speaking and 10% foreign.

In 1918 the office staff consisted of 11 male clerks and 32 female clerks. The average salary paid to the male clerks was \$100.00 per month. The maximum salary paid to the female clerks was \$85.00 per month, the minimum was \$50.00 and the average was \$60.00.

Out of the 32 women employed in the office 6 had formerly been in domestic service, 4 were from departmental stores and the remainder had had former office employment. The majority of the staff were English speaking, only 6 being French Canadians.

TABLE NO. 1.

Manual Workers in Munition Plants—1917.

No.	Total No. of Workers.	Women Workers.	Percent Women's Wages Per Hour.	Percent Women's Wages Per Hour.	Average Women's Wages Per Hour.	Percent of Men's Wages Per Hour Paid Women.	Percent of Men's Wages Per Hour Paid.	Percent of Women French Canadian.	Percent of Women Foreign.
1.....	700	300	a .27½	a .18	a .25	83½	43	90	0
2.....	3,100	2,100	b .23	b .19	b .21	80	80	35	5
3.....	2,500	0	.....	.....	.....	.....	.....	.....	.....
4.....	2,000	0	.....	.....	.....	.....	.....	.....	.....
5.....	300	0	.....	.....	.....	.....	.....	.....	.....
6.....	3,000	2,500	.35	.17	.20	50	82.3	65	10
7.....	200	10	.....	.....	.....	.....	.....	.....	.....
8.....	2,000	250	c .42½	c .27½	c .35	c .58½	} 12	.....	.....
			d .27½	d .22½	d .25	d .712		
		1917. 75	c .42½	c .27½	c .35	c .698	} 3.6	50	10
			d .27½	d .22½	d .25	d .625		
Total	15,200	5,400	.....	.....	.....	.....	35	52	3.4

a Wages paid for day work. b Wages paid for piece work. c Wages paid for day work.

TABLE NO. 11.

Manual Workers in Munition Plants—1918.

No.	Total Number Manual Employees.	Women Workers.	Highest Women's Wages Per Hour.	Lowest Women's Wages Per Hour.	Average Women's Wages Per Hour.	Per cent. of Men's Average Wages Per Hour Paid Women.	Per cent. of Women Employed.	Per cent. of Women French Canadian.	Per cent. of Women Foreign.
1.....	1,400	70	a .25	a .20	a .25	71.4	5	99	..
2.....	3,000	2,400	b .23	b .19	b .21	61.7	80	35	5
3.....	2,500	....	....	....	....	....	....	....	..
4.....	3,000	68	c,d 1.30	c,d .30	c,d .45	81.8	2.2	66	4.4
5.....	800	100	c,d 1.30	c,d .30	c,d .45	75	12.5	59	4
6.....	....	....	....	....	....	....	....	....	..
7.....	65	2	.27	.27	.27	79	3	....	..
8.....	2,000	75	d .42½ .27½	d .27½ .22½	d .35 .25	60.8 62.5	3.6	50	10
Totals ..	12,765	2,715				....	22	38	5

a Wages paid for 8 hour day.

b Wages paid for 9 hour day.

c Wages paid for 10 hour day.

d Wages paid for piece work.

e Plant No. 6 was in operation only during the year 1917.

Summary of Munition Plants and Explanation of Tables.

In October, 1914, the manufacture of munitions was begun in Montreal by Plant No. 7. Early in 1915 Plant No. 4 commenced producing shells. By June, 1915, Plants Nos. 3 and 8 began work in specially erected buildings. The owners of Plant No. 1 turned their machine shop into a munition plant and hired 400 men to make shells. By the end of the year there would be approximately 6,000 men at work in the plants named but no women.

At the end of 1916 most of the plants included in this study reached the capacity of their output and continued working at this rate during the years that followed. At this period Plant No. 1 employed 400 men and 300 women; Plant No. 2, 600 men and 2,400 women; Plant No. 3, 2,500 men; Plant No. 4, 3,000 men; Plant No. 5, 800 men; Plant No. 6 was not in existence; Plant No. 7, 1,189 men; Plant No. 8, 1,500 men and 500 women.

The year 1917 saw the greatest number of men and women engaged in the production of munitions. In that year all of the eight plants were in operation. There were employed altogether 9,931 men and 5,460 women. Shells and fuses were turned out in great abundance. Owing to the fact that in this year the maximum number of women were employed at munitions it was decided to set forth in table form such information regarding this as was available.

In table No. I statistics regarding the Manual Workers in Munition Plants have been arranged. The figures opposite Plant No. 8 require some explanation. For the greater part of the year this plant employed 250 women, but in October this number was reduced to 75. In making up the grand total of 5,460, the 250 women were included.

Plant No. 6 operated only during the year 1917.

Plant No. 7 gradually decreased its production and staff of employees. In 1916 it employed 1,189 men, while in 1917 the number fell to 206 men and 10 women.

The most striking feature of the table is the large

percentage of women workers, which is 35% as contrasted to 22% in 1918. See table No. II.

The highest wages which were paid women for piece work and day work, ranged from \$.23 to \$.42½ per hour. In 1918 the highest wages ranged from \$.23 to \$1.30 per hour. This latter wage was earned only one day and included overtime on piece work production.

The lowest wages paid women in 1917 were from \$.17 per hour to \$.27½ per hour, while in 1918 they ran from \$.19 per hour to \$.30 per hour. The lowest wages in Plants 4 and 5 exceeded the highest wages on Plants 1, 2 and 7.

The average wages earned by the women in 1917 ranged from \$.20 to \$.35 per hour, while in 1918 they increased until they ran from \$.21 to \$.45 per hour.

The percentage of men's average wages per hour paid women in 1917 was from 50% to 83⅓%, and in 1918 it was from 60.8% to 81.8%. In Plant No. 1 the difference in wages in 1917, when the women earned 83⅓% of the wages paid men, to those in 1918 when they earned only 71.4% of those paid men, is accounted for by the fact that in 1917 the women actually produced fuses while in 1918 they inspected shells. The remuneration for the former work is higher. The men on the other hand were paid higher wages to make shells than fuses.

The percentage of women employed in the various plants in 1917 ranged from 3.6% in one plant, to 80% in another and 83.3% in a third. In 1918 there was a falling off in the number of women workers. In most of the plants they numbered from 2% to 3% of the workers and 80% in only one plant.

The percentage of French Canadian women employed was very high. In 1917 it was 52% for all the plants and in 1918, 38%. The foreign women in munitions numbered from 3% to 5% in both years.

It was thought to be of considerable interest to ascertain as nearly as possible the class of women who were employed in munition plants. Table No. III, entitled, "Women Manual Workers in Munition Plants," deals with this. As the plants numbered 1, 6 and 7 were unable to supply such detailed informa-

TABLE NO. III.

Women Manual Workers in Munition Plants.

No.	Total No. Women Employed.	Per cent. Married.	Per cent. from Domestic Service.	Per cent. Employed for First Time.
1.....	300	5	.....	.....
2.....	4,464	26.5	10	25.5
3.....	0	.....	.....	.....
4.....	85	44.1	21.1	21.1
5.....	100	23	18	22
6.....	2,500	15	.....	.....
7.....	2	0	.....	.....
8.....	75	40	25	0
Totals.....	7,526	22	6.2	15

tion, the results in the third and fourth columns cannot be taken as absolute.

The first column shows that there were 7,536 women employed at munitions, though not at one time. In Plant No. 2, where the maximum number of women employed at one time was 2,400, the application cards showed that out of 4,464 women who passed through the plant:—1,160 of them were married, 446 were from domestic service, and 1,116 had had no previous employment.

Considering all of the plants, the percentage of married women employed, which was 22%, was very high. Although the percentage of women from domestic service was high in some plants it did not exceed 25%, which was rather less than was anticipated. The number of young women who were being employed for the first time ranged from 0% to 25% in the plants which were able to give information. What conditions would have been in the other plants it is difficult to determine.

The number of clerical workers in munition plants was increased as a general rule, during the war. See Table No. IV. Plant No. 4 shows a remarkably large office staff. This is due to the fact that this plant carried on its original business as well as the production of munitions. The company operating this plant contracts for large engineering projects and has many draftsmen and engineers in its employ.

The percentage of women clerks is as large as the percentage of women manual workers, the former being 27% and the latter 35% and 22%.

The salaries paid to female clerks have greatly increased during the war period although even yet they do not equal the average salaries paid men. In Plant No. 7 the salaries paid women are 93% those paid men, which is exceptionally high. In Plant No. 1 women are paid 80% of the salaries of men, although the highest salary per week paid women is the lowest of any in the first column. Plants Nos. 2 and 7 paid women the highest salaries of any, but their women were paid only 63.3% and 68.1% of what men were paid.

Comparing the percentage of men's average salaries

TABLE NO. IV.

Clerical Workers in Munition Plants—1918.

No.	Total No. Clerical Workers.	Women Clerks.	Highest Women's Salary Per Week.	Lowest Women's Salary Per Week.	Average Women's Salary Per Week.	Per cent. of Men's Average Salary per Week, paid Women.	Per cent. of Women Employed.
1.....	32	12	15.00	12.00	12.00	80	37.5
2.....	54	12	25.00	12.00	19.00	63.3	22.2
3.....	92	19	22.00	12.00	18.00	60	20.6
4.....	326	65	23.07	8.07	13.85	46	19.9
5.....	53	9	.....	.....	13.85	52.5	16.9
6.....	65	25	25.00	12.00	15.00	68.1	38.4
7.....	55	19	21.00	20.00	20.50	93	34
8.....	43	32	19.60	11.50	13.80	60	74.4
Totals.....	720	193	.....	.....	.....	.....	27

paid women as manual and clerical workers it is seen that although in one case the clerical workers get only 46% of the men's salaries which is lower than that received by any of the manual workers, in another the clerical workers received 93% of the men's salaries, which is a higher percentage than any of the manual workers received. Considered throughout it would seem that manual workers were paid in the same ratio to the men as the clerical workers. This is always a fraction of the men's earnings, although in many cases it was said that the women did the same work and gave the same service as the men.

Government Inspectors.

In the various munition plants the governments of Great Britain and the United States of America placed inspectors to examine the production intended for their respective countries. Owing to the fact that the cessation of hostilities occurred almost immediately after this research was begun, it was not possible to obtain complete statistics in regard to the number of inspectors stationed at these different plants. It was thought to be of sufficient interest, however, to set forth in table form the information that was secured.

Summary and Explanation of the Table Regarding Government Inspectors in Munition Plants in 1918.

Of the munition plants tabulated in the foregoing pages under "Manual Workers in Munition Plants," only numbers 1, 2, and 3 appear here. Figures regarding government inspectors in the other plants were not procurable. Plants numbered X, Y, and Z in the above table have not appeared before as the number of workers was very small. As more complete information regarding their government inspectors was obtainable, however, it was decided to embody them here.

The total number of employees working in the plants does not include the government inspectors, who were employed, stationed and remunerated by the governments.

TABLE NO. V.
Government Inspectors in Munition Plants—1918.

No.	Employees of plant.	Total No. Government Inspectors.	Male Government Inspectors.	Female Government Inspectors.	Highest wages Per Day Paid Women.	Lowest Wage per Day paid Women.	Average Wage per Day paid Women.	Per cent. of Men's Average Wages per Day paid Women.	Per cent. of inspectors Female.	Per cent. of Women Married.	Per cent. of Women Employed for First Time.	Per cent. of Women From Domestic Service.	Per cent. of Women French Canadian
I.	1,400	59	30	29	2.25	2.00	....	..	49	98	7	13	4
II	43,000	310	50	260	2.70	1.80	1.89	50	83	..	30	15	20
III	2,500	..	..	24	3.25	....	2.75	25	..	..	0	..	0
X	220	..	..	7	2.75	2.75	2.75	..	..	..	..	..	85
Y	200	..	..	8	3.25	3.18	....	70	61	..	0	0	100
Z	450	15	10	5	2.40	2.40	2.40	..	334	..	..	..	50
Totals	7,770	423+	90+	333	....	....	....	..	..	..	25	12.9	20

a Inspectors in this plant were for the Government of Great Britain. In other plants shown, the inspectors were for the Government of the United States of America.

In order to inspect the production of 7,770 workers, the government placed 423+ inspectors, which would probably be about 650 inspectors if figures from all of the plants were known.

When munitions were first begun the government inspectors were all men. At a later period of the war from 33½% to 83% of the inspectors in various plants were women. This was because of two reasons—first, female labour is cheaper, and secondly, men were wanted for military service or other occupations where women could not be used.

Women's wages ranged from 25% to 70% of those paid men. The highest wages paid to the women in different plants ran from \$2.25 to \$3.25 per day. The lowest wages were from \$1.80 to \$3.18 per day, and the average wages were from \$1.89 to \$2.75 per day.

Although 98% of the women inspectors in one plant were married that is not considered a representative percentage.

These figures show that 25% of the women were employed for the first time in this occupation and about 13% came from domestic service, the other 62% probably came from factories.

About 20% of the women were French Canadians, the other 80% were probably English speaking, for although one of the plants shows 100% of the women inspectors as French Canadian, one other shows 0%.

Had it been possible to obtain a more complete showing of figures some of the percentages would have been changed.

CHAPTER II.

Investigation of Railway Shops.

July, 1914, to November, 1918.

One of the most interesting and radical changes brought about by the war in the world of manual labour, was seen in railway shops. The manufacture of munitions was purely a war time industry, and owing to the vital need for adequate production, men and women alike were pressed into service. On the other hand machine shops and railway shops were in existence before the war, and employ only men to do the heavy manual work of constructing and repairing locomotives, machinery and cars. Although in neither machine shops nor iron and steel construction plants were women employed, except on munitions, they were used in railway shops. There were two reasons for this. In the first place enough men were not available to maintain sufficient production. In the second place there was a desire to experiment with female labour and see to what extent it could be used to offset the impoverished labour market, and thus serve the common good of all. The results obtained regarding these two shops appear below.

Shop No. 1.

In 1914 this shop had in its employ 4,655 men and 3 women. The women were day labourers and paid at the rate of \$.16 per hour. The average wage paid to the men was \$.25 per hour.

In October, 1916, there were 4,371 men in the shops exclusive of the munitions plant. About 210 women were then hired for the first time. They were placed at work best fitted for them to begin with, and in a short time those who had passed their apprenticeship as Sweepers, Coach Washers and so forth, were transferred to a better class of work, such as Brass Filing

and Drilling. By the end of the first season there were about 50 women working as General Carpenters who built refrigerator cars. Their work was entirely satisfactory and some of them earned as much as \$100.00 per month at piece work and by working overtime.

The wages were paid to men and women at the same rate for the same work. As the men were much more skilled than the women their wages averaged higher. The highest wages paid to the men were \$.50 per hour, and to the women \$.26 per hour. The lowest wages paid to the men were \$.12 per hour and to the women \$.18 per hour. The average wages paid to the men were \$.30 per hour and to the women \$.22 per hour.

Out of 210 women 111 were married, 6 or 7 had never had previous employment, and 12 came from domestic service. The nationalities of the women were proportioned as follows: 117 were French Canadian, 73 were English speaking and 20 were foreigners. Only women who proved upon investigation to be absolutely in need of work were employed.

As time went on the occupations of the women became more skilled and varied. They were used, as Painters, Mattress Makers, on Light Punch Machines, as Bolt and Nut Threaders, on Turret Lathes, as Saw Filers, at Buffing Machines, Milling Machines, as Armature Winders, Third Class Machinists and Labourers. They were also used on munitions in another department of the shops.

By October, 1918, there was a further increase in the number of female labourers. At that date the pay-roll showed 4,884 men and 240 women. The wages paid had increased very considerably over those paid in 1916. The highest wages paid men were \$.73 per hour, the highest wages paid women were \$.68 per hour. The lowest wages paid the men at this time were \$.25 per hour and the lowest to the women were \$.34 per hour. The average men's wages were \$.54 per hour and the average women's wages were \$.45 per hour.

Out of the 240 women at work in October, 1918, none were working at their first employment; 187 of

the women were married; none of the women came from domestic service, but all from other plants; there were 105 French Canadians, 100 English speaking women, and 35 foreigners.

This was among the first of Canadian Corporations to introduce and institute the use of overalls among the women workers. At first there was a little difficulty in overcoming prejudice, but as the women realized that they not only safeguarded their lives, but their clothes, they quickly adopted them.

There was very little adjustment of equipment required. The women worked under the same conditions as the men, except that they were allowed to leave the shops five minutes earlier in order to escape the later rush and congestion.

No difficulty was experienced in having men and women working together. They worked side by side in almost all departments without friction and under the same foreman. The work done by women was equal to that done by men, and in cases where exceeding deftness was required the women often surpassed the men. Women were found to be just as quick to learn their work as men. Their articles of production did not need special supervision either during the process of making or when they were complete.

The office staff in connection with these shops is the same as appears under Munit.ion Plant No. 7.— (see above.)

In the yards of this railroad women were employed in various capacities. To enumerate, there were 32 truckers, 5 checkers, 1 sweeper, 1 brass worker, 53 car cleaners, 6 general cleaners, and 1 supervisor. These women were paid at the rate of from \$.37 to \$.39 per hour. From 85% to 90% of these women were married and all had had previous employment. A few women have always been employed about car yards, but since 1916 they have been used extensively.

Railway Shop No. 2.

In August, 1914, there were 1,841 male employees in the Motive Power Shops of the company, and no female employees. In the car shops there were 928

men and 2 women. The average wage paid to the men was \$.25 per hour and to the women \$.17 per hour.

During the war period women sought work in the shops and as there was a great shortage of men they were hired. They proved themselves to be ambitious and quick to learn any work to which they were assigned.

In the Passenger Car Department they were used successfully at staining, filling and varnishing. Women were put at painting the inside of cars, leaving men free to do varnishing and heavier work on the outside.

Women were also employed in the Upholstering Shop. Here they sewed carpets and seat coverings and made window blinds.

Women were placed in the store-room and the time office, which was a new departure.

In the Motive Power Department women assisted mechanics to work milling machines, drilling machines and lathes. They cleaned repaired parts of machinery, painted engines and did general cleaning about the shops.

The women all wore uniforms in order to facilitate their work and insure their safety.

By November, 1918, there were 1,882 men employed in the Motive Power Shops and 24 women. All of the women worked at piece work on standard schedule prices, that is they were paid at the same rates as the men for the same work. The highest wages paid to the men at this date were \$.73 per hour and to the women \$.50 per hour. The lowest wages paid to the men were \$.25 per hour and to the women \$.31 per hour. The average wages paid to the men were \$.52 per hour and to the women \$.34 per hour.

Out of these 24 women the percentage who had never worked before was 41%; those who were married was 59%; from domestice service there were 17%. The nationality of the women was as follows: French Canadian 16%, English speaking 70%, and foreign 14%.

In the Car Shops, November, 1918, there were 911 men and 16 women. All of the women were paid piece work rates according to a standard schedule.

The men were paid from \$.33 to \$.70 per hour, the average being \$.53 per hour. The women were paid from \$.42 to \$.45 per hour, the average being \$.43½ per hour.

The number of married women in the Car Shops was 45% and the number coming from domestic service was 45%. The nationality of the women was 50% English speaking and 50% French Canadian.

In the Motive Power Office connected with the shops, August, 1914, there were 5 male clerks and no female clerks. The average salary paid to the men was \$15.00 per week.

In October, 1918, in the same office there were 6 male clerks and 6 female clerks. The average salary paid to the men was \$26.85 per week. All of the women received \$20.37 per week.

These female clerks were all English speaking. None of them were married. None of them had previously been school teachers. For 16% of them it was their first employment.

In the Car Department Office connected with the Shops in August, 1914, there were 12 male clerks and no female clerks. The average salary paid per week was \$16.00.

In the same office in October, 1918, there were 17 men and one woman. The average salary paid to the men per week was \$21.00, and to the woman \$19.00 per week.

Summary and Explanation Regarding Railway Shop Tables.

In August, 1914, the clerical staffs of the two railway shops totalled 78 male clerks and 2 female clerks. In October, 1918, there were only 59 male clerks, but 26 female clerks. The total staffs had been increased by 5 clerks. The reason for the introduction of female clerks into these offices was because so many of the men had enlisted. In the office of Shop No. 1, the percentage of women employed increased from 3% to 34% during the four years of war. In Shop No. 2 the number of women employed increased from 0% in 1914 to 23% in 1918. These women were for the most part

TABLE NO. VI.

Clerical Workers in Railway Shops—1914.

No.	Total No. Clerical Employed	Women Clerks.	Highest Salary Paid Women Per Week.	Lowest Salary Paid Women Per week.	Average Salary Paid Women Per Week.	Per cent. of Men's Average Salary Per Week Paid Women.	Per cent. of Women Employed.	Per cent. of Women Married.	Per cent. of Women French Canadian.
1.....	63	2	13.00	12.00	12.50	104	3	0	0
2.....	17	0
Totals.. . . .	80	2	—	—	12.50	104	2.5	0	0

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Manual Workers in Railway Shops—1914.

No.	Total No. Manual Workers	Women Workers.	Highest Wage Paid Women Per Hour	Lowest Wage Paid Women Per Hour	Average Wage Paid Women Per Hour	Per cent. of Men's Average Wages per Hour Paid Women.	Per cent. of Women Employed.	Per cent. of Women Married.	Per cent. of Women French Canadian.
1.....	4,662	3	.16	.16	.16	61	.06	0	66½
2.....	2,771	2	.17	.17	.17	68	.07	..	..
Totals	7,433	5	—	—	—	..	.067	..	..

Clerical Workers in Railway Shops—1918.

TABLE NO. VII.

No.	Total No. Clerical Employees.	Women Clerks.	Highest Salary Paid Women Per Week.	Lowest Salary Paid Women Per Week.	Average Salary Paid Women Per Week.	Per cent. of Men's Average Salary Per Week Paid Women.	Per cent. of Women Employed.	Per cent. of Women Married.	Per cent. of Women French Canadian.
1	55	19	21.00	20.00	20.50	93	34	0	11
11	30	7	20.37	19.60	20.26	^a 93	23	0	0
Totals	85	26	.....	.....	.....	.....	30.6	0	7

^a Rates paid in motive power shops.

^b Rates paid in car shops.

TABLE No. VIII.

Manual Workers in Railway Shops—1918.

No.	Total No. Employees in Shops.	Women Workers.	Highest Wages Paid Women Per Hour.	Lowest Wages Paid Women Per Hour.	Average Wages Paid Women Per Hour.	Per cent of Men's Average Wages Per Hour Paid Women.	Per cent of Women Employed.	Per cent of Women Married.	Per cent of Women French-Canadian.	Per cent of Women Foreign.	Per cent of Women Employed for First Time.	Per cent of Women From Domestic Service.
I	5,124	240	.68	.34	.45	83	4.6	77.9	43	14.5	0	0
			a .45	a .42	a .43½	a 81		a 45	a 50	a 0	a ..	a 45
II	2,833	40	b .50	b .31	b .34	b 59	1.4	b 59	b 16	b 14	b 14	b 17
Totals	7,957	280	....	....	....	..	3.5	75	41	13	10	7

a Rates paid to employees in car shops.

b Rates paid to employees in motive power shops.

unmarried, English speaking clerks. Most of them had come from other clerical positions, but in the case of Shop No. 2, 16% of the women were experiencing their first employment.

The remuneration of office clerks has increased 60% for women, which is a greater difference than has been noted in any other occupation.

Under Shop No. 1, the percentage of men's average salary paid women is shown to be 104%. This is accounted for by the fact that the lowest male clerk's salary was \$2.50 per week, while the lowest female clerk's salary was \$12.00 per week. Shop No. 1 in October, 1918, shows a greater increase in the average salary paid men, for at that time women received only 93% of the salary paid men. The lowest men's salary had advanced to \$10.00 per week and the women's salary to \$20.00 per week.

The percentage of women employed, taking both shops together, shows a remarkable increase of from 2.5% to 30%.

Railway Shops in July and August, 1914, were almost barren of female labourers. Out of 7,433 workers there were only 5 women, or .067%. These women were just unskilled labourers who did cleaning and sweeping. Their wages were an indication of their grade of work being only \$.16 or \$.17 per hour.

By October, 1918, women were being used through-out both shops in every capacity for which they were fitted. At this date 3.5% of the workers employed were women—that is 280 out of 7,957.

As has been pointed out before women were paid at exactly the same rate as men for the same work. At times, and on certain kinds of work women earned more than men, but they did not attain to as high a rate. Women earned from 59% to 83% of the men's average wages.

It is remarkable that among manual labourers the percentage of married women is very much higher than among women in the clerical positions. For instance, in the banks of Montreal the percentage of married women is 2.9%, while in the railway shops it is 75%. This is partly explained by the fact that labour organizations insisted that no man's work be given to a

woman unless she was in need of it for her own subsistence or for the support of dependents. On the other hand in munition plants, where no such regulation existed from 5% to 40% of the women were married.

The French Canadian and foreign women were 41% and 13% respectively, of the workers. Only 10% of the 280 women were experiencing their first employment. Although in one shop as many as 45% of the women came from domestic service only 7% of the whole had come from that occupation.

The installation of women in railway shops as manual workers was purely a war measure. By degrees they have been eliminated until only those in absolute need of the work have been retained. In Shop No. 1, in April, 1919, there remained only 39 women who were scattered throughout the plant as Labourers, Drillers, Painters and Bolt Threaders. These women were either widows supporting families or soldier's wives supporting sick husbands. In Shop No. 2 there were even fewer women left.

CHAPTER III.

Investigation of Factories.

February, 1919.

It was found that there existed at least 1,400 industries in Montreal. Some of the chief ones were selected as worthy of investigation and they are as follows: textiles, clothing, leather and rubber, sugar refining, flour milling, cement, iron and steel, machinery and tools, paints, furniture, electrical appliances, carriages, confectionery and tobacco.

A circular letter was sent out to some of these industries where it was doubted that women were employed, such as flour mills, carriage factories, iron and steel plants, tool shops and so forth, asking them if they had employed a large number of women during the war. Most of these industries sent a courteous reply but some of them have never been heard from.

In factories which employed large numbers of women the following questions were asked.

I(a) Have women in your factory taken the places of men in any capacity (b) If so, to what extent will they be retained in their new occupations?

The matter of wages was discussed in every factory and it was found that wages had increased everywhere to a greater or less degree. Shorter hours had been demanded and obtained.

A negative answer was generally given to the questions I(a) and (b), so that further query was not necessary. The figures at hand are therefore so meagre that it was not possible to display them in table form.

The various factories are classified under the head of the industry to which they belong.

A—TEXTILE INDUSTRY.

Knitting Factory.

This factory employed 200 people, 150 of whom were women. During the war period women were oc-

asionally used on machines which men operate, but it was only a temporary shifting for men are again at their old places. The wages of these operators, male and female, have increased 20%.

Cotton Factory.

In this factory 52% of the employees were women. The proportion of male and female workers has remained the same throughout the war period. A great deal of child labour is used in this industry. About $\frac{1}{3}$ of the employees were children between 14 and 18 years of age. The men who left for service overseas were replaced by older men as conditions here did not necessitate the substitution of female labour.

In the main office of this factory two women clerks did the work of two men on active service. On their return the men will receive their old positions.

Clothing Factory No. 1.

This factory manufactures clothing, shirts and caps for boys and men. There were 500 employees in this plant, 50% of which were women. Most of the laborers were foreigners, Italians, Poles and Hebrews. The proportion of male and female help remained the same during the period of the war. Here it was not found desirable or necessary to put women at work previously done by men. It was stated that there had been a great increase in the wages paid skilled workers. They were augmented from 50% to 60%. For unskilled labour wages have increased 30%. The number of working hours have also been reduced by degrees, from 54 to 49 to 48 to 44 hours per week. Wages were paid by the week and not for piece work.

Clothing Factory No. 2.

This factory had from 150 to 200 employees during the war period. Women formed 50% of the number. The men in this factory were not called for military service because they were either not of military age or they were foreigners. This company was al-

way short-handed. The wages from August 1914, to February 1919, increased 10%. At the time of investigation the employees were demanding a further increase of from 10% to 20% to their wages and shorter hours. The wages were paid for piece work or by the week as the worker desired. It was stated that some of the production was of necessity paid for by the week to avert loss.

Clothing Factory No. 3.

This factory manufactured men's clothing exclusively. There were 300 employees, 150 of which were women. Almost all of the men in this establishment were married and were not called upon for military service. There was also a large portion of the male employees foreign, Hebrews and Italians which made them free from our M.S.A. There was no widespread substitution of male for female labour although there were occasional and temporary changes. Cutting in all such factories is done by men, but if the labour unions did not object, women could be used in this department. Wages for piece work and weekly work have increased from 25% to 40% over pre war rates. By April 1st, 1919, the work hours will be shortened to 44 hours per week. This applies to male and female labour alike and serves to increase wages 10%.

It is notable how few English speaking and French Canadian men were found in this industry, but women of every nationality seek this occupation.

B—LEATHER AND RUBBER FACTORIES.

Boot and Shoe Factory No. 1.

One of the oldest shoe factories in Montreal which employed 248 workers, said that although they employed large numbers of women in their business they had not seen fit to put them at work usually done by men during the war.

Boot and Shoe Factory No. 2.

This factory employed men and women in about equal proportions. In the factory they were not forced

to use women where men had previously been employed. In the office one woman was used in place of a man.

Rubber Goods Factory.

This was a large factory whose employees numbered about 2,500 male and 1,250 female workers in 1914. Most of the employees were paid for piece work, except apprentices who begin at \$.15 per hour and commence piece work as soon as they have qualified. The rates paid for piece work have not increased, but the wages received by the employees have increased about 30% and will continue to increase. First, because of increase in business which has made employment steadier. In February 1919, the time when the factory was visited, all of the employees could work full time, and in some departments over time.

Secondly, because a system of team work has been adopted in the shoe department which has increased production 33%. A number of workers, say five, sit two at each side of a table and one at the end. Each one does a certain piece of work on the shoe and passes it along until the one at the end receives and finishes it. The whole table is paid by the piece according to the amount of productio. This is said to be the only rubber company in Canada using this system.

Thirdly, because the restless hours between 11 and 12 a.m. and from 3 to 5 p.m., when perhaps half of the staff of piece workers, satisfied with the day's remuneration would walk out, have vanished. This was accomplished by the installation of player pianos among women workers in the drug sundries and shoe departments. Now when a girl feels like leaving for a moving picture show, she is allowed to relieve her weary muscles at the piano. The music is not only enjoyed by the player but by the other workers. At present almost the whole staff stays throughout the working hours, and the production of these departments has been increased 30%. The pianos have been in use for three years, and they are just as popular to-day as they were at first.

During the war period women were tried out in every department where male labour had previously held the monopoly. In the mill room and raw material

departments, it was found that women could not endure the intense heat near the machinery, nor the dank vaults where the rubber was stored.

They were introduced into the hose room with great success. This was an entirely new departure and no one thought women could be used in such a capacity. Very strong women were placed there, where they did the same work as men and received the same wages after their apprenticeship was over. As many as 25 worked there at one time during the war period. By February, 1919, there were only 10 and they were rather taking the places of older boys. It is the intention of the company to use them here permanently.

Women were also introduced into the moulds and roll department. In the war period 8 was the maximum number used at one time in this room. In February, 1919, there were three.

A new department which has been opened up is the black rubber coat department. In other rubber factories there has always been a man in charge of this department, but here there is a forewoman and a staff of female workers.

Had the war not ended the number of women would have been increasing in every department of this huge factory. In order to place returned soldiers, women are being taken out of departments where men formerly worked and can work. The business of this company is so large that these women do not lose their positions but are absorbed into other parts of the factory.

In 1918 through the expanse of business and shortage of male labour, the number of women working in the factory was increased 900 over pre war days. At the end of the year 1918 there were 6,235 employees in the factory—4,087 of this number were men and 2,148 were women. From 54% to 60% of the workers operated on piece work.

There has not been much change in the personnel of the office staff except that occasioned by an increase in business. In 1918 there were 58 male clerks and 68 female clerks which was a $\frac{2}{3}$ increase over the staff of 1914.

The officials of this company confidently hope and expect that within one year there will be such a shortage of labour caused by industrial development that women will again be called into departments which were formerly considered exclusively for men.

C—SUGAR REFINERIES.

Factory No. 1.

This sugar refinery employed 475 men and 10 women in 1914. The average wage paid male labourers was \$.22 per hour. The highest wage paid to the female labourers was \$.12½ per hour, the lowest \$.12 and the average \$.12.

The total number employed at one time during the war period was 415, of this number 372 were men and 43 women. The women were never employed at men's work.

For the war period the men's average wage was \$.29 per hour. The women's highest wage was \$.25 per hour, the lowest \$.14 and the average \$.17. The wages paid women have been increased 100%.

About 8% of these women were married. The French Canadians numbered 76.7%, the English speaking 16.2%, and the foreigners 6.9%.

Factory No. 2.

This factory has always employed a certain number of women to box and pack sugar. Even during the war period when men were scarce it was not found that they were suited to any of the heavy work done by men in the refinery.

D—FLOUR MILLS.

Mill No. 1.

In the milling business proper this company did not employ female labour. In the offices it employed women stenographers and telephone operators. The number of female clerks in the offices did not increase during the last four years.

This milling company owns and operates a cotton and jute bag factory in Winnipeg. Large numbers of women are employed there, but as it falls outside the territorial limits of this study it cannot be considered.

Mill No. 2.

This company did not employ women in any of its manufacturing plants.

Cement.

Only one plant was investigated.

This plant employed about 600 men and 15 women. The women were engaged in cleaning cement sacks. Their occupation was not extended during the war, nor were additional women called in to do the work of the men in the plant. Women were paid for piece work. The maximum rate was \$.27½ per hour, the minimum \$.20 per hour, and the average \$.25 per hour.

E—IRON AND STEEL WORKS.

Construction Company No. 1.

This company never used female labour in any but a clerical capacity. Those plants which manufactured munitions and used female labour have already been dealt with.

Construction Company No. 2.

This company used women to some extent in the manufacture of munitions, but they have never employed them in general construction work.

Shop No. 1. (Metals.)

This plant finds its work too heavy for female labour and has never used it as yet.

Shop No. 2. (Machinery.)

During the war this factory engaged in the manufacture of lead balls for munitions. Their staff of

manual workers was increased 50% during the war, but the company never used women in any capacity in the shops. Men who left the clerical staff for overseas service were not replaced by women.

F—PAINT INDUSTRY.

Paint Factory No. 1.

In this factory 30 women were used along with the other employees and did a special part of the work. This was pasting labels, cleaning cans, and so forth. As far as possible the company refrained from using women to do the work which had always been done by men. The war conditions did not force them to make any change in the occupations of their male and female workers.

The female clerks on the office staff numbered between 5 and 10. There was no change made here by the war, except in regards to salaries, which were augmented.

Paint Factory No. 2.

The staff of employees at this factory was not increased during the war. Owing to male enlistments women were put at work previously done by young boys aged 16 and 17. This was in the trucking department, where girls loaded and wheeled trucks piled with cans. They did this work so much more quickly and neatly than young men that they will be retained here permanently.

The employees of the factory numbered 175 out of which 25% were women. Almost 1/5 of these women were used at work previously done by young men. The other 4/5 were employed at labelling cans, work in the stationery department, and arranging paint cards.

The clerical staff saw a greater change. In 1914 the staff numbered 60 men and women clerks. The head office took over some of the work done in their branch offices and so increased their staff on that account. The female portion of the staff was augmented 33½%. A part of this number was used to replace soldiers and a part to take care of the added business.

Wages throughout the establishment were increased 30% during the period of warfare. The women who took the places of the young men in the factory were paid at the same rate. All of the women working at piece work are paid at the same rate as the men.

Some returned men have already been re-established in this company. No change was anticipated in the status quo of the factory, but in the office the women will have to give place to the returned men. This will take place during the early months of 1919.

Paint Factory No. 3.

This factory before 1914 employed 120 men and 16 women. The men were paid from \$17½ to \$.35 per hour, the average being about \$.20. The women were all paid \$.15 per hour.

In November, 1918, there were 146 men and 24 women. As the factory was engaged in some munition production 20 of these men remained only until December, 1918. The wages received by the men at this date ranged from \$.35 per hour to \$.56 per hour, the average being \$.47 per hour. The wages paid the women were \$.13 per hour. The reason that the women do not get higher wages is because they are continually shifting their employment and so never advance beyond apprentice rates. It was not necessary to put women at men's work although they were able to do the work of young men of from 17 to 18 years.

The office staff in 1914 numbered 6 men and 4 women. The men's salaries ranged from \$15.00 to \$25.00 per week, the average being \$20.00. The women's salaries ranged from \$16.00 to \$20.00 per week.

In 1918 the office staff was 6 men and 5 women. The average salary paid men was increased to \$30.00 per week, while that of the women remained the same.

G—FURNITURE AND UPHOLSTERING FACTORY.

This is the largest factory of its kind in the city and the only one that gave out any information. There were from 275 to 300 employees, 45 of which were women. The latter were employed at sewing mat-

tresses and pillow casings, and lacing springs. This last named occupation is a new one for women since the war. The maximum number placed in this department was 10. Later it was 8, and the work was done so satisfactorily that women will be retained there indefinitely. The female wages, which were for piece work, ranged from \$1.50 to \$2.50 per day. The women lacing springs came from munition plants.

The rates paid for piece work have advanced 30% during the war.

There was no change in the office staff.

H—ELECTRICAL APPLIANCE FACTORY.

This factory has always used women to a great extent. The employers have found them so satisfactory during an experience of twenty-five years that their policy is to use women in every capacity possible. During the war period this same principle was followed although to a greater degree because of the existing conditions. Just previous to the signing of the armistice there were about 700 women and 700 men at work in the shops.

During the war this plant engaged in making munitions as well as their regular commodity. When shell production was begun in the plant men were used exclusively as operators and inspectors. After a while the company, always on the watch for new occupations for women, put them on inspection work. At a later date women assumed positions as operators. Thus women entirely supplanted men in the manufacture of munitions.

The workers, male and female, were paid by the hour generally, although some preferred the piece work rate.

By December, 1918, a large number of the women who were producing munitions, shells, fuse casings, and so forth, were released. In February the staff on hand which was engaged in the regular production of normal times numbered about 400 women and 800 men.

The general office in connection with the factory had 280 clerks. The number of male and female clerks was about equal. The same policy of using women

workers where possible was rigidly observed here as well as in the shops. Any substitution of a female clerk for a male clerk in these offices is rather a general fulfillment of the ideal of the company than a war contingency.

I—CONFECTIONERY.

Biscuit Factory.

This is one of the largest factories of the kind in the city and its experience during the war period may be taken as representative. Most of the employees in this factory were women. The work which was done by men was too heavy for women to undertake at any time. When the shortage of men could not be supplemented by women or married men the exigency had to be suffered.

J—TOBACCO FACTORIES.

Factory No. 1.

This factory employed 500 women who form the largest part of the factory workers. The war conditions did not necessitate any change in the occupations of the employees in the establishment.

Factory No. 2.

In this factory there was no change in the work done by men or women during the war.

Factory No. 3.

This factory employed many more female labourers than male. Their work was to pack cigarettes and tobacc. The men in the shop were skilled mechanics and any of them who went overseas had to be replaced by men.

In the office a different condition prevailed. All men, married or single, were encouraged to enlist. The married men received their whole salary during their absence and unmarried men half of their salary. Their

places will be restored to them on their return with increased remuneration. Under such favorable conditions large numbers of the clerical staff enlisted. In order to meet this exigency the company employed women to take the places of these men. By the time the armistice was signed the female part of the clerical staff had been augmented 20%. The women carried on the work in a most efficient manner.

The wages of all employees were increased considerably during the period of the war, and additional remuneration in the form of bonuses was allowed.

Summary and Conclusions Regarding Factories.

The information concerning factories here set forth was acquired either through correspondence with the executives of the companies, or through personal interviews and inspections at the factories themselves. Such opinions and criticisms as have appeared, concerning the various factories are those expressed by the employers.

The industries which were studied employed women to the following extent:—In textile, clothing, leather and rubber, electrical appliances, confectionery and tobacco factories, one half or more of the employeegs were women. In the paint and furniture factories, and sugar refineries about $\frac{1}{4}$ of the labourers were female. In flour mills, cement plants, iron and steel works, machinery, tool and carriage shops no women were employed, except in such places where they were used to manufacture munitions. (A few women were used in the cement plant to clean sacks.)

About one-half of the industries investigated have been employing women to a greater or less degree for years. During their experience, the employers, have sought to use women in every capacity which was deemed suitable to their skill and physique. There were two reasons for this policy. In the first place, female labour has been cheaper than male, and in the second place, such tasks as women are able to do, they usually perform more satisfactorily than men.

Thus, during the period of the war, broadly speaking, there was no change in the occupation of factory

hands. There are several reasons for this. First, war conditions here did not force such an industrial upheaval as was suffered in Great Britain and Europe. Employers in factories, therefore, did not voluntarily make radical changes in the occupations of the male and female workers. There were notable exceptions to this general practice, and in plants where women were successfully used, at men's work, the opinion was expressed that factories as a whole could have employed women to a much greater extent, and so released men for such positions as women were physically unable to fill.

Since, in over half of the industries shown, a great part of the employees were already female, the enlistment of men did not seriously effect the general production. For instance, when the men left, they were either replaced by men, or the men who remained, and sometimes the women, had to assume the extra burden of work to try to prevent the reduction of the output. They were not always successful in keeping up the production, as high prices and scarcity of many commodities testify.

Another reason for the failure to use women in every occupation possible was the interference of labour organizations. There are certain trades in the hands of men, from which women are debarred, for example in clothing factories, it is said, all cutters must be men.

Such factories as did not employ any women suffered from the shortage of male labour more acutely, as they were so situated as to be unable to use female labour.

Employers in the following factories did make radical changes in the occupations of their female workers. In the Rubber Goods factory women were tried out in almost every department. In departments where they took the places of men satisfactorily they are being retained as far as possible, as in the hose room, and the moulds and roll department. Although they may be displaced temporarily by men in these new occupations, when industry revives, they will be reinstated.

In paint factory No. 2, one-fifth of the women

were used in place of young men. The trucking room was a notable example of this new departure.

In the Furniture and Upholstering factory, women were used at men's work to lace springs. They have been so successful at this occupation that they will be permanently used here.

The factory for making Electrical Appliances used women for munitions of various kinds. Women have always been supplanting men in this factory.

It was thought before the survey was begun that factories supplying materials especially demanded by the forces overseas, such as clothing, knitted goods, leather, flour and tobacco, would have to have an increased number of workers, to supply the need, but such was not found to be the case.

The office staffs of factories suffered a depletion or re-arrangement of clerks to some extent. Women were used to take the situations of male clerks in the Cotton Factory, in Paint Factory No. 2 and in Tobacco Factory No. 3. These women will in turn give place to the men as they return to their old positions.

CHAPTER IV.

INVESTIGATION OF WHOLESALE HOUSES.

Three of the chief wholesale houses having been visited, the information concerning the conditions existing in each, during the war period, may be taken as representative.

Firm No. 1.

This is a large wholesale house that did not make any change in the personnel of the staff in the ware-rooms during the last four years. Salesmen were replaced by salesmen and male travellers by male travellers.

In the clerical department a change did take place. Before the war the "entry room" was equipped with male clerks. Three women have now supplanted the men permanently. They take down the entries (on a machine), which are read off to them by men.

In the main office four women have been put to keeping books which had previously been done by men. Bookkeeping machines have been installed, and just as female typists are replacing male, it is thought by the employers of this company, that women bookkeepers will replace men at machines.

Firm No. 2.

This, also, is a large wholesale house employing over one hundred men and women. During the period of the war this company put ten women in the places of men. The departments where this was done were: in the entry department where three women were installed; in the small offices, on each floor there were placed three stenographers in all, who did clerical work, such as looking after orders, as well as stenography; in the small-wares department women looked

after stock; and in the glove department women checked the goods. None of the women have done sales work, because it is not possible to send them "out on the road," where they would have to handle trunks, and salesmanship in the ware-rooms leads to commercial travelling outside.

The women were paid at the same rate as the men in consideration of their permanency and future usefulness.

It was expected that about twenty men would return to their former positions from overseas. If this be so the women will not be asked to discontinue their services. It is hoped that increased business will enable the house to absorb both the men and women workers. Should the company find that they could not retain the services of all their employees, the fittest will survive, irrespective of sex.

Firm No. 3.

This wholesale house employed a staff of 120 workers. Out of this number 20 were women clerks and stenographers. During the war 6 women were placed in clerical positions formerly occupied by men. Two of these positions were that of book-keeping. Women were paid much the same salaries as men for this work. The salaries paid to all the clerks have increased 20% during the period of the war.

Summary Regarding Wholesale Houses.

Each of these wholesale houses was effected by the enlistment of male clerks. Those who did the heavier work, such as lifting bolts of merchandise, had to be replaced by men. In the clerical departments, however, women were used to hold situations formerly held by men, in all the wholesales shown above. Women in the entry departments, and women as book-keepers were examples of women in unusual positions.

If sufficient development in the industrial world be attained the favorable conditions thereby resulting would necessitate the retention of all. Should this not

come to pass men returned from overseas will be given first consideration.

Remuneration was given to men and women employees on an equal basis. During the war all salaries increased 20%.

CHAPTER V.

INVESTIGATION OF DEPARTMENTAL STORES AND MISCELLANEOUS ENTERPRISES.

Upon investigating four of the chief departmental stores of Montreal, it was found that the war had made little if any change in the prevailing ratio of male and female employees in these establishments. There were many reasons given for this condition. In the first place a departmental store is essentially a woman's organization. In its mart women buyers and women sellers meet. There are, however, certain departments in the store which must be equipped with male clerks. These are, the furniture and carpet departments, departments where large bolts of merchandise are handled, and the receiving and distributing department, all of which are unsuitable for a woman because of the heavy work entailed. The men's clothing department is an undesirable place for a woman clerk. In these departments of the store men of military age have been replaced, not by women, but by older men, who otherwise would have retired from active business life.

There have been a few exceptional instances where women have been placed in the departments usually assigned to men. In one store it was found necessary to place a woman in the linen and cotton department. In another a woman has been successfully running an elevator for several months. In a third store some women had been placed in the distributing department, where their work is highly praised. Such examples clearly point to the fact that had the war continued women would gradually have been forced into all parts of the department store, as has been the case in European countries.

Unlike most industries the staff of a departmental store is not replenished with employees from other occupations. The system adopted by all these stores is to employ young girls just out of school and let them

commence work in some of the minor departments of the store. Here they begin their apprenticeship as cash girls or sale's clerks at the notion's counter. Whenever a vacancy occurs in the store, there is a general promotion throughout and a new cash girl is introduced.

The salaries paid to the clerks of departmental stores have advanced during the war period. This is due to the increased cost of living, and to the necessity of competing with the munition plants which paid such high wages to their employees.

Municipal Service—City of Montreal.

When the Municipal Service of the city of Montreal was investigated it was learned that war conditions had occasioned no change in the personnel of its employees. Women, as yet, have not been employed on the police force except, of necessity, in detective work. In positions where men were employed previous to the war, they are still employed. In the City Hall women are employed in a clerical capacity, but it was not found necessary to replace men of the military age by women.

Dominion Civil Service—Post Offices.

In the city of Montreal the clerical staffs of the post offices are mostly female. The conditions brought about by the war have neither increased nor diminished their numbers in this branch of the service. Nor has there been any change in the numbers of male clerks employed for it has been possible to retain a sufficient number of them in the service to carry out the work of collecting and distributing the mail. The superintendent in charge of post offices in Montreal affirmed that in his department of the civil service the only change brought about by the war was in the remuneration of the employees. Male and female clerks are paid at the same rate, and although the emolument has not been permanently augmented, bonuses have been granted from time to time as compensation.

Offices of an Insurance Company.

In this insurance company the women composed 50% of the staff before the war. During the last four years 40 young men left the company for overseas service. To some extent these men were replaced by married men, but women had to be called in to help bear the burden of work. Owing to a natural growth of the company and a shortage of young men the female clerical staff has increased to 60% that of the male staff. At present there are 230 women clerks on the pay roll. As the men return they will take up their old positions, but the services of the women will not be dispensed with as the development of the company necessitates their presence.

Clerical Staff Employed in an Office Building.

The following table shows the changes brought about during the war in a large office building.

The decrease of the total number of employees in 1914 from 1,720 clerks to 1,417 in 1918 was due to two reasons. In the first place large numbers of young men left the offices for military service and it was impossible to fill all the vacancies. The female clerical staff was increased by 157 workers to help supply the need. In the second place the offices were over-staffed in 1914, and a campaign was begun to consolidate some of the departments and do away with as many superfluous clerks as possible. Thus in 1918 although there has been a great increase of business over 1914, the clerical staff showed a decrease of 303 workers. As the men continue to return to their positions the total will remain the same, but many of the female clerks will be dispensed with.

The highest salary paid to the women clerks has increased \$40.00 per month or 70% since 1914. The lowest salary paid women has increased 44% over that of 1914, and the average salary paid women has increased \$47.00 per month or 47%. This was due not only to the general increase in remuneration, but to a special award.

In 1914 the salaries paid women were 60.7% those

TABLE NO. IX.

Clerical Staff of Employees—1914 and 1918.

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	Total No. Clerical Employees.	Women Clerks.	Highest Salary Paid Women Per Month.	Lowest Salary Paid Women Per Month.	Average Salary Paid women Per Month.	Per cent. of Men's Average Salary per Month Paid Women.	Per cent. of Women Employed.
August, 1914.....	1,720	300	95.00	20.00	42.50	60.7	17
November, 1918.....	1,417	457	135.00	45.00	89.50	86	32
Increase 1918 over 1914.....	.....	157	40.00	25.00	47.00	25.2	15
Decrease 1918 over 1914.....	303	...	.....	.....	.....	.....	..

paid to men while in 1918 they were 86% those paid men — an increase of over 25% for the women.

The percentage of the women employed in 1918 was an increase of 15% over those employed in 1914. Such a condition was brought about by the war and is not permanent.

CHAPTER VI.

INVESTIGATION OF BANKS.

The next business to be investigated was that of the banks. Owing to their proximity to one another, and general accessibility the head offices of all the banks in Montreal were visited. These numbered nineteen and included four French Canadian banks. There are several blanks in the tables below as some of the banks were unable to furnish complete information owing to lack of records or to the policy of the bank. The figures given refer only to the clerical staffs and do not include the officials of the banks. The statistics which appear were supplied by the head offices of the banks and cover all the branches of the respective banks in the enlarged Montreal.

Summary of Tables in Regard to Banks.

In Montreal in August, 1914, there were seventeen banks, by November, 1918, these had been increased to nineteen. In the same period the number of bank clerks changed from 1,549 to 2,194. The managers of the banks maintained that their augmented staff was not due as much to an increase in business as to the necessity of employing a larger number of inexperienced clerks to replace the practised ones who had left for military service.

In August, 1914, the women in banks numbered 195. At that time most of the women were stenographers as has been indicated on table No. X. In November, 1918, see table No. XI., the numbers of women had increased to 913. During the war period women were called in to serve as clerks, and although a portion of the 913 still remained stenographers, the greater percentage were ledger keepers, tellers, and so forth.

Before the war the highest salaries paid to women

TABLE NO. X.

Employees in Banks Previous to August—1914.

No.	Total Bank Clerks.	Women Bank Clerks.	Highest Women's Salary Per Annum.	Lowest Women's Salary Per Annum.	Average Women's Salary Per Annum.	Per cent. of Men's Average Salary per Annum Paid Women.	Per cent. of Women Employed.
					a \$400.00		
1.....	220	30	\$1,200.00	\$300.00	b 600.00	54	13
c 2.....	...	..	.....	.....	.....	..	..
3.....	320	80	.....	400.00	600.00	80	20
4.....	70	10	800.00	300.00	500.00	45	14
5.....	276	16	950.00	360.00	493.00	..	6
6.....	13	e 1	.....	.....	.....	..	7
f 7.....	19	e 1	.....	.....	.....	..	5
f 8.....	32	c 3	600.00	500.00	550.00	69	9
9.....	169	0	.....	.....	.....	..	0
10.....	28	2	.....	.....	.....	..	7
11.....	114	18	1,100.00	480.00	750.00	71.3	15.7
12.....	163	e 10	.....	.....	.....	..	7
d 13.....	...	..	.....	.....	.....	..	..
14.....	26	c 1	900.00	.....	b 300.00	128	4
15.....	33	6	700.00	400.00	.....	..	18
16.....	36	10	.....	.....	600.00	85.7	28.5
c 17.....	...	..	.....	.....	.....	..	..
18.....	31	3	650.00	400.00	466.00	41	9.7
f 19.....	...	e 4	.....	.....	.....	..	..
Totals	1,549	195	.....	.....	.....	..	12.5

a Clerk's average salary.

b Stenographer's average salary.
c. Stenographers only.

c Not in existence until war period.

f Bank of 2 branches—figures appear for 1 branch.

d Records destroyed.

TABLE NO. XI.
Employees in Banks—November, 1918.

No.	Total Bank Clerks.	Women Bank Clerks.	Highest Women's Salary Per Annum.	Lowest Women's Salary Per Annum.	Average Women's Salary Per Annum.	Per cent. of Men's Average Salary Paid Women.	Per cent. of Women Employed.	Per cent. of French-Canadian Women.	Per cent. of Married Women.	Per cent. Employed for First Time.	Per cent. Formerly School Teachers.	Women Graduates of a University.
a 1.	320	180	\$1,400.00	\$400.00	\$600.00	50	56.2	4	2.2	50	3.3	..
2.	17	13	900.00	600.00	750.00	62.5	76.4	0	0	0	0	0
c 3.	425	216	.....	450.00	750.00	62.5	50.8	13.8	4.6	77.7	14.5	..
4.	70	32	1,000.00	400.00	700.00	53.8	45.7	0	3.1	62.5	0	0
5.	369	102	1,050.00	b 150.00	408.00	.....	27.6	100	0	41.1	5.8	..
6.	12	9	1,000.00	500.00	700.00	50	75	0	0	86.6	0	0
f 7.	25	6	.....	.....	.....	.....	24	100	0	100	0	0
8.	20	4	800.00	500.00	650.00	81.2	20	0	0	0	0	0
9.	133	0	.....	.....	.....	.....	0	.....	.....	.....	.....	.....
10.	40	24	.....	.....	.....	.....	80	0	0	79.1	4.1	1
a11.	124	92	1,200.00	450.00	688.00	53.5	71.4	2.1	4.3	27.1	1	..
12.	187	69	.....	.....	.....	.....	36.8	21.7	2.8	71	1.4	..
13.	215	65	.....	.....	802.00	82.3	32.2	0	6.1	54.4	7.6	1
14.	25	8	.....	.....	600.00	66.6	32	0	0	60	0	0
15.	43	16	1,050.00	600.00	.....	.....	37.2	0	3.7	62.5	0	0
16.	45	27	.....	.....	640.00	81.7	60	0	0	22.2	0	0
17.	8	c 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18.	29	12	1,000.00	400.00	654.00	41.8	41.3	16.6	0	83.3	0	..
f19. ....	..	d 37	e 728.00	c 416.00	.....	.....	.....	100	2.7	.....	5.4	..
Totals..	2,194	913	.....	.....	.....	.....	41.6	20.7	2.9	54.1	5.6	2

a Free lunch supplied in the head office
 b Very young girl—lowest salary usually \$300.00.
 c Stenographer—no women clerks.
 d Out of this number 12 were stenographers.
 e These wages are not those paid to the women clerks but to the stenographers.
 f Bank of 2 branches—figures for 1 branch only appear.

ranged from \$600.00 to \$1,200.00 per annum. The lowest salaries ran from \$300.00 to \$500.00 per annum. The lowest average salary paid to women was \$400.00, and the highest was \$900.00 per annum. Both of these extremes were received by stenographers. It is thought that the average clerk's salary would be about \$600.00 per annum.

During the war period all salaries were increased. The highest salaries paid to women by the various banks ranged from \$728.00 (which was received by a stenographer) to \$1,400.00 per annum. The lowest salaries paid to the women ran from \$150.00 per year, which was an exceptional case, to \$600.00 per year. The lowest average salary received by women was \$402.00, and the highest was \$802.00 per annum. It was contrary to the policy of many of the banks to divulge any information respecting salaries. The statistics shown in this table cannot therefore be taken as absolute.

Before the war the average salaries paid to the women were from 41% to 128% of those paid to the men. In order to explain the latter high percentage it is perhaps well to say that there was only one woman on the staff of this bank. She was a stenographer and received \$900.00 per year, while the average salary of the male bank clerk was only \$700.00 per year. Not considering this exceptional case the average salaries received by the woman ranged from 41% to 85.7% of the average salary received by the men.

During the war period the percentage of the men's average salary received by the women was slightly lower. The reason for this is that the number of women bank clerks increased to a greater degree than did women stenographers. Women bank clerks do not receive as high an average as do stenographers, so with their preponderance the average salaries dropped. In 1918 they ranged from 41.8% to 82.3% that of the men.

In August, 1914, the percentage of women employed in the several banks ranged from 0% to 28.5%. In the war period the percentage ranged from 0% to 80%.

During the period of the war the number of French

Canadian women in the banks varied considerably. In three of the banks the female staff was 100% French Canadian while in nine banks they numbered 0%.

The percentage of married women in the banks during the last four years (1914-1918) was very small. The highest percentage in any bank was 6.1%. This is a striking contrast to the condition which prevailed in munition plants and shops where in some cases 75% of the women employees were married.

One of the most interesting columns of the table 1918 is that which shows the percentage of women who had never had previous employment. This ranges from 0% in one bank to 100% in another. Considering all of the women employed 54.1% had never been employed before.

The columns where the number of university women graduates in banks is shown, is incomplete as many of the banks could not furnish such information.



CHAPTER VII.

DIGEST OF PERSONAL OPINIONS.

After having learned to what extent women had changed their industrial occupation during the war period in Montreal, it was decided to ascertain the opinions of about 50 men, who were interested in industrial reconstruction, regarding the capacity of women as industrial workers. With this end in view a circular letter was sent out containing the following questionnaire :

1. How do women as mental workers compare with men in quickness to learn?

2. How do women as mental workers compare with men in reliability?

3. How do women as mental workers compare with men in punctuality and regularity in work?

4. As manual workers, can you name any classes of work which you think women can permanently undertake, which they were not doing before the war?

5. As manual workers, do you agree with the opinion that women show better endurance against monotony than men?

6. Is it your opinion that after the war women will be replaced in their new occupations by men? If so, to what extent?

7. Women's wages, manual and mental, still average a good deal below those of men for the same or similar work, to what do you attribute this?

Is it (a) because women really perform less service?

(b) a mere matter of the labour market women being in keener competition, one with the other, than men?

Out of the 50 letters sent out, only about 20 replies were received. In some cases the recipient was

out of the city, but in others it is assumed that the circular was ignored through lack of interest. The courtesy of the 20 men who did take the trouble to answer the questions is very much appreciated, and their opinions will be of great value and interest to women. In order to get a representative opinion on these questions about 20 additional employers, managers and directors, were personally interviewed, and their opinions, which were thoughtfully given, are embodied here.

Under Question 1, How do women as mental workers compare with men in quickness to learn? Thirty-five men answered that they were as quick to learn as men, four replied that they were quicker. One man among these four, who was voicing the opinions of several men in charge of large clerical staffs in a transportation company, said that although women were quicker at picking up work they were not as thoroughly grounded as men who had served long years in apprenticeship. Three men, two of whom were bank managers, said that women were not as quick to learn as men.

Twelve out of thirty-five men, who answered affirmatively, qualified their remarks by adding that women excelled only in routine clerical work and could not be used in executive positions. Several reasons were given for this, the most oft recurring being that women lacked ambition. They are said to look upon their position as an interim occupation and not a life work, therefore they do not show the same desire to promote themselves as men. Two men maintained that women possessed executive ability but they did not have the physique to carry on responsible work. Two others affirmed that they were capable of filling executive positions and did not qualify their remarks in any way. Two men, who for years had employed from 150 to 250 women in audit departments of railroads, said that if women had had centuries of education as a heritage, as men had, and were trained from infancy to the idea that they were destined to take a place in the business world, they would be just as capable and willing to accept responsible positions as men.

Question 2. How do women as mental workers com-

pare with men in reliability, brought forth many opinions. About eight of the men did not reply to the question, in some cases because they had no first hand knowledge, but there is no doubt that the majority consider women to be as reliable as men. Twenty-seven men said that women were as reliable as men and five said that they were not. Four men, who were mostly bank managers, said that women were more reliable than men and several made a point of their honesty being of a higher quality. Several men said that reliability was not confined to sex, it was a characteristic of the individual. Two men out of the twenty-seven said that although women were as reliable as men they were not as ready to assume responsibility.

Out of twenty-seven men, six said that although women were as reliable as men they were not as valuable because they did not remain as long in the services as the company as did men. One company which employs a large number of women in a clerical capacity said that out of 230 women only 31 had been in the service over five years, while it was an unusual thing to have a young man resign.

The six men who said that women were not as reliable as men made the following statements: Women are unwilling to give over-time to finish a piece of work; women can not be trusted to the same extent as a man to do work left to them; women clerks shirk responsibility; they do not show the same ambition to advance either for their own or for the company's sake. The following complaint against women was made several times by bank managers and insurance companies employing several hundred women clerks: Women do not appreciate the fact that they owe any consideration to an employer for the training they have received at his hands. If a better position is offered them they leave him "without scruples." A man, generally speaking, is more loyal to his work than a woman. The reason women take this attitude in business goes back to the old opinion so often expressed, that they consider it a temporary occupation.

The answer to Question 3, How do women as mental and manual workers compare with men in regularity and punctuality at work? were more varied. Eleven

men, who included among their number an employer of several hundred women in a munitions plant, and a superintendent of an office containing 250 women, said that women were as regular in their attendance as men. Fourteen men maintained that women were not as regular as men, several of these men are bank managers, two are railway officials who have several hundred women under their supervision, two are directors of wholesale houses and two are managers of large factories where women are employed by thousands. The male representative of a labor union said that if women received the same remuneration as men for the same work, they would give the same service as men, in attendance and punctuality at work.

Regarding the punctuality of women seventeen men affirmed that they were as punctual as men and ten said that they were not. Several men maintained that it was a matter of discipline. Others said that it was not a matter of sex but of personality. Among the men who claimed women to be as punctual as men there number, superintendents of large offices, bank managers, an official of a telephone company and the manager of a factory. *The men who said women were deficient in punctuality include the heads of several factories, directors of two wholesale houses, bank managers and managers of large office staffs.*

As many of the men interviewed had no first hand experience with women as manual workers the answers to Question 4—As manual workers can you name any classes of work which you think women can permanently undertake which they were not doing before the war?—were not as numerous as those to other questions. The officials of a rubber factory said that women could be used to manufacture rubber hose, and rubber garments; in the moulds and roll department and as cutters in the garment department. A large paint factory used women in the trucking room. The superintendent of a mattress and spring factory said women laced wire springs. In a cotton factory women replaced men in “attending napping machines and cloth inspecting and cloth selecting,” wrote the foreman. In large railway shops women were successfully used on light machines, at the running of lathes, as general car-

penters, as painters, mattress makers, armature winders, as unskilled labourers and on munitions. Women have been used extensively in large office buildings as elevator operators. They do not seem to be giving place to men in this new occupation. Many of the men mentioned some of the new positions women have held in England during the war, but as that is outside this subject they will not be treated of here.

Although the question did not include mental workers, many of the answers named new employments for them. The bank managers were not unanimous either in their praise or derogation of women's work in banks. A few managers said that women were not successful as bank clerks; many more maintained that they filled juniors posts and did routine work better than men. A few of the men said that women could fill any of the positions in the bank, executive or otherwise, if they had the physique. Owing to the superficial training women have had in banks, due to the stress of the times, they can hardly be judged by the same standards as men, who took years to attain to the same positions.

Other office managers felt confident that women could permanently become book-keepers, filers, and operate the various machines which have recently come into use in the offices. for example, ledger and comptometer machines. One man who was in charge of a staff of 150 female clerks said that they could greatly enlarge their scope of clerical activity if they had the ambition to do so.

In answer to Question 5, As manual workers do you agree with the opinion that women show better endurance against monotony than men? There were thirty-five opinions expressed. Many of the men had only first hand information about clerical workers and did not voice an opinion.

Sixteen men, many of whom employed hundreds of women in their offices, said that female clerks were more satisfactory as routine workers than men. No one gave forth a contrary opinion in regard to mental workers.

Regarding female manual workers eight men were of the opinion that women did show better endurance

against monotony than men, and seven men maintained that they did not. Among the eight there were representatives of three factories employing thousands of women, one railway shop which had had several hundred women workers, three plants which had employed over 3,000 women workers and a telephone company employing several hundred operators. One of these men who had been president of a large munition company and is interested in a factory for electrical appliances said that women excelled as inspectors of small and intricate work. Very often they did not understand the principles of physical science they were applying, but they knew when their gauge was true.

Among the seven men who thought that women did not show as great endurance against monotony as men, two of them qualified their statement by saying that neither men or women objected to monotonous work if it were suited to them. These men were on the executive of a company which employed several thousands of men and women and had had considerable experience with male and female workers.

Another man out of the seven, who employed about 500 men and women, said that men did not object to monotonous work if they felt they were learning something that would yield them promotion. Or if they had reached the summit of their ambition they would continue at monotonous work for years.

The representative of a large labor organization said that men were much more content at monotonous work than women.

The greatest weight of opinion is on the side maintaining that women as manual and mental workers do show better endurance against monotony than men. One man who was in charge of an office of 250 women clerks said that women would suffer uncongenial occupation longer than men because they lacked knowledge of the business world and were afraid to make a change. Most of the men believe that woman's lack of ambition in business life is responsible for the fact that she is more content with monotonous work.

There was great diversity of opinion regarding Question 6, Is it your opinion that after the war women will be replaced in their new occupations by men?

If so, to what extent? All of the men who were questioned did not feel able to express an opinion. Out of about forty men thirty-three replied to the question. Nineteen gave it as their opinion that women would be very largely replaced by men and for the following reasons. In the first place the men who went overseas were promised their old positions on their return should they care to have them. Many of the men will not return and many more will not be physically fit to assume their old employment. Others again will seek new positions either through preference or desire for advancement. Thus all of the men who left situations will not return to them. Many of them will, however, and in such cases women must give place to the men. Two representatives of a large rubber factory said that it was as much a patriotic duty for women to return to their homes, now that there was a surplus of male labour, as it was for them to leave them to fill the breach during the war period. They prophesied that in six months time there would be such a stimulus to industry as would necessitate the recall of a great number of the women workers into the industrial world. The manager of a large fur industry said that although women would be replaced by men in the factories of the city for a time, they would soon return and there would be open competition between male and female labourers. The old natural law of the survival of the fittest would then have play.

The managers of four banks and the heads of several offices said that women would be replaced by men to a great extent, but that the most efficient female clerks would remain. Transportation companies have employed great numbers of women, both as clerical and manual workers. The executives of these companies say that women will be replaced by men, almost entirely, owing to the nature of the work. They wish to use men in routine clerical work, such as women could do, in order to fit them for more responsible positions. Any of the men who prophesied to what extent women would be replaced by men in their new occupations thought it would be from 50% to 80%, always providing that there is not a serious depression in industry.

Out of the fourteen men who affirmed that women would not be replaced in their new occupations, seven were managers of banks. Most of them said that women were better than men as junior clerks and as such they would be permanently retained. The women who are already in banks will remain for the most part but no additional ones will be hired until the returning soldiers have been re-instated.

The manager of a large fur factory said that the war had shown that both men and women have a place in the industrial world. During the last four years women have found new kinds of work which are better suited to them than to men, and in the future they will be considered as women's occupations.

The manager of one of the largest Canadian banks said that in the past many intelligent men had held positions inferior to their capabilities. Now that women had been found to perform the routine business of a bank so satisfactorily, the average man's training could be completed in a much shorter time than before, and he could advance to more responsible positions. Women, therefore, would not be entirely replaced in banks.

Owing to the fact that women displaced junior bank clerks during the war period their salaries could not be considered comparatively, except in relation to what the junior male clerks received before the war. In about 90% of the banks the salaries of female clerks were about 20% more than those of male clerks before the war. Even early in 1919 several of the banks were paying women clerks more than men. Thus Question 7, Women's Wages, manual and mental still average a good deal below those of men for the same or similar work; to what do you attribute this? Is it (a) because the women really perform less service? (b) a mere matter of the labour market women being in keener competition with one another, than men? did not apply to banks.

There remained about twenty or more men to give their opinions as to why women received less remuneration than men. Four of these men said that in their factories or railway shops women were paid at the same rate as men for the same work, but as men

could do much heavier work than women, for which a higher rate was paid, their wages averaged a good deal more than women's.

Thirteen men said that women performed less service than men and gave several reasons why this was so. Both managers of factories and managers of banks said that women could perform the same service as men, but they have not the physique. Just as women are physically unfit to work heavy machinery so are they unfit to sustain the strain of a heavy post in a bank. In times of stress when work is behind a man can be pushed to the limit of his strength without ill effects, but a woman could not stand overwork. In a cotton factory it took 12 women to do the work of 10 men on nappers. Also one man could do heavy lifting that would require 7 or 8 women. Two men in charge of offices containing about 500 women clerks each said that women were not as well equipped educationally as men, and therefore could not give as good service. A manager of a large bank which employed several hundred women in Montreal said that women required more supervision at their work, for the same reason.

The president of a factory said that greater domestic responsibility rested on men and therefore they should receive more remuneration. If the same practice were applied to women with responsibilities, there would be no cry for justice.

Three men considered that the labour market was responsible for the low wages of women. One of the executives of a telephone company said that women did not remain long enough in the service of any company to reach as high positions as men held. Their salaries, therefore, would never average as high as men's.

Many of the men gave reasons of their own to explain why women were not paid at the same rate as men for the same work. Four men who have had wide experience in dealing with labour problems said that women did not demand the same wages for manual work, or the same salaries for clerical work, and therefore they did not receive them. One of these men added that women have realized the value of their ser-

vices at a later date than men, and that it would take longer for them to receive adequate compensation.

Three men mentioned the fact that women generally had not organized themselves into "Labour Unions" and therefore could not demand the remuneration they desired to obtain.

Two men pointed out the fact that most women look upon employment as a temporary occupation and they are not interested sufficiently to demand equal wages with men.

Several men in official positions in large companies said that although women gave the same service as men at the time, they were not as stable an economic investment as men. The training a man receives as a clerk fits him to undertake more responsible positions which make him of more value to the company. A woman on the other hand rarely aspires to executive positions. It is therefore more in the interests of the company to pay higher wages to a clerk who will be an asset in years to come. Many men consider this an answer to Questions 2, 3 and 5 as well.

A manager of an insurance company and a general manager of a bank said that many women working in offices came from homes where there was no need for increased earnings. They were therefore content with a small salary. Such a statement evidently refers to banks and a few other offices, but is not generally applicable.

Men are paid more for heavier work, which women cannot do, two men at the head of a large factory pointed out, and therefore the average wages of men are higher than those of women. Men's labour organizations fix the wages for skilled labour, such as bricklayers, plasterers and so forth, as women do not do such work, here is another case where the average men's wages would be higher.

The manager of a large railway company gave it as his opinion that the chief reason women received smaller wages than men was because they had not been long in the labour market as manual workers, and the employers have been able to secure them at reduced rates. The war period has shown that women can take their places beside men and the tendency is to pay them accordingly.

CHAPTER VIII.

SUMMARY AND CONCLUSIONS.

After having investigated such occupations and industries as munition plants, railway shops, factories, wholesale houses, departmental stores, civil and municipal services, office buildings and banks, which were enumerated at the beginning of this study, the following report is set forth:

In the first place in 1914, there were 6,635 men and 18 women employed in the plants which subsequently manufactured munitions. The women were day labourers and sack cleaners in Plants 7 and 8.

During the period of the war all the plants except No. 3 employed women to a greater or less extent. The maximum number employed was in 1917 when there were 9,931 men and 5,460 women.

Previous to August, 1914, there were 7,428 men and 5 women in railway shops. In the offices there were 78 men and 2 women.

Between August, 1914, and November, 1918, there was a great change among the workers of the shops. In 1918 there were 7,677 men and 280 women. The clerical staff also passed through a transition period and by 1918 there were 59 male and 26 female clerks.

There was very little change in the activities of the employees in factories generally. (1) A few notable exceptions were the Rubber Goods Factory, Paint Factory No. 2, and the Furniture and Upholstering Factory where about 50 women actually carried on work formerly done by men. (2) In such industries as enjoyed a favorable market the number of male and female employees greatly increased during the war period.

In the factory where Electrical Appliances are made 700 men and 700 women were employed to produce war materials. By 1919 there were only 400 women and 800 men.

Although in the wholesale houses the number of female employees was increased about 30%, to help replace the men on active service, the male employees decreased accordingly and a fixed total was maintained.

One large office building showed in 1918 a staff diminished by 8%. The number of women clerks had increased 15% during the period 1914-1918. A desire to economize caused the general diminution of employees, and lack of male clerks the increase in the number of female workers.

The male employees in banks decreased from 1,354 in 1914 to 1,281 in 1918, while the female staff was augmented from 195 to 913 workers in the same period.

Broadly speaking the changes involved in the numbers and sex of the employees in the above industries, were brought about first by the war, which necessitated the substitution of female labour for male in some occupations; and secondly, by the favorable economic condition which resulted in growth and development in industry.

Secondly, previous to the war, in Shops, which later produced munitions, where both men and women were employed, the women received 65% of the wages paid men. In 1918 they received 83% of the wages the men earned. During the manufacture of munitions women received from 50% to 80% of the wages paid men.

In factories, wholesale houses, and departmental stores the wages of workers clerical and manual increased from 20% in wholesale houses, which was the minimum, to 60% in clothing factories which was the maximum.

Organized labour has always been in the lead in securing increased remuneration for services, but during the war period clerical workers have made decided progress in this direction.

During the last four years salaries paid to office clerks have increased from 10% to 60%. After consulting the statistical tables it was found that women's salaries did not increase to the same degree as men's. The one exception to this general statement is seen in

the table entitled, "The Clerical Staff Employed in an Office Building," where women's salaries increased 26% more than men's; but even at that augmented figure, female clerks received only 86% of the average salaries paid men.

In banks in 1914 women received a higher percentage of the men's average salaries than they did in 1918. The reason for this may be that in 1914 most of the women in banks were stenographers, who were paid at a higher rate than junior clerks. In 1918, 41% of the employees were women bank clerks and their rate of remuneration is lower than that of stenographers, so the percentage of men's average salaries paid women declined.

Thirdly, the thousands of women found in munitions were drawn from three sources. They came either from other employments, from domestic service, or from domestic life. It was not possible to obtain statistics relating to this for the whole period of the war, but during the year 1918, out of 2,969 women workers 557 were being employed for the first time; and 330 were from domestic service. The remaining 2,082 came from other industrial employments, factories, departmental stores, laundries and so forth. No college graduates or school teachers were found at this work, although it is thought that they had had temporary employment there at certain periods.

In the railway shops only 28 out of the 280 women were being employed for the first time; and 19 came from domestic service. The great majority of these women came from other factories and plants.

As the factories did not show many changes in the occupations of women there was no need to enquire as to the source from which most of the employees came. The clerical workers in wholesale houses were usually experienced women.

In the departmental stores the new employees were in the 'teen age and came directly from school.

In the banks 54% or 493 of the female clerks had not held previous situations. Out of 913 women 6% had been school teachers. There were a few university graduates among these mental workers, but the exact

number was not obtainable. The remaining 40% were experienced clerks from other occupations.

Fourthly, regarding the number of French Canadian women employed in the different industries it was found that in 1917, the percentage was 52% in munition plants. In railway shops they numbered 41%. The French Canadian women as clerical workers in Railway Shops equalled 7%. Statistics regarding their number in factories, departmental stores and so forth were not accessible. Considering the banks as a whole the number of French Canadian women was 20%, but in some banks their percentage was 100%, while in others it was 0%.

Fifthly, as has been pointed out before the numbers of married women in industry varies with the occupation. At munition work they numbered 22%, and in railway shops 75% of the women. In the offices of the railway shops, however, none of the women were married. No information was received from factories or departmental stores regarding this question. In the banks the proportion of married women was very small, being only about 3%. Speaking generally married women are found among the manual rather than the clerical workers in industry.

In order to give the ^{Digest}~~Consensus~~ of Opinions regarding the capacity of women workers, manual and mental, as compared with men, the writer proposes to deal with each question, and the answers in turn.

After considering the replies to Question 1, How do women as mental workers compare with men in quickness to learn? The answer would be: Women are as quick to learn as men. They excell in routine work, but lack ambition or physique to strive for executive positions.

The majority of men questioned, answered that women were as reliable as men, to Question 2. They proceeded to say that they were not as valuable because they did not remain as long as men in the service of a company.

The opinion was 11 to 14 in declaring that women were not as regular in attendance at their work as men.

Regarding the punctuality of women workers the opinion was 17 to 10 in favour of their promptness. It was asserted that discipline had much to do with the exactness or tardiness of employees.

As the answers to Question 4, As manual workers can you name any classes of work which you think women can permanently undertake which they were not doing before the war? were given by men who had actually seen the women successfully perform the kinds of work, they enumerated, the suggestions are most valuable and timely. In the field of manual labour women can do any light mechanical work which is suited to their strength. Opportunities for more varied clerical work have become numerous and women are urged to enter this occupation with a spirit of fearlessness and ambition.

Both as manual and mental workers, the verdict is, that women show better endurance against monotony than men.

In answering Question 6, Is it your opinion that after the war women will be replaced in their new occupations by men? If so, to what extent? The men spoke from their own experience only, and 19 versus 14 felt that for the present at least women would be largely replaced by men. This is not only a result of a surplus in the male labour market, but because in many cases women are unsuitable for the positions they are filling during the abnormal times.

In railway companies women are being paid at the same rate as men for the same work, clerical and manual. The women junior clerks in banks have been paid 20% higher salaries than male clerks. The great mass of employers, however, pay for female labour at a much lower rate than for male. Thirteen men out of sixteen said that this was because women performed less service. The opinion was that women were physically unfit to do the same work as men in the same time, clerical or manual. The employers of men and women labourers in large factories said that men could do heavier work than women and were paid at a higher rate for it. On the other hand it was admitted that women could do fine and intricate work which men

were physically unfit to perform. It would seem that women should be paid at an equally high rate for this work which is peculiarly fitted to them.

Referring to clerical workers the employers say that women are as quick to learn and as reliable as men and yet they do not attain to positions of responsibility. In other words they do not perform the same service. It is an undisputable fact that women do not generally view life in the business world as a permanent occupation. With such an attitude they do not have the same interest in their work as men. Just as in the army the recruit, who fails to become a soldier after months of training, is a loss to the government, financially as well as individually, so in an office the woman clerk who suddenly leaves the company's service after months of instruction is a waste.

The plea: "Equal pay for equal work" of the employee must not be considered irrespective of the employer's utterance that, "Equal work shall receive equal pay."

The experience gained through the war period has shown woman her shortcomings and her attributes. If she profits by her knowledge, the future holds all that she may desire in the variety of occupation and adequate compensation.
