FACTORY WORK AND WAGES:

RUSSIAN AND AMERICAN

WOMEN 1900 TO 1920

BY

MONICA LYNN TIETZ-GEHRINGER

Bachelor of Arts

The University of Tulsa

Tulsa, Oklahoma

1991

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF ARTS
May, 1993

OKLAHOMA STATE UNIVERSITY

FACTORY WORK AND WAGES:

RUSSIAN AND AMERICAN

WOMEN 1900 TO 1920

Thesis Approved:

Thesis Advisor

Dean of the Graduate College

Man may work from sun to sun,
But woman's work is never done.

Old Saying

ACKNOWLEDGEMENTS

In completion of my thesis, much gratitude and thanks are extended to many people. I am indebted to numerous members of the faculty, staff, and graduate students of the Oklahoma State History department. In particular, to my advisor Dr. George F. Jewsbury, for outstanding guidance in research and in writing. Another measure of thanks is conferred to the other members of my committee, Dr. Joel Jenswold and Dr. James L. Huston, for their keen insights and observations. Other professors deserving recognition are Dr. Elizabeth Williams, for her understanding as a teaching advisor; Dr. Alain Saint-Saens, for his knowledge of European Gender history; and Dr. Helga H. Harriman, for her immeasurable assistance in researching American women's history.

The staff of librarians at the Edmon Low Library have also provided helpful service. My special thanks to inter-library loan, and Mike Shahan for his continual assistance and diligence in locating and obtaining countless documents. I wish to thank the librarians in government documents, who provided endless assistance in locating materials as well.

Final appreciation is extended to my fellow graduate students, who have provided hours of support and

encouragement. Gratitude is given to Julie Wilcutt's knowledge of American women, and for her reading drafts of my manuscript. Special gratitude is extended to Bruce Pavey, for his humor in dismal situations; Malcolm Brown, and his eagerness to listen to anything; and Cindy Smelker, for patiently sharing a small office. Thanks is conferred to other fellow graduate students--Sandy Unruh, Tom Gashlin, Kelly McDaniel, Russ Overton, and Kelly Robison. Finally, I wish to thank members of my family for their support. And to my husband, Christopher Gehringer, while writing his thesis, he still provided suggestions and encouragement.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

From the turn of the century to 1920, Russia and the United States experienced an increase in the number of women entering the work force. Russian and American women faced similar difficulties in the economic realm, despite different motivations and conditions prompting their employment. Both groups were forced into gender specific employment and, once there, exploited as sources of cheap labor. The steady increase in women's participation within industry continued as World War I approached, and both nations geared for conflict. A study of the literature indicates that the assessment of the exact effect of the war on women's economic positions, however, remains debatable for both countries. Contrary to Maurine Grenwald's assertion that "the international conflict not only accelerated previously established labor patterns, but also created an unprecidented number of employment opportunites for women," World War I did not rapidly increase the number of women in the paid labor force.[1] The war did not increase the number of new jobs, or provide wage equalizations.

To arrive at an evaluation of the war's impact on the status of women within the Russian/Soviet and American

economies, this study examines and analyzes in greater detail the impact of World War I on women industrial workers and their wages in the two countries. Particularily, it examines and compares industrial employment of women in the pre-war, wartime, and immediate post-war periods. Moreover, the study provides a bi-national comparison of Russian and American working women in the early twentieth century.

The available literary and statistical evidence indicates that women in both countries entered the paid work force steadily and in increasing numbers between 1900 and 1920. However, World War I produced no dramatic increase in women's employment or status within the respective societies, rather it only created shifts within industries. The war neither produced a notable increase in the numbers of women in the work force, nor did it create policies of equal pay for equal work. The war only continued the steady labor trends established before the war. Although the 1914-1918 period did not constitute the "major watershed" proposed by some scholars, it consolidated women's place in the wage-paying, industrial sector. Never again would women return in large numbers to their homes to perform domestic and "cottage" labor.

The impact of World War I on the position of Russian women is an area that historians of Russia and the Soviet Union have, by-and-large neglected. This is due primarily to the narrow focus of women's studies in Russian and Soviet history and lack of access until 1990 to primary sources.[2]

Additionally, most scholars of the period predominately examine how social and political--not economic--issues related to women.[3] The study of the women's political movement in Russia is the principal focus of Richard Stites's work The Women's Liberation Movement in Russia. Tracing the development of the women's movement through feminism, nihilism, and communism, Stites provides a useful, yet limited overview of the changing economic and social conditions of Russia's women from 1860 to 1930.[4] In a similar work, Linda Edmondson's study, Feminism in Russia, is the standard publication for the examination of the feminist movement in nineteenth and early twentieth-century Russia.[5] Other historians examine the pre-World War I and wartime periods through prominent figures such as Vera Zasulich and Aleksandra Kollontai.[6] These historians, however, concentrate on the women of the intelligentsia, over-emphasizing the importance of the revolutionary environment of the early twentieth century. Thus, these authors present only one aspect of Russian women's history, neglecting peasant and working class women.

There are few extensive works directly about Russian factory women or about World War I's impact on working women and their wages. Susan Kingsbury's and Mildred Fairchild's Factory, Family and Woman in the Soviet Union provides a general survey about women in factories from 1900 to 1930.[7] This source also supplies unattainable pertinent primary sources. In S. A. Smith's study Red Petrograd, he examines

both men and women workers in that city's factories during the final years of the war.[8] Although this work provides limited information on women, it too contains unaccessible primary information. Additionally, in The Politics of Industrial Mobilization, Lewis Siegelbaum investigates industrial mobilization during the war period, but adds little specific information on the mobilization or pay of factory women.[9]

Only two studies specifically examine women factory workers, or the impact of World War I on their lives. Rose Glickman explores the daily lives of Russian factory women at home, at work, and in society. She couples this examination with the development of the "woman question" and socialism, but unfortunately, her survey of women ends in 1914. Additionally, her use of economic data is less than precise. Alfred Meyer's "The Impact of World War I on Russian Women's Lives" is a brief study focusing on both rural and urban women. Meyer emphasizes the war's drainage of manpower and the resulting economic and social impact at home, in the work place, and at the front.[10] He claims that his study is incomplete and asserts that more investigation is needed in the areas of World War I and Russian women.

In American history, the debate concentrates on two opposing views. One group of scholars asserts that World War I was a historical watershed in women's employment. Others maintain that either World War II or immediate pre-war trends were the actual turning point in the fundamental

long-term social and economic status of American women. Karen Anderson's study, Wartime Women, focuses on the nature and extent of Second World War influences as they affected the status of women and societal values. She concludes that World War II was "a profoundly important event in American social history."[11] Stressing social, economic, and political roles, William Chafe's The American Woman asserts that the changes that occurred during World War II "represented a watershed event...[and] the war and its aftermath constituted a milestone for women in America."[12] In a similar assessment of this period focusing on values and attitudes of men and women, D'Ann Campbell's Women at War With America argues that it is difficult to establish that World War II in itself constituted a watershed, but the "war crystallized or accelerated" changes already occurring in American society.[13] Moreover, these authors did not examine women's wages in their research. They also view the effects of World War I as negligible, without any long and lasting impact on the future of American women.[14]

There has been a deficiency of works about women and the First World War because historians have overlooked women wartime workers due to the lack of interest in women's history and scarcity of primary sources. Many studies focus on the suffragists movement,[15] while other works, such as William Chafe's, only provide passing commentaries on women during World War I.[16] The foremost study of women during World War I by Maurine Greenwald presents a strong and more

scholarly interpretation of the war's impact. She examines the war's direct effects on women's employment in the framework of the fundamental long-term economic and social changes in America's societal structure. Through a case study approach, Greenwald explores the war's various effects on women's employment in selected occupations and locales. She concludes that World War I was the truning point in women's employment because it laid the foundation that precipitated the permanent placement of women in the economy.[17]

Greenwald also examines women's wages during this period; but she only explores the percentage of increase of women's wages as compared to men. She maintains that the percent increase of women's wages rose greater than their male counterparts. Yet, she does not examine or compare women's pay to their male counterparts in the same industry. Even though the percent increase was greater in women's wages as compared to men's, women were still paid considerably less than men in the same occupation.

Again, this study indicates that women in both countries entered the paid work force steadily between 1900 and 1920. World War I did not produce dramatic increases in women's employment or status within the respective societies. Furthermore, World War I neither produced a notable increase in the numbers of women in the work force, nor did it create policies of equal pay for equal work.

Endnotes

1. Maurine Greenwald, Women, War, and Work: The Impact of World War I on Women Workers in The United States Westport, Conn.: Greenwood Press, 1980), 4.

2. Dorothy Atkinson, Alexander Dallin, and Gail Warshofsky Lapidus, Women in Russia (Stanford: Stanford University Press, 1977); Gail Warshofsky Lapidus, Women in Soviet Society: Equality, Development, and Social Change (Berkeley: University of California Press, 1978), and Women, Work, and Family in the Soviet Union (New York: M.E. Sharpe, Inc., 1982); David Ransel, ed., The Family in Imperial Russia: New Lines of Historical Research (Urbana, University of illinois Press, 1978); Serebrennikov, G. M. The Position of Women in the USSR (London: Books for Libraries, 1937).

3. Alfred G. Meyer, "The Impact of World War I on Russian Women's Lives," in Russia's Women: Accommodation, Resistance, Transformation eds. Barbara Evans Clements, Barbara Alpern Engel, and Christine D. Worobec (Berkeley: University of California Press, 1991), 208-224.

4. Richard Stites, The Women's Liberation Movement in Russia: Feminism, Nihilism, and Bolshevism, 1860-1930 (New Jersey: Princeton University Press, 1990).

5. Linda Edmondson, Feminism in Russia, 1900-1917 (Stanford: Stanford University Press, 1984).

6. Jay Bergman, Vera Zasulich: A Biography (Stanford: Stanford University Press, 1983); Barbara Clements, Bolshevik Feminist: The Life of Alexandra Kollontai (Bloomington: University of Indiana Press, 1979); Beatrice Farnsworth, Aleksandra Kollontai: Socialism, Feminism, and the Bolshevik Revolution (Stanford: Stanford University Press, 1980).

7. Susan M. Kingsbury and Mildred Fairchild, Factory Family and Woman in the Soviet Union (New York: G.P. Putnam's Sons, 1935).

8. S.A. Smith, Red Petrograd: Revolution in the Factories 1917-1918 (Cambridge: Cambridge University Press, 1983).

9. Lewis H. Siegelbaum, The Politics of Industrial Mobilization in Russia, 1914-17 (New York: St. Martin's Press, 1983).

10. Alfred G. Meyer, "The Impact of World War I on Russian Women's Lives."

11. Karen Anderson, Wartime Women: Sex Roles, Family Relations, and the Status of Women During World War II (Connecticut: Greenwood Press, 1981), 174.

12. William H. Chafe, The American Woman: Her Changing Social, Economic, and Political Roles, 1920-1970 (New York: Oxford University Press, 1972), 195.

13. Campbell, Women at War With America, 237.

14. Karen Anderson, Wartime Women: Sex Roles, Family Relations, and the Status of Women During World War II; William H. Chafe, Paradox of Change: American Women in the 20th Century (Oxford: University of Oxford Press, 1992) and The American Woman: Her Changing Social, Economic, and Political Roles, 1920-1970; D'Ann Campbell, Women at War With America: Private Lives in a Patriotic Era (Cambridge, Mass.: Harvard University Press, 1984).

15. Aileen Kraditor, The Ideas of the Woman Suffrage Movement, 1890-1920 (New York: Columbia University Press, 1965); William O'Neil, Everyone Was Brave: The Rise and Fall of Feminism in America (Chicago: Quadrangle, 1969).

16. Chafe, The American Woman and The Paradox of Change.

17. Greenwald, Women, War, and Work.

CHAPTER II

RUSSIAN WOMEN WORKERS

With the beginning of Russia's first phase of industrialization in the late nineteenth and early twentieth centuries, Russian women were an essential component in its development and expansion. Yet, most women worked in lower industries that contained work similar to what they performed in the home: spinning, weaving, and cloth making. Once established in these textile industries, women were exploited as sources of cheap labor. In spite of this, their numbers increased steadily throughout the early 1900s and continued to do so through World War I. The study of wartime materials indicated that World War I created very little economic improvement in Russian women's employment. This lack of improvement, however, did not impede women from future participation in the work force.

In pre-revolutionary Russian society, women's roles in the public sphere, outside of the elite or intelligentsia, were very limited. Russian tradition, church, and laws, emphasized the lower status of women. The Russian language reflects these traditional attitudes, where the Russian word for woman is "zhenshchina," and the word for wife is "zhena." The Russians did not distinguish a woman outside

her role as wife. Many Russian proverbs also reflect a similar mentality such as:

> A hen is not a bird, nor a woman a human being.
> And who will bring the water?--The daughter-in-law.
> And who will be beaten?--The daughter-in-law.
> And why should she be beaten?--Because she is the daughter-in-law.[1]

Other proverbs about women denoted her lowly origin and her propensity to cause evil, "do not trust your horse, your dog or your wife," and "where the devil fails, he sends a woman."[2] Many proverbs also demonstrated the relationship between the members of a Russian family, "hit your wife harder, the soup will be tastier," and "beat the child from infancy, beat the wife from the beginning."[3]

The Russian Orthodox Church also continued the teachings of women's lower status through the Domostroi, a collection of sixteenth century literature that contained social, religious, and familial codes of conduct.[4] It was particularly noted for its advice on how to control and discipline women.

> But if a wife refuses...to obey, and does not attend to what her husband...tells her...it is advisable...to beat her with a whip according to the measure of her guilt; but not in the presence of others, rather alone...And do not strike her straight in the face or the ear...and do not use a rod of wood or iron...Keep to a whip...and choose carefully where to strike: a whip is a painful and effective, deterrent and salutary.[5]

Finally, the Russian Empire's Code of Laws bound women to their husbands, and denied women their rights of citizenship, similar to the "Code Napoleon."[6] Within the Russian Code of Laws, the wife was "obliged to obey her

husband as the head of the family, [and] to show him love, respect, and unconditional obedience."[7] In a continuation of the Russian State's confirmation of women's inferiority, the State Duma excluded "persons of the female sex" from the electoral lists.[8] Even after the emancipation of the serfs in 1861, women still had no more rights than before, even though they composed more than half the total population (Table I).

TABLE I

NUMBER AND PERCENTAGE OF RUSSIAN WOMEN FROM 1897-1922

	Number of women (in millions)	Women as percent of population
1897	63.2	50.3
1913	80.1	50.3
1922	71.1	52.3

Source: Norton T. Dodge, Women in the Soviet Economy: Their Role in Economic, Scientific, and Technical Development (Baltimore: The Johns Hopkins Press, 1966), 6-8, (for 1897). "Women in the USSR: Statistical Data." Soviet Review 13 (Summer 1972): 144; reprint, "Zhenshchiny v SSSR: Statisticheskie Materialy." Vestnik Statistiki 1 (1971): 1, (for 1913). "Zhenshchiny v SSSR." Vestnik Statistiki 1 (January 1977): 82, (for 1922).

Late nineteenth-century Russia experienced a decline in the Empire of agricultural production, and an increase of industrial development. When Russian industrialization

grew, especially at the beginning of the twentieth century, so did the number of job openings for both men and women. Women were drawn into the work force and exploited as sources of cheap labor. Yet, most women were refused entrance into those industries that required skills, and therefore obtained jobs mainly in the lower paid occupations. Thus, women came to dominate trades in textile, cloth, and food industries, while occupations that required skilled labor, such as heavy industry, employed male workers. Even with these prohibitions, female labor steadily increased not only in total numbers within the work force, but also as a percentage of the work total force (Table II).[9]

There were several non-industrial and industrial wage-earning possibilities for women. In the non-industrial, or non-factory areas, women found work in domestic services as servants, laundresses, cooks, and seamstresses. Domestic service was the largest employer of women in Moscow in 1902, employing 28 percent of the working female population. By 1912, however, because of the increasing number of job opportunities in the textile industry, domestic services employed only 25 percent of the working female population.[10] As industrialization continued to expand, more women were drawn into the factories to fill the positions. One of Russia's major enterprises was textile production, located in highly industrialized cities such as Moscow and St. Petersburg. These urban areas not only drew women from the

TABLE II

COMPOSITION OF FACTORY WORKERS BY SEX IN THE RUSSIAN EMPIRE, 1900-1917

Year	Total Population	Men	Women	Percentage of Women[b]
1900	1,692,252	1,251,240	441,012	26.1
1901	1,710,735	1,257,378	453,357	26.8
1903	1,690,478	1,227,364	463,114	27.4
1904	1,663,080	1,204,553	458,527	27.6
1905	1,693,323	1,212,609	480,714	28.4
1906	1,723,177	1,213,701	509,476	29.6
1907	1,811,267	1,272,489	538,778	29.7
1908	1,808,109	1,261,763	546,346	30.2
1909	1,831,396	1,266,301	565,095	30.9
1910	1,951,955	1,345,367	606,588	31.1
1911	2,051,198	1,412,921	638,277	31.1
1912	2,151,191	1,483,884	667,307	31.1
1913	2,319,577	1,595,664	723,913	31.2
1914	1,960,860	1,338,240	622,620	31.8
1915	1,922,572	---	---	---
1916	2,093,862	---	---	---
1917	2,093,862	1,254,628	839,243	40.1[a]
1917	2,933,333	2,053,333	880,000	30.0

a January 1, 1917, while all others are for years end.

b Formula: the number of women in a given year divided by the total number of people, multiplied by one hundred.

Source: Ministerstvo torgovli i promyshlennosti, Svod Otchetov Fabrichnykh Inspektorov za 1900 - [1914] god (St. Petersburg: Otdel promyshlennosti, 1902-1915), for 1900 see 1901, 25, 39; 1901, 43, ii, iii, xii; 1903, iv; 1904, iv, 42; 1905, viii, 40; 1906, vi, 40; 1907, vi, 43; 1908, ii, 43; 1910, 27, 30, xxxi-xxxii, lii; 1911, 22, 26-27, xlvii-xlviii, l-liii; 1912, 28, xlv, xlviii, li; 1913, 25-26, xliii, xlix; 1914, 27-28, xxxviii, xlii. See also: Rose Glickman, Russian Factory Women: Workplace and Society, 1880-1914 (Los Angeles: University of California Press, 1984), 83. For 1913, 1915, and 1916 see: S. O. Zagorsky, State Control of Industry in Russia During the War The Carnegie Endowment For International Peace: Division of Economics and History (New Haven: Yale University Press, 1928), 10-15. For 1917 see: G. N. Serebrennikov, The Position of Women in the USSR, 27. See also: A. Riazanova, Women's Labor (Moscow-Leningrad: 1926), 35; figures are of January 1st, cited in Susan M. Kingsbury and Mildred Fairchild, Factory, Family, and Woman: In the Soviet Union (New York: G. P. Putnam's Sons, 1935), 7.

TABLE III

PERCENTAGE OF WOMEN IN FACTORY EMPLOYMENT, BY INDUSTRY, 1900-1923

Branch	1900	1901	1910	1911	1912	1913	1914	1923
All industry	--	--	--	--	--	24.5	--	28.1
Textiles	44.6	46.9	51.6	54.1	52.9	53.9	57.0	58.7
Cotton	46.0	--	53.6	54.2	55.2	56.2	58.6	59.6
Wool	36.0	--	38.7	38.9	39.3	40.8	43.9	48.4
Silk	50.4	--	66.0	68.2	57.3	66.7	57.2	--
Linen, hemp, and jute	47.0	--	55.1	54.2	54.8	55.1	66.0	--
Mixed textiles	54.8	--	56.8	57.3	67.3	60.4	62.7	--
Food	--	--	20.1	20.5	21.9	22.2	23.5	23.3
Chemicals	--	--	33.4	34.1	35.5	36.6	37.7	31.2
Minerals	12.8	--	17.6	17.8	17.7	18.3	18.2	26.1
Paper	25.7	--	25.7	25.5	25.4	25.3	24.9	--
Metals	2.8	--	5.2	5.4	5.6	5.9	5.5	--
Wood	10.2	--	10.1	10.3	10.2	11.1	11.5	16.0
Animal products	--	--	15.2	15.7	16.4	16.5	19.0	--
Others	--	--	9.9	9.7	8.4	4.0	8.1	--

The branch of industry "Minerals" for 1923 includes extraction and processing, and statistics for this category are inflated because of the larger inclusion of these industries.

The branch of industry "Metals" for 1923 includes machine building and metalworking, and statistics for this category are inflated because of the larger inclusion of these industries.

Sources: Ministerstvo torgovli i promyshlennosti, Svod Otchetov Fabrichnykh Inspektorov za 1900 - [1914] god, 1910, xxxiii; 1911, xlix; 1912, xlvi, xlvii; 1913, xlv; 1914, xxxix, xl. For years 1900, 1910, 1913 and 1914, excluding all industry see: Glickman, Russian Factory Women, 80. For the year 1923 and all industry see: Dodge, Women in the Soviet Economy, 180. Also for 1923 see: G. N. Serebrennikov, The Position of Women in the U.S.S.R., 29-31. For Similar figures for textile industry see: A. G. Rashin, Formirovanie promyshlennovo proletariata v rossii-statistiko-ekonomicheskie ocherki (Moscow: Gosudarstvennoe sotsial'no-ekonomicheskoe izdatel'stvo, 1940), 196.

TABLE IV

CHANGES IN THE COMPOSITION OF THE WORKING CLASS WOMEN IN 1913-1917 (AS THE PERCENTAGE OF THE TOTAL) IN THE PRIVATE INDUSTRIES OF RUSSIA

Branches of industry	1913	1914	1915	1917[a]
Cotton	50.5	52.4	56.6	61.1
Wool	35.3	37.4	40.6	41.8
Silk	55.2	56.3	65.7	56.0
Linen	45.9	47.0	49.9	52.5
Mixed textiles	52.5	57.9	64.7	67.8
Paper	26.6	27.5	30.2	29.5
Printing	8.1	8.4	10.8	--
Sawmills and plywood	4.6	5.7	9.2	16.2
Iron and steel	6.8	7.3	12.4	[b]
Engineering	1.1	1.5	6.2	14.3
Glass, china, and ceramics	13.6	13.8	18.9	--
Manufacture of animal products	14.3	16.2	22.8	26.2
Flour	5.6	3.2	4.8	[b]
Sugar	14.8	13.8	19.8	29.3
Chemical	2.8	3.2	9.0	32.5
Gunpowder	30.1	22.5	30.1	--
Average total	23.0	23.4	28.2	38.8

a These figures are for January 1, 1917.

b For 1917 the branches of industry "Iron and steel" and "Engineering" were combined as well as the "Flour" and "Sugar" industries.

Source: Zagorsky, State Control of Industry in Russia During The War, appendix xxvi. See also Appendix A.

local population, but also from the migrant peasantry. The area of textile production was an extension of the cottage industry and used relatively low skilled labor. For these reasons textile production was an area that women had

concentrated in since the turn of the century, and later became known almost exclusively as a woman's domain.

During the first thirteen years of this century, women continued to expand in the textile industry. Between 1902 and the end of 1913, the percentage of women cotton textile workers increased from 47.8 to 56.2 percent.[11] In Moscow alone, by 1912 women comprised 50.8 percent of all textile workers, and composed 30.3 percent of Moscow's total work force. In St. Petersburg by 1913, women constituted 67.7 percent of textile workers and 29.4 percent of that city's total work force.[12] These two examples were representative of what was occurring in many of the industrial provinces throughout Russia (Appendix A, Tables XXIX and XXX). Soon, women dominated these specific factory occupations, such as textiles, cotton, silk, and linen; and by the end of 1913, Russian women were one out of every two workers in these occupations.

By the eve of World War I women comprised half of the textile workers in Russia. They also were 31.2 percent of all industrial workers, and 24.5 percent of the total Russian work force. After World War I, by 1923, women were 58.7 percent of the textile workers--only 1.7 percent higher than they were before the War (Tables III and IV).[13] Although World War I created some increases in women's employment, particularly in the textile industries, it was temporary and had little long lasting impact on Russian women's economic position in the factories.

In overall factory employment, the employment situation was again similar. At the turn of the century, women composed 26.1 percent of factory workers in Russia. From the period 1900 to 1913, the growth of female workers increased in greater numbers than those of male workers. The number of women workers rose by 64.1 percent, while the number of men workers increased by 27.5 percent (Table II).[14] In fact, the rate of increase for the employment of women was greater than both the rate of increase for male workers and factory workers as a whole, with the exception of one year (Appendix A, Table XXVIII). During 1901 to 1904 there was a decrease in employment of male factory workers and of overall factory employment. By the end of 1904, the economic slump of 1900-1903 affected women's industries, and as a result there was a decline in female employment.[15] In years following, there were also several agrarian disturbances that culminated in the Duma offering new lands in 1907. As a result their was a decrease in the overall and male factory employment in 1908. Although there was an increase in the numbers of employed women, the increase was not as great as the previous years. Many women, who originally left the farm for the factory to supplement their family's income, returned to the farms to aid in the maintenance of new lands. With the exception of the one aforementioned instance, the total number of factory workers between 1901 and 1913 increased by 34.8 percent--women increased 59.7 percent, men by 26.9 percent.[16]

The expanded use of women in factory work for the early 1900s was noted in several Factory Inspector's reports. These reports contributed useful insights into the reasons for the employment of women. A factory inspector in 1905 remarked that women were the "calmer, steadier element."[17] A year later, another factory inspector wrote in his notes that many manufacturers were employing women since 1904 as a result of the appearance of the workers movement: "manufacturers everywhere, where possible, replace men with women not only among adults, but among adolescents, and regard women's characters in factories as more peaceful and stable."[18] A similar report appeared the following year. An inspector explained that the reason for replacing men with women, particularly in the textile industries, were women's "greater diligence, the attentiveness and temperance of women (they do not drink, do not smoke), and that they are also compliant and less demanding with regards to their wages."[19] Therefore, the precedent and policy for employing women was clearly established before the advent of World War I.

Yet, the employment in factories of women workers continued to increase during the war, not only in absolute numbers, but also in percentage of women employed. In 1914, 31.8 percent of factory workers were women, and by January 1, 1917, an unofficial report claimed women had increased to 40.1 percent of factory employees (Table II). At the end of 1917, as well as Russia's participation in the

war, women composed 30.0 percent of the factory workers. Between 1914 and the beginning of 1917, the percentage of increase for women's employment was 35.8 percent; whereas men's decreased by 6.9 percent, and the total number of factory workers increased by 6.2 percent (Appendix A, Tables XXIV-XXVII). Cities such as Moscow experienced similar events as well--the number of women in the work force in 1914 was 39.4 percent, and by 1917 it rose to 48.6 percent.[20]

Women continued to spread into other economic occupations during the war, but by the end of 1917, the gains women acquired in male oriented industries such as mining, timber, chemical, and engineering, were lost. At the end of 1917, women were 30 percent of factory workers, similar to pre-war statistics (Table II). The decline of female employment continued. By 1922, women were one in every four workers in the entire economy.[21] Moreover, in 1923, women's employment was similar to, and in some industries even lower than, women's employment in 1913. Furthermore, the post-war years actually experienced a sharp decline of all industrial workers due to the Civil War's impediment to industrial growth. Many industries closed due to lack of materials, fuel, and manpower.[22]

In addition to these statistics, traditional historical sources also demonstrated that the war period had little significant impact, either positive or negative, on women's factory employment. Many industries suffered from the out-

break of war, particularly those that produced agricultural machinery and implements. From 1915 to 1917, these industries were reduced by nearly 80 percent as compared to pre-war figures.[23] Industries that worked directly for the army fared better, such as those dealing with textiles, leather, and metals. This development, however, also had a detrimental effect on general economic conditions. More often than not, these industries monopolized their commodities, either to the detriment of related industries, or neglecting output for general consumption. In the end, the war both employed vast numbers of people, and also closed many factories.

Moreover, the war affected rural areas in Russia more than its urban center, where most of the factories were located. As the war progressed, conscription increased (Table V). One source maintained that of the estimated fifteen million men conscripted, ten million came from the peasantry.[24] Estimations of 1916 suggested that women composed up to 72 percent of the work force on peasant farms.[25] This source continued to note that the deficiency of male industrial laborers was resolved several ways. In some instances peasants supplied the labor for industries. In other circumstances, refugees and prisoners of war filled the industrial ranks.[26]

TABLE V

TOTAL NUMBER OF MEN CONSCRIPTED, 1914-1917

Year	Number of men	Percentage of total male population of working age
1914	6,485,000	15.0
1915	11,695,000	25.0
1916	14,440,000	36.0
1917 (1st half)	15,070,000	37.0

Source: Zagorsky, State Control of Industry in Russia During the War, 51.

Another source, estimated from yearbooks of the Statistical Committee, stated that 11.7 million men were conscripted from rural areas, while 1.3 million men were mobilized from urban districts of European Russia. These urban districts represented 14.6 percent of the total number of urban males and 24.0 percent of laboring men ages 18 to 60.[27] Thus, also confirming the low number of male conscripts from the cities. This source continued to state:

> The urban population was much less affected by the mobilizations than the rural population. This is due to the fact that temporary exemptions from military service were granted to men employed in institutions and industrial concerns working for national defense.[28]

As Russia rapidly industrialized, necessity demanded that women become an integral part of industrial labor. Since 1900, factory women steadily increased in both total numbers and as percent of factory workers. At this time, women became dominate in the specific areas that later were

designated "woman's work." Additionally, manufacturers eagerly aided women's factory employment because of women's assumed calm, submissive temperament, and their willingness to work for lower wages.

With the commencement of World War I, the position of factory women altered little. Women continued to steadily increase in numbers, and in occupations that they had previously held before the war. Although the war opened some new occupations, women filled very few of these positions. Many industrialists attempted to fill the labor shortage though recruitment of male peasantry, refugees, and prisoners of war, and lastly through women. By the end of the war and in succeeding years, the position of factory women still was similar to their pre-war status. Many women remaining illiterate, returned to socially acceptable unskilled occupations, where they worked simple repetitive processes. World War I did not significantly alter the inferior economic position of Russian factory women either through greater occupational attainment or better wages.

Endnotes

1. Fannina Halle, Women in Soviet Russia (London: Viking Press, 1934), cover page. For other interesting traditional views on women see: Elaine Elnett, Historic Origin and Development of Family Life in Russia (New York: Columbia University Press, 1926), 111.

2. Elnett, Historic Origin and Development of Family Life in Russia, 111-113.

3. Ibid., 113.

4. The Domostroi was a sixteenth-century book that contained moral codes relating to the church. Fannina Halle, Women in Soviet Russia, and Elaine Elnett, Historic Origin and Development of Family Life in Russia, both discuss societal attitudes towards women.

5. Halle, Woman in Soviet Russia, cover page.

6. For information on the Code Napoleon see: Owen Connelly, French Revolution-Napoleonic Era (New York: Holt, Rinehart and Winston, Inc., 1979), 233.

The Code Napoleon, or civil code of 1804, granted many people individual liberty, excluding women. These laws were written to keep the family together. Civil marriages were required and divorces were difficult. Women were considered "less equal than men," and had all property and finances managed by their father or husband. Moreover, women had no recourse in law, where in most cases were treated as minors. These laws were not changed until the 1960's: in 1965, the divorce laws were rewritten, and in 1966 women were allowed to control their own finances (including their own checking accounts) and business affairs.

7. Vera Bilshai, The Status of Women in the Soviet Union (Moscow: Foreign Languages Publishing House, 1957), 11.

8. Ibid., 12. See also: Beatrice King, "Women in the USSR: Fifty Years of Emancipation," New World Review 35 (August/September 1967), 44-49.

9. Bilshai, The Status of Women in the Soviet Union, 7.

10. Rose Glickman, Russian Factory Women (Los Angeles: University of California, 1984), 60-61.

11. See Table II. See also: A. G. Rashin, Formirovanie promyshlennovo proletariata v rossii-statistiko-ekonomicheskie ocherki (Moscow: Gosudarstvennoe sotsial'no-ekonomicheskoe izadatel'stvo, 1940), 196. See also: Michael Paul Sacks, Women's Work in Soviet Russia: Continuity in the Midst of Change (New York: Praeger Publishers, 1976), 23.

12. Ibid.

13. For 1914 see: Glickman, Russian Factory Women, 80. For 1923 see: Norton T. Dodge, Women in the Soviet Economy: Their Role in Economic, Scientific, and Technical Development (Baltimore: Johns Hopkins Press, 1966), 180. Note that 1923 is the earliest data available after World War I.

14. Bilshai states the same percentages in her work. The numbers for this calculation were taken from Table II are were figured accordingly:

$$\text{For women, } \frac{723{,}913 - 441{,}012}{441{,}012} \times 100 = 64.1\%$$

$$\text{For men, } \frac{2{,}319{,}557 - 1{,}692{,}252}{1{,}692{,}252} \times 100 = 27.5\%$$

15. Olga Crisp, Studies in the Russian Economy Before 1914 (New York: 1976), 32.

16. Figures are obtained from Table I and Appendix B. The same figure are presented in : Glickman, Russian Factory Women, 84-85.

17. Ministerstvo torgovil i promyshlennosti, Svod Otchetov Fabrichnykh Inspektorov za 1905 (St. Petersburg: Otdel proymshlennosti, 1906), ix.

18. Rashin, Formirovanie promyshlennovo proletariata v rossii, 195. See also: Glickman, Russian Factory Women, 88; and Sacks, Women's Work in Soviet Russia, 24.

19. Ibid., 196-197.

20. Linda Harriet Edmondson, Feminism in Russia, 1900-1971 (Stanford: Stanford University Press, 1984), 162.

21. "Zhenshchiny v SSSR." Vestnik Statistiki 1 (January 1977), 86.

22. G. M. Serebrennikov, The Position of Women in the USSR (London: Books for Libraries, 1937), 29.

23. Michael T. Florinsky, The End of the Russian Empire (New Haven: Yale University Press, 1931), 42-43.

24. Semen Osipovich Zagorsky, State Control of Industry in Russian During the War (New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economic and History, 1928), 51. For more information on the impact of World War I on the countryside, and other areas see: Alfred G. Meyer, "The Impact of World War I on Russian Women's Lives," in Russia's Women: Accommodation, Resistance, Transformation eds. Barbara Evans Clements, Barbara Alpern Engel, and Christine D. Worobec (Los Angeles: University of California Press, 1991), 208-224.

25. Edmondson, Feminism in Russia, 162.

26. Zagorsky, State Control of Industry in Russia During the War, 51-53.

27. Stanislas Kohn and Alexander F. Meyendorff, The Cost of the War to Russia (New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1932), 19-20.

28. Ibid., 20.

CHAPTER III

WOMEN'S WAGES IN RUSSIA

Russian women dominated several industries long before the beginning of World War I and the creation of the Soviet government. The domination of women in these industries, especially textiles, led to a further division of labor in Russia. With the introduction and adoption of mechanized processes and the Revolution of 1905, came the increased use of women in industry.[1] Although there was a greater distribution of women in factories, wages remained much lower for female workers than for their male counterparts. These wage discrepancies in Imperial Russia continued through World War I and into the Soviet period. World War I and the new Soviet regime neither completely eliminated wage discrepancies nor greatly improved the ratio of women's earnings to men's.

The increase in numbers of women in factories and other areas of industrial production in the early 1900s was in part a result of factory owners' attempts to replace men with women for several reasons.[2] Women were considered, in general, more submissive and calmer, therefore less likely to demand higher wages. Factory owners also found it more profitable to employ women because they could be paid

considerably lower wages, therefore allowing owners to economize on personnel expenditures.[3]

There were other reasons behind manufacturers' actions. Generations of inculcated beliefs about the inferiority of women spread into the factories where manufacturers' rationale behind paying women lower wages, was that women were weak and unskilled. This explanation, however, was unsupportive. Many factory inspectors' reports describe several women's jobs as difficult and arduous, particularly in the textile industries. As Factory Inspector V. V. Sviatlovskii in 1889 noted the hard and filthy work of wool trampling, a primitive method of washing wool in wet clay. He continued to describe the harmful medical consequences of the procedure to these women. He concluded his description by stating "men do relatively light work on the...machine--which is not dangerous."[4] It was not apparent from Sviatlovskii's report that women were paid less because of their physical weakness. Yet, as a predominantly woman-oriented industry in late nineteenth and early twentieth centuries, textiles were the lowest paid branch of industry with the longest working hours between 1900 and 1913. Additionally, throughout this period women's earnings averaged one-half to two-thirds that of men's wages.[5] Neither the dangers of textile work, nor the lack of women's physical strength prevented manufacturers from employing women at low wages.

The assumption that women were less skilled was a more feasible explanation for their lower wages, but was still not the reason for their low pay. The reason why women performed predominately low skilled or unskilled jobs was due to their illiteracy. Literacy, more an advantage for men than women, allowed access to several skilled occupations in several branches of industry. These workers were considered "the best paid workers in the industrial world," and were uniformly male and were paid 13 percent more than illiterate male workers.[6]

Yet, lower pay for illiteracy was not the case in all industries. A comparative survey of monthly wages in the cotton industry in Moscow in 1912 demonstrated that women working on four looms, an occupation requiring a high level of skills, were paid almost the same as men who performed the same function (Table VI). Women working on four looms were paid 28.00 rubles per month, while men were paid 28.06 rubles per month. The percent of women earning these wages, however, was very small--only 2.2 percent.[7] Moreover, although only one-third the number of men were employed compared to women, there was two-times as many men in the more skilled four loom positions than women. The table also indicated through a comparison of one, two, and three loom positions, that the wage discrepancies between men and women were greater in areas requiring less skill. The average wages for women, according to information available in Table VI, demonstrated that women earned 89.7 percent

that of men, while among the least skilled women earn 69.1 percent that of their male counterparts.[8]

TABLE VI

COMPARATIVE PRE-WAR MONTHLY WAGES OF A GROUP OF MEN AND WOMEN IN THE COTTON INDUSTRY IN MOSCOW, DATE PRIOR TO 1912

Type of work	Number of workers		Percent on looms		Average wages in Rubles	
	Men	Women	Men	Women	Men	Women
Total	4,584	11,812	100	100	19.49	17.49
1 loom	392	559	8.6	4.7	17.68	12.20
2 looms	3,316	9,602	72.3	81.5	18.10	16.61
3 looms	630	1,280	13.7	10.8	25.18	24.46
4 looms	191	265	4.2	2.2	28.06	28.00
Reserve	55	108	1.2	1.0	21.03	15.02

Source: I. M. Kozminih-Lanin, Mechanical Weaving in the Government of Moscow (Moscow, 1912), cited by Susan M. Kingsbury and Mildred Fairchild, Factory, Family, and Woman in the Soviet Union (New York: G. P. Putnam's Sons, 1935), 12.

An examination of average monthly wages for workers in several Russian industries revealed similar wage discrepancies, particularity of those industries that predominantly employed women (Table VII). Industries that were gender-specific toward women, such as textiles, had lower monthly wages than male-dominated industries, such as metals and printing. In 1913, the average monthly wages

for men and women in the eleven industries mentioned in Table VII were twenty-five rubles. In the textile and cotton industries, the average monthly wages were lower than the average, by 68 and 69 percent, or 8 to 8.3 rubles less respectively. Yet, in the male oriented industries of metal trades and printing, the average monthly wages were 7.0 to 10.4 rubles higher than the average. Thus, these figures indicated a gender based fluctuation of wages both above and below the average monthly wage.

TABLE VII

AVERAGE MONTHLY WAGES, NUMBER OF WORKERS AND THE PERCENTAGE OF WOMEN IN RUSSIAN INDUSTRY, 1913

Trades	Average Wages in Rubles	Number of workers in thousands	Percent of women
Metal trades	35.4	534.6	4.8
Textiles	17.0	704.9	--
Cotton	17.3	480.4	56.1
Wool	--	92.1	41.1
Silk	--	--	67.6
Chemical	20.0	70.8	34.8
Match	14.3	20.1	--
Food	16.0	304.5	21.4
Woodworking	22.0	104.0	8.2
Paper	18.0	100.9	31.4
Printing	32.0	--	9.1
Average	25.0	2,550.0	--

A. G. Rashin, "Women's Labor in the U.S.S.R.," Labor Questions in Figures (Voprossii Truda v Tsifrak) Volume I, No. 10 (1928), 19, cited by Kingsbury and Fairchild, Factory, Family, and Woman, 13.

In some cases, the wage variances presented in Tables VI and VII did not illustrate the stark wage discrepancies between male and female workers in the same occupations. These two tables presented monthly wages based on the average of both male and female workers. The extreme discrepancies were mathematically truncated in the compilation of the statistical "averages." To an extent, these averages did not show the magnitude of earning differences between the two sexes because the average wage discrepancies illustrated were toned down. Nevertheless, Table III did present women's average wages in 1914 as compared to their male counterparts.

In 1914 women's average daily earnings in industry were 47.7 percent that of male workers.[9] In the women dominated industry of cotton textiles, women earned 72.1 percent that of male workers. While in the male dominated metal industries, women earned only 41.1 percent that of male workers. Again the trend demonstrated that most women were paid much lower wages than men even at the same occupations (Table VIII).

After an initial decline of all workers wages during the onset of World War I, wages slowly rose through the war period. At the beginning of World War I, women in some industries earned about 35 percent of what men were paid.[10] For example, in Moscow, in 1915 the average monthly pay for women weavers was 15 rubles, 8 kopecks. The average earnings for women textile workers ages 18 to 25 were

9 rubles per month. In small industries of Moscow, women textile workers earned 10 rubles a month, while in large industries they earned 14.5 rubles per month.[11]

TABLE VIII

WOMEN'S AVERAGE WAGES AS A PERCENT OF MEN'S AVERAGE WAGES, BY INDUSTRY, 1914

Industry	Women's wages
Cotton	72.1
Wool	67.8
Linen	65.4
Hemp and jute	64.8
Mixed textiles	55.0
Paper and polygraphics	46.5
Wood	44.3
Metal	41.4
Minerals	44.3
Animal products	58.2
Food processing	58.9
Chemicals	64.0
Extractive industries	62.8
Remaining nonspecified	50.6

Source: I. M. Kozminykh-Lanin, Zarabotki fabrichno-zavodskikh rabochikh v Rossii, Vyp. 1 (Moscow, 1918), cited by Glickman, Russian Factory Women, 107.

Women textile workers in St. Petersburg during the beginning of the war earned similar wages. In weaving, spinning, and cotton printing, women on the average earned 70.5 kopeks a day, comparable to the average female industrial workers' pay of 70 to 90 kopeks a day (Table

XXXII, Appendix B).[12] Moreover, by 1917 in Petrograd a sample of women workers in metal factories, the Skorokhod shoe factory, and the Nevka woolen mill earned from under 60 rubles to 210 rubles monthly, while men in the same occupations received up to 419 rubles a month (Tables XXXIII-XXXV, Appendix B).

In the Nevka wool mill by June 1917, where women were 9 times greater than men, the majority of women earned between 120 and 179 rubles per month, while 0.5 percent of these women workers received between 180 and 209 rubles. Male workers, however, earned between 180 and 329 rubles, with 0.1 percent of them acquiring 390 to 419 rubles per month. In this wool mill the beginning pay for male workers was often the top pay for women workers.

Similar trends occurred within the Petrograd metal industries and the Skorokhod Shoe factory. In the metal trades, which employed 10 times as many men as women, women's wages were between 60 and 239 rubles per month. Yet, 61.8 percent of the male workers earned 240 to 450 rubles per month. The shoe factory, employing 1.5 times as many women than men, contained the top pay for women in June 1917. Of those women surveyed, only .08 percent earned 300 to 329 rubles (Table XXXIII, Appendix B).[13] The majority of women (94.4 percent), however, received between 90 and 179 rubles, while the majority of men (86.7) earned between 180 and 419 rubles per month.

TABLE IX

AVERAGE MONTHLY WAGES OF A WORKER IN RUSSIA
DURING THE PERIOD 1913 TO 1916

Branches of industry	Wages in paper rubles			
	1913	1914	1915	1916
1. Industries connected with working of stone	20.0	19.5	20.5	30.2
2. Mining	22.1	21.2	22.0	42.2
3. Metallurgical	29.7	31.8	41.6	67.7
4. Engineering	37.2	40.6	56.8	82.4
5. Timber and plywood	24.0	28.3	33.2	48.7
6. Cotton manufacturing	17.2	17.4	22.9	33.6
7. Wool manufacturing	15.8	15.7	19.4	28.7
8. Silk manufacturing	20.2	16.3	21.1	29.2
9. Linen manufacturing	--	15.7	20.2	28.4
10. Mixed textiles	22.8	22.2	39.5	48.8
11. Paper	17.5	18.1	24.1	30.0
12. Printing, engraving, etc.	42.7	43.1	47.6	66.8
13. Chemical	26.1	32.7	35.6	64.1
14. Food	17.6	17.9	21.4	35.2
15. Leather	22.4	26.5	34.2	49.3
Average wage	21.7	23.0	31.6	50.1

Source: Semen Osipovich Zagorskii, State Control of Industry in Russia During the War (New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1928), appendix xxv.

In large scale industry during the war period, women's wages continued to be much lower than male workers (Tables IX and XXXI, Appendix B). From 1913 to 1916, wages were higher for industries that employed highly skilled male workers. Industries involving metallurgy, engineering, printing, and chemistry in 1913 received 4.4 to 21 rubles per month more than the average wages of the 15 listed

industries in Table IX. The same year, female oriented industries such as cotton, silk, linen, and mixed textiles paid 1.5 to 4.5 rubles less than all workers' average wages. By the end of 1916 in the previously mentioned industries, male workers received 14.0 to 32.3 more rubles than the average wage. Again women earned 1.3 to 21.6 rubles less than the average of all workers in the 15 listed industries in Table IX. World War I, therefore, did little to equalize women's wages in these industries. And considering the wage differentiation trend, World War I did little to alter any wage discrepancies in industry.

After the Bolshevik Revolution in November, 1917, wage discrepancies were to be eliminated and all workers were to be treated the same. Soviet historians claimed that from the beginning of the new socialist state, women "were paid the same wages as men."[14] The first Constitution of the Russian Federation of July 1918 established for women equal rights with men in all spheres of economic, cultural, social, and political life.[15] Lenin also spoke of equality, especially about the participation of selected women in productive labor occupying the same positions as men.[16] However, because of the centuries of prejudices against women, they still were not paid the same wages as men. In an attempt to alleviate such injustice through various decrees, the Soviet government established the principle of equal pay for equal work. One of these decrees, "On wages of Industrial, Office, and Other Workers of Soviet

Enterprises," set a minimum wage for all adult workers. And finally, "On General Regulations on Rates of Wages" stated that equal wages must be paid to "women doing similar work in quality and quantity to men."[17]

TABLE X

CORRESPONDING WAGES OF MEN AND WOMEN WORKERS IN INDUSTRY, 1914 AND 1924

Branches of industry	Daily wages of women workers in percent to men's earnings	
	1914	1924
Total average for all industry	47.4	64.6
Cotton textiles	72.1	65.6
Wool	67.8	77.6
Linen	64.8	67.5
Paper and printing	46.5	66.5
Wood working	44.3	61.8
Metal working	41.1	51.3
Animal products	58.2	72.9
Food	58.9	78.5
Chemicals	64.0	70.5

Source: Central Bureau of National Economic Accounting, U.S.S.R., unpublished data, (Moscow, 1932); and Labor in U.S.S.R., Handbook 1926-1930 (Moscow, 1930), 44; cited by: Kingsbury and Fairchild, Factory, Family, and Woman, 34.

Despite all of the new Soviet government's supposed wage equalization laws, by 1924, women continued earning wages at 51.3 to 78.5 percent of that of men (Table X). In male dominated industries, such as metal trades, women

workers received little more than half that of their male counterparts. The wage discrepancies were smaller in the women oriented industries, such as the cotton textile industry; however, women overall, earned only two-third of the wages of men.

As the number of women increased in industrial employment from the turn of this century, and particularly after the 1905 Revolution, so did the exploitation of women as a source of cheap labor. There were several reasons for this: women were considered passive, calmer, weaker and unskilled--and generally inferior. The years of social inculcation of female inferiority perpetuated lower wages for women. From 1900 to 1913, women's earnings averaged one-half to two-thirds that of men's wages. By the onset of World War I and through the beginning of the Soviet period, women's wages were still one-third to one-half lower than those of male workers. Even with the Soviet government's attempt at resolving wage inequalities, by 1923 women's wages were basically the same as they had been before and during the war. From 1900 to 1923, there was little if any actual improvement in women's employment or wages, a situation that many American factory women experienced as well.

Endnotes

1. Susan M. Kingsbury and Mildred Fairchild, Factory Family and Woman in the Soviet Union (New York: G. P. Putnam's Sons, 1935), 8.

2. A. G. Rashin, Formirovanie promyshlennovo proletariata v rossii-statistiko-ekonomicheski ocherki (Moscow: Gosudarstvennoe sotsial'no-ekonomicheskoe izadatel'stvo, 1940), 195-197. See also: Rose Glickman, Russian Factory Women: Workplace and Society 1880-1914, 84-88; and Michael Paul Sacks, Women's Work in Soviet Russia: Continuity in the Midst of Change (New York: Praeger Publishers, 1976), 24.

3. Glickman, Russian Factory Women, 88.

4. V.V. Sviatlovskii, Fabrichnyi rabochii (iz nabliudeniia fabrichnogo inspektora) (Warsaw, 1889), 12; as cited by: Rose Glickman, Russian Factory Women: Workplace and Society, 1880-1914 (Berkeley: University of California Press, 1984), 108.

5. G. M. Serebrennikov, The Position of Women in the USSR (London: Book for Libraries, 1937), 26-27.

6. Glickman, Russian Factory Women, 112.

7. For a similar explanation see: Glickman, Russian Factory Women, 106.

8. For a similar analysis and discussion on Table I see: Kingsbury and Fairchild, Factory, Family, and Woman, 12-13.

9. Serebrennikov, The Position of Women in the USSR, 26.

10. Zlata Ionovna Lilina, "Soldaty Tyla," Zhenskii trud vo vremia i posle voiny (Perm, 1918), 44. See also Alfred G. Meyer, "The Impact of World War I," in Russia's Women: Accommodation, Resistance, Transformation, eds. Barbara Evans Clements, Barbara Alpern Engel, and Christine D. Worobec (Berkeley: University of California Press, 1991), 214.

11. Lilina, "Soldaty Tyla," 44.

12. Ibid., 45. See also Glickman, Russian Factory Women, 200.

13. A. P. Serebrovskii, Revolyutsiya i zarabotnaya plata metallicheskoi promyshlennosti (Petrograd, 1917), 9; and I. A. Baklanova, Rabochie Petrograda v period mirnogo razvitiya revolyutsii, mart-iyun', 1917 god. (Leningrad, 1978), 3; cited by: S. A. Smith, Red Petrograd: Revolution in the Factories 1917-1918 (Cambridge: Cambridge University Press, 1983), 71.

14. Ibid., 32.

15. Vera Bilshai, The Status of Women in the Soviet Union, (Moscow: Foreign Languages Publishing House, 1957), 22.

16. Vladimir Lenin, "Socialism and the Emancipation of Women," The Woman Question (New York: International Publishers, 1951), 52.

17. Bilshai, The Status of Women in the Soviet Union, 22-24.

CHAPTER IV

AMERICAN FACTORY WOMEN

Like their Russian sisters, women in America also endured comparable male biases regarding their alleged inferiority. The American social perspective of women was that they were weaker, thus, less valuable. Societal norms and prevailing legality made them dependent on a male guardian for financial support. But, as the twentieth century began, it became necessary for many young American women to work, it also became imperative that these young women work at acceptable occupations.[1]

In the late nineteenth century, American women, as in Russia, also dominated gender specific industries, particularly those occupations relating to domestic and personal services. By the early twentieth century, women began to spread into other gender-oriented industrial occupations. Economic depression and the need for cheap labor in the late nineteenth and early twentieth centuries were the impetuses that created an increase in the number of women in the American industrial labor force.[2] As a result, women were already present, and in some occupations dominant, in some industries by the beginning of World War I. Contrary to Maurine Greenwald's assertions, World

War I was not a watershed event in the employment of women. It neither dramatically increased the numbers of women in factories during or after the war, nor did it significantly alter women's wages.

The basic theme that a woman's place was in the home as a wife and mother originated in Western Europe, as the "Victorian idea of Womanhood." This upper class ideal of a "lady" was the assumed model for most women in late nineteenth and early twentieth century Western societies. This assumption created a paradox for working class women, because this concept dominated societal attitudes through the mass press and helped shape their expectations and experiences in society, as well as society's reaction towards them.[3] The paradox became known as the "Cult of True Womanhood," which dictated that a woman's place was at home--as a daughter and sister, but primarily as a wife and mother. The home was deemed the safest place for her.[4]

These attitudes became particularly prevalent within nineteenth century literature, such as Henrik Ibsen's A Doll's House. Helman reminded Nora about his influence and control over her life as well as informing Nora of her role in society. By stating, "Before all else, you are a wife and mother," the author and the main male character reinforced the predominant societal attitudes.[5]

Similar ideas manifested themselves as early as the American colonial period, both in attitudes and laws. Women had no rights of property, or legal entity apart form their

fathers or husbands.[6] These attitudes persisted through the Revolutionary period, even though many women began questioning their position in the new American society. In a letter to her husband in 1776, Abigail Adams asked:

> In the new code of laws which I suppose it would be necessary for you to make, I desire you would remember the ladies and be more generous and favorable to them than your ancestors. Do not put such unlimited power into the hands of the husbands. Remember, all men would be tyrants if they could. If a particular care and attention is not paid to the ladies, we are determined to foment a rebellion, and will not hold ourselves bound by any laws in which we have no voice or representation.[7]

Even after the Revolution, however, old attitudes and laws still reinforced the Victorian ideas of womanhood.

Society's opinions of the 1800s continued to idealize the domesticity of women. Alexis de Tocqueville noted that although American women seemed more free than their European sisters, "the inexorable opinion of the public carefully circumscribes woman within the narrow circle of domestic interests and duties and forbids her to step beyond it."[8] Another author of this period wrote:

> Nature made woman weaker, physically and mentally, than man, and also better and more refined. Man, compared with her, is coarse, strong, and aggressive. By confining themselves to the duties for which nature has prepared them, respectively, the better they will harmonize. Let her stay in; let him go out.[9]

A woman whose productive and reproductive work remained in the home, was the predominant social ideal of women in American society. Moreover, these attitudes extended into American law, where women were accorded few rights. In most states they still were not allowed to own property, to have

guardianship of their children, to sue in court, or the right to vote.

During the mid 1880s, however, reality began to conflict blatantly with the Victorian ideas, as circumstances pressured more unmarried women to obtain jobs. Usually, working class single women and widows engaged in productive labor to secure financial security until marriage. Many married middle class women worked as well, but in proportionately smaller numbers. They frequently worked to supplement their husbands' wages, which were often inadequate.[10] As a result, many of these working women felt that the common laws perpetuated the inferior and unequal position of women, and in the mid 1800s steps were taken to remedy this situation.

Campaigns were undertaken to allow women to have control of the property they brought to their marriage. In 1848, New York state passed legislation allowing women legal responsibility for their own property. It was not until 1860, however, that women actually were allowed to own property, maintain guardianship over their children, to collect and keep their own wages, and to sue in court. In New York, and few other New England states, this "Married Women's Property Act" became law in 1870, with additional laws in 1882 and 1893.[11]

Although women were half the population, and were allowed to posses property, they were still denied political rights, except in a few states, until the Nineteenth

Amendment in 1920 (Table XI). Woodrow Wilson acknowledged the women's war effort in his speech in 1918 to the United States Senate in an effort to promote women's suffrage, which he considered "vital to winning the war."[12] Regardless of these advances, the Victorian idea of womanhood continued to dominate American attitudes, particularly in the economic sphere, where women remained confined to few low paying occupations.

TABLE XI

POPULATION OF THE UNITED STATES, 1890-1920

Year	Population (in millions)	Percent male	Percent female
1890	62.6	51.2	48.8
1900	76.3	51.2	48.8
1910	93.4	51.5	48.5
1920	105.7	51.0	49.0

Source: United States Census Office, Twelfth Census of the United States, 1890 (Washington D. C.: Government Printing Office, 1891), lxxi-lxxiv. United States Census Office, Thirteenth Census of the United States, 1900 (Washington D. C.: Government Printing Office, 1901), xciv. United States Census Office, Fourteenth Census of the United States, 1910 (Washington D.C.: Government Printing Office, 1911), 247. United States Census Office, Fifteenth Census of the United States, 1920 (Washington D. C.: Government Printing Office, 1921), 101-107.

At the turn of the century, women continued to worked in the traditional gender specific occupations. In 1900,

the category "domestic and personal services" employed 1.9 million female workers, or 40.4 percent the total female labor force. Yet, this same category only comprised 14.9 percent of all male workers.[13] This occupational area included: hairdressers, hotel and house keepers, governesses, maids, cooks, laundresses, nurses, midwives, and servants. Of the people employed in these domestic and personal services, women were concentrated in the serving occupations. Of the total female labor force 24.1 percent held servant positions, while only 1.1 percent of the total male labor force held similar serving positions.[14]

During the first decade of the twentieth century, the second highest concentration of women's employment over the age of sixteen was in manufacturing and mechanical pursuits. This industrial category composed 1.19 million women workers, representing 24.8 percent of the total female labor force. In this same area, male worker held 24.9 percent of the jobs (Appendix C, Tables XXXVI and XXXVII).[15] Yet, the numbers of male workers employed in manufacturing and mechanical pursuits were much greater because 82.0 percent of the total work force in this area were males. Yet, women were only 17.6 percent of the workers in manufacturing and mechanical pursuits (Table XII). Furthermore, of these occupations, the highest area of concentration of women remained the traditional female oriented manufacturing and mechanical industries, such as book binders, box makers, and glove makers.

Another area highly concentrated with women was textiles. In the textile industries, women were categorized as either operatives or laborers. Operatives were the semiskilled workers who worked in, or operated a machine, in a mill or factory; while laborers were considered the unskilled masses of workers in industry. As textiles workers, women were 77.4 percent of the total, whereas men were only 22.6 percent. As textile operatives, an occupation requiring more skill, women's numbers declined, although they represented 50.0 of the workers within that industry (Table XII).[16]

Within textiles themselves, women dominated such divisions as clothing, knit, silk, and rayon products (Table XIII). Women in these areas comprised 60.2 to 79.2 percent of the workers. Additionally, women were almost half of the cotton and floor covering workers (carpets, rugs, and other floor coverings). The other subdivisions under manufacturing and mechanical occupations were customary male dominated pursuits, especially in paper and dyeing occupations, where men were 75.0 to 89.9 percent of all workers represented. Although by the early 1900s women's employment increased, and they expanded into other manufacturing and mechanical pursuits, their employment trends were a continuation of the pre-1900 period.

TABLE XII

PERCENT OF MALE AND FEMALE BREADWINNERS 16 YEARS OF AGE AND OVER, BY OCCUPATION IN THE UNITED STATES, 1900

Occupations	Percent male	Percent female
All Occupations	82.3	17.7
Agricultural	91.7	8.3
Domestic/Personal service	63.2	36.8
Housekeepers and stewards	5.3	94.7
Launderers and laundresses	13.2	86.8
Nurses and midwives	10.1	89.9
Manufacturing/mechanical	82.4	17.6
Boxmakers	18.4	81.6
Paper	75.0	25.0
Textile mill operatives	50.0	50.0
Textile mill laborers	22.6	77.4
Other manufacturing	97.1	2.9

For additional information see Appendix C, Table I.

Source: United States Bureau of the Census. Statistics of Women at Work (Washington D.C,: Government Printing Office, 1907), 32.

TABLE XIII

PERCENT OF MALE AND FEMALE OPERATIVES AND LABORERS IN TEXTILES, BY DIVISION IN 1900

Division of textiles	Men	Women
Cotton manufacturers	50.6	49.4
Knit goods	26.8	73.2
Woolen and worsted manufacturers	--	--
Silk and rayon manufacturers	39.8	60.2
Carpets, rugs, and floor coverings	51.5	48.5
Dyers; dyeing and finishing	89.9	10.1
Clothing	20.8	79.2

Source: Janet Hooks, Women's Occupations Through Seven Decades U.S., Department of Labor. Women's Bureau. Bulletin no. 218 (Washington D. C.: Government Printing Office, 1947), 105-117.

TABLE XIV

PERCENT OF WOMEN OPERATIVES AND LABORERS IN IN TEXTILES, BY DIVISION, 1910-1920

Division of industry	1910	1920
Total distribution	50.0	48.4
Cotton manufacturers	47.6	44.5
Knit goods	72.0	71.9
Woolen and worsted manufacturers	46.2	44.0
Silk and rayon manufacturers	62.4	60.4
Carpets, rugs, and floor coverings	44.2	36.4
Dyers; dyeing and finishing	15.8	14.3
Clothing	72.6	64.9

Source: Hooks, Women's Occupations, 106-117.

TABLE XV

PERCENT OF WOMEN WORKERS (OPERATIVES AND LABORERS) IN INDUSTRY, BY BRANCH, 1900-1920

Industry	1900	1910	1920
All industry	18.1	20.9	20.4
Sales/clerks	20.6	25.2	30.2
Food and kindred products	9.7	15.8	19.4
Beverage	3.1	4.6	3.4
Tobacco	33.1	45.4	54.3
Textiles	48.9	50.0	48.4
Woodworking	2.9	3.5	5.5
Paper	34.1	27.5	24.8
Printing/publishing	16.7	19.7	18.2
Chemicals/petroleum	12.9	17.3	13.0
Rubber	34.4	26.5	16.9
Shoemakers	19.0	24.0	25.9
Clothing	12.6	10.7	6.5
Leather/tan and cure	4.1	4.1	7.5
Leather products	11.4	22.1	24.8
Glass/glass products	6.1	11.9	12.8
Pottery	18.6	20.3	21.4
Structural clay	1.0	1.6	2.1
Metal products/ machinery	3.9	4.8	6.2

Source: Hooks, Women's Occupations, 33-123, 139.

As industrialization continued to grow in early twentieth-century America, so did the demand for cheap labor. Women helped satisfy that demand. As industrialization expanded, there was a shift from domestic and personal services to manufacturing and mechanical, primarily among textile workers (Tables XIV and XV). By 1910 on the one hand, the number of women workers in domestic and personal services declined to 40.4 percent.[17] Yet on the other hand, the number of women workers increased in the textile industry, where women represented half of the textile operatives and laborers in America.[18] During this period, however, women continued to worked in the principal women-employing industries. In five of these industries--textiles, personal apparel, food and related products, tobacco products, and hand and footwear--women were 75.2 percent of all people employed in these areas. Specifically, textiles and personal apparel still composed the majority of all working women at 27.4 and 22.9 percent respectively.[19] Within the subdivisions of textiles, women concentrated in low skilled, low paid, occupations such as: clothing, knit goods, silk, and rayon. In these areas, women represented 62.4 to 72.6 percent of workers. While in occupations requiring more skill, such as dyeing and floor coverings, women were considerably less represented, ranging from 15.8 to 44.2 percent of the workers (Table XIV).

A similar set of statistics in Table XV further demonstrated that during the first decade of the 1900s,

women labored in gender specific occupations. Again, women concentrated within occupations of low pay requiring unskilled or semiskilled workers. Moreover, very few women were found in vocations outside of the textile industry, particularly pursuits considered highly skilled. In fact, the only pursuits considered skilled that women monopolized were dressmaking, millinery and seamstry, which of course, existed within the female oriented occupation of textiles. Overall, between 1900 and 1910, women in the labor force increased by 40 percent.[20] Therefore, it was clear through the available literary and statistical evidence that large numbers of American women were already employed before World War I. Moreover, women's employment was not insignificant in the years before the war. Many women had established themselves in numerous occupations, and even had become the principal workers in some of these industries.

Between 1910 and 1920, there were three main trends in women's employment: an increase of women workers in the production of war materials; a decrease of women workers in previous gender specified employment, which occasionally resulted in some wage increases for women; and an increase a few positions in occupations previously prohibited to women before the war. Women in domestic services between 1910 and 1920 decreased, employing 24.9 percent and 15.7 percent, respectively, of the total female labor force.[21] Textile work remained in 1920 the largest employer of factory women at 48.4 percent (Table XV). Yet, the percentage of women

working in this occupation in 1920 was lower than 1910. In fact, although women continued to work in gender specific occupations in 1920, many industrial areas observed a decrease in the number of women employed in factories in 1910. An even greater percentage of women were employed in the decades before the war than immediately after the war. The percentage increase of women in the labor force between 1910 and 1920 was 16.0 percent. This was 24.0 percent less than the percent increase between 1900 and 1910.[22] This clearly indicated that World War I did not create any long term increase in the employment of women.

The employment of women during the war period also demonstrated that there was a shift within the female labor force rather than an introduction of non-working women into the paid labor force.[23] The statistics demonstrated that the number of employed women remained fairly constant between 1910 and 1920. This also showed that the war only had a slight influence on women's occupational progress with regard to the percentages of women in the entire labor force. The percentage of women workers in all American industries in 1910 was 20.9 percent of the total labor force, while this figure decreased to 20.4 percent by 1920.[24]

Other figures indicated that in 1910, 8,075,722 females over the age of ten were employed; and in 1920, 8,549,511 females were employed, an increase of only 5.87 percent.[25] Taking into account the population growth with the number of

women working in this period, there was actually a decline in the number of women workers. In 1910, 17.83 percent of women over ten years worked, while in 1920, 16.51 percent of women worked.[26]

Additionally, World War I only created small changes in the distribution of women within the various occupations available to them. In 1910, there were 28 occupations employing 50,000 or more women, in 1920 there were only 30. In occupations that employed 1,000 women or more the 1910 census listed 165 pursuits, while in 1920, it only increased to 191. Yet, this increase was misleading because many occupations that were considered one job in 1910 were broken down in into several new positions in 1920. The percent increase of women workers during World War I was relatively small. The number of new jobs open to women was equally meager. And the number of women who entered these new occupations also remained relatively minute.[27]

This trend however, did not continue through the 1920s. Although by 1930 there was a 25.8 percent increase of women gainfully employed from 1920, the number of job pursuits had not greatly increased since the end of the War. In 1930, occupations that employed 50,000 or more women remained at 30, the 1920 figure. In the occupations that employed 1,000 women or more, there was only an increase of 17 occupational pursuits--a rise from 191 to 208.[28] Therefore, little post-war progress in obtaining other occupational pursuits for women occurred, and the war's influence on women's positions

in the American economy was nearly negligible. Both the statistical and literary evidence demonstrated that the increase in the numbers of women in industry, or the opening of new job occupations was far from spectacular--minimal at best.

Even with the predominance of the Victorian ideas in American society, American women steadily entered the paid work force before the 1900s. Although women concentrated within gender specific industries, they eventually dominated several of these occupations. It was clear that the decade before the war saw the permanent placement of women in American industrial society. World War I was not a watershed in the employment of women. It did not create a significant increase in women's employment during the war years. The war only created a shift within industries; and by the end of the war, the percentage of American women in the total labor force had actually declined. In many cases, the percentage of women employed in several industries was significantly lower than the employment percentage for those same industries in 1910. World War I reinforced the gender specific orientation of American industries, and opened few new occupations to women. The war neither significantly influenced American women's economic status, nor created wage equality for women.

Endnotes

1. At this time women outnumbered men in the United States (see Table I), particularly on the Eastern Seaboard where many men left the city for the West. Conversely, in the West it was not uncommon for men to outnumber women.

2. Sarah Eisenstein, Give Us Bread but Give Us Roses: Working Women's Consciousness in the United States, 1890 to the First World War (Boston: Routledge & Kegan Paul, 1983), 13.

3. Ibid., 55.

4. Ibid., 56.

5. Henrik Ibsen, Eleven Plays of Henrik Ibsen (New York: The Modern Library, 1946), 88.

6. Eleanor Flexner, Century of Struggle: The Woman's Rights Movement in the United States (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1975), 7.

7. Abigail Adams, Familiar Letters of John Adams and His Wife Abigail Adams during the Revolution (New York, 1876), 149-150, letter dated March 31, 1777. As cited by: Flexner, Century of Struggle, 15.

8. Alexis de Tocqueville, Democracy in America, vol. II (New York: Random House, Inc., 1945), 212.

9. Charles W. Marsh, Recollection, 1837-1910 (Chicago: 1910). As cited by: Eisenstein, Give Us Bread But Give Us Roses, 66.

10. Mary Kinnear, Daughters of Time: Women in the Western Tradition (Ann Arbor: University of Michigan Press, 1982), 120-121.

11. For an in depth discussion of this period, and the Married Women's Property Act see: Flexner, Century of Struggle, 71-102.

12. Ray Stannard Baker and William E. Dodd, ed., The Public Papers of Woodrow Wilson: War and Peace (New York, 1925-1927), I, 263-267. Cited in: Flexner, Century of Struggle, 321-322. William Henry Chafe, The American Women: Her Changing Social, Economic, and Political Roles, 1920-1970 (New York: Oxford University Press, 1972), 3; and, William Henry Chafe, The Paradox of Change: American Woman in the 20th Century (New York: Oxford University Press, 1991), 4.

13. United States Bureau of the Census. Statistics of Women at Work. (Washington D.C.: Government Printing Office, 1907), 32.

These figures are for breadwinners 16 years of age and older.

14. Ibid.

15. Ibid.

For a discussion of women in selected manufacturing and mechanical industries see: Sophonisba P. Breckinridge, Women in the Twentieth Century: A Study of Their Political, Social and Economic Activities (New York: McGraw-Hill Book Company, Inc., 1933), 138-166

16. United States Bureau of the Census, Statistics of Woman at Work, 32.

17. Ibid.

18. U.S. Department of Labor, Women's Bureau. The New Position of Women in American Industry. Bulletin no. 12 (Washington D.D.: Government Printing Office, 1920), 40.

In 1910, the Census grouped operatives and laborers together, unlike in 1900, where these two groups were listed separately. The is no individual percentages for 1910.

19. Ibid.

Personal apparel contains all areas of making wearing apparel or its materials associated with it.

20. Janet Hooks, Women's Occupations Through Seven Decades U.S. Department of Labor. Women's Bureau. Bulletin no. 218 (Washington D.C.: Government Printing Office, 1947), 33.

The Census figures are based on workers 10 years of age and older.

21. Hooks, Women's Occupations Through Seven Decades, 104. Mary V. Dempsey, The Occupational Progress of Women, 1910 to 1930, U.S. Department of Labor, Women's Bureau. Bulletin no. 104 (Washington D.C.: Government Printing Office, 1933), 7; and, The United States Bureau of the Census, Statistics of Women at Work, 32.

22. Hooks, Women's Occupations Through Seven Decades, 33.

These Census figures are based on workers 10 years of age and older.

23. For a discussion on this aspect see: Chafe, Paradox of Change, 66-68.

24. Hooks, Women's Occupations Through Seven Decades, 34.

Figures for this is based on gainful workers 14 years old and over.

25. Dempsey, The Occupational Progress of Women, 7. Maurine Greenwald, Women, War, and Work: The Impact of World War I on Women Workers in the United States, (Westport, Conn.: Greenwood Press, 1980), 13.

26. Figures were taken from Table I. In 1910 there were 45.3 million women, of which 8,075,722 worked, or 17.83 percent of women worked. In 1920, 51.8 million women, of which 8,549,511 worked, or 16.51 percent of women worked.

27. Dempsey, The Occupational Progress of Women, 4.

28. Ibid.

CHAPTER V

AMERICAN FACTORY WOMEN'S WAGES

While working as unskilled laborers in textile industries, women were paid considerably lower wages than their male counterparts in the same industry. Moreover, female oriented industries as a whole, were paid lower wages than the male-dominated industries. This trend, apparent from the beginning of female employment within industry, continued despite various attempts at minimum wages laws, or the onset of World War I. Although, the war increased wages for almost all workers, women continued to receive lower wages than men. In the end, World War I perpetuated the gender and wage discrimination that had characterized labor history since the middle of the nineteenth century.

There were several reasons for women's low wages in the late nineteenth and early twentieth centuries. One argument for women's lower wages was the belief that women were not the primary supporters of families. Employers looked upon women's wages as "extra spending money."[1] Women were not working for their own self-sufficiency, or for the livelihood of their families. As a result, this idea "still prevails with many employers...keeping women's wages at a low level."[2]

The primary cause, however, was the oversupply of women in the industrial labor markets. As manufacturers depended on low production costs to maintain profits, they attempted to pay the lowest possible wages. Because there was great competition among women to obtain jobs, many women accepted factory jobs at low wages rather than to face unemployment. Moreover, compounding the situation was the fact that many of these jobs required unskilled laborers. Women were then viewed as expendable sources of cheap labor, because thousands of women were waiting as replacements. As a result, women's bargaining power for better conditions, especially concerning hours and wages, was negligible.[3]

By the turn of the century, several government reports, particularly the 1900 Census, brought women's labor conditions to the forefront of American society. During the early 1900s, many Americans were amazed to discover that millions of women were working in stores and factories.[4] As awareness about women's employment grew, many Americans became astonished and concerned over women's working conditions. This concern culminated in a federal government report from 1907 and 1910, "Woman and Child Wage Earners in the United States." The study noted of women's employment and that the rates and earnings of women were "shockingly low in the majority of cases."[5]

As interest over women's and children's employment grew, so did the concern over wage legislation. This was such a great concern of the Progressive Party in 1912 that

their platform advocated minimum wage laws for women and children.[6] Yet, no federal laws were passed, and wage legislation remained in the domain of individual states. Some states, such as Massachusetts and Michigan, felt a concern over women's situations, and Massachusetts was the first state to implement minimum wage legislation in 1913.[7]

By 1923, only eight other states had followed Massachusetts' example.[8] In many of those states, however, the courts repealed or declared the laws unconstitutional; and other states soon abandoned similar legislation. Moreover, a federal minimum wage law was not enacted until 1938 with the establishment of the Federal Fair Labor Standards Act, which set an initial minimum wage for a forty hour week at twenty-five cents an hour.[9] While establishing minimum wage laws, this did not create wage equalization between men and women.

The interest in women's industrial employment, particularly wages and working conditions, first began with the release of the 1900 Census. There were over 4.83 million female workers over the age 16 in the United States. Of these workers, 1.95 million women worked in domestic and personal services, while 1.20 million women worked in manufacturing and mechanical industries. Within the latter industrial category, 906,713 women worked as textile operatives and laborers.[10]

As the largest industrial employer of women, textiles was the lowest paying industry for women. In a survey of

eight industries, wage discrepancies were illustrated from 1890 to 1913 (Table XVI and Appendix D, Table XXXIII).[11] Moving from cotton to the iron and steel industry (left to right), illustrated a progression from female employing to male employing industries. In almost every year listed, the hourly and weekly wages increased as more men were employed. The cotton industry, the lowest paying industry from 1890 to 1913, averaged from 9.7 cents to 14.9 cents an hour--an increase of 4.8 cents over a twenty-four year period. A full time employee's weekly earnings were similarly low during the same period. Wages ranged from 6.07 dollars to 8.58 dollars per week, an increase of only 2.51 dollars in twenty-four years. Hosiery, knit goods, woolens, and clothing manufacturers, all primarily women oriented industries, were also among the lowest paying industries during this time.

The highest paying industry in this survey was iron and steel. Form 1890 to 1913 the average hourly earnings ranged from 22.9 to 30.6 cent and hour--an increase of 7.7 cents, or 33.0 percent, over twenty-four years. The average full time weekly earnings were also considerable higher than others industries. In 1890, the average earnings were 15.39 dollars, and by 1913 the average wages rose to 20.29 dollars, an increase of 4.90 dollars in a twenty-four year period. The hourly and weekly wages for the iron and steel industries during this period, which were predominantly male, were almost twice that of the cotton industry.

TABLE XVI

AVERAGE FULL-TIME WEEKLY EARNINGS IN 'PAYROLL' MANUFACTURING INDUSTRIES, IN DOLLARS, 1890-1913

Year	Cotton	Hosiery and Knit goods	Woolens	Clothing
1890	6.07	6.93	7.26	7.97
1891	5.99	7.05	7.19	7.99
1892	6.00	6.56	7.31	8.23
1893	6.29	6.58	7.56	8.02
1894	5.78	5.90	6.76	7.84
1895	5.85	6.75	6.89	7.95
1896	6.14	6.44	7.01	8.09
1897	5.92	6.14	7.08	7.98
1898	5.81	6.20	7.41	8.41
1899	5.75	6.08	7.35	8.42
1900	6.42	6.06	8.01	8.38
1901	6.47	6.54	8.06	8.42
1902	6.62	7.08	8.09	8.56
1903	6.86	7.43	8.37	8.80
1904	6.73	7.13	8.08	9.19
1905	6.85	7.65	8.37	9.46
1906	7.37	7.97	8.98	9.88
1907	8.21	8.48	9.47	10.12
1908	8.05	8.44	8.92	9.06
1909	7.81	8.34	9.03	10.06
1910	7.81	8.35	9.05	10.32
1911	7.92	8.35	9.12	11.79
1912	8.52	8.72	10.04	11.99
1913	8.58	9.27	9.86	12.95

TABLE XVI CONTINUED

Year	Boot and Shoes	Lumber (sawmills)	Slaughtering Meat-packing	Iron and Steel
1890	9.95	9.78	10.46	15.39
1891	9.87	9.75	10.46	15.08
1892	10.07	9.65	10.46	14.94
1893	10.17	9.62	10.52	15.41
1894	10.05	9.17	9.50	13.51
1895	10.17	8.97	9.44	14.03
1896	10.11	9.10	9.38	14.18
1897	10.14	8.94	9.44	13.66
1898	10.14	9.17	9.74	13.84
1899	10.26	9.37	10.10	14.56
1900	10.40	9.60	9.86	15.87
1901	10.41	9.76	9.74	16.02
1902	10.75	10.03	10.22	17.09
1903	11.13	10.29	10.88	17.39
1904	11.44	10.29	10.98	16.03
1905	11.65	10.65	10.56	16.54
1906	11.76	11.20	10.68	17.19
1907	12.25	11.59	10.98	17.79
1908	12.02	10.68	10.38	15.89
1909	12.45	10.97	10.74	16.46
1910	12.40	11.72	11.04	18.01
1911	12.50	11.72	11.40	18.10
1912	12.38	11.86	11.52	18.71
1913	13.28	12.22	11.82	20.29

Source: Paul H. Douglas, Real Wages in the United States, 1890-1926 (New York: Augustus M. Kelley, 1966; reprint, 1930), 124.

In another survey of the Labor Board's top seven manufacturing industries, the average yearly earnings also demonstrated that gender based wage discriminations were predominant in American industries from 1890 to 1913 (Appendix D, Table XXXIX). In industries that were predominantly female oriented, wages were often one-third to one half that of the wages in male dominated industries.

The earnings illustrated, however, do not truly represent the stark discrepancies between men's and women's wages in industrial employment. The earnings represented were the averages of both men and women in that industry, thus eliminating the extremes within each industry. An examination of wages within the individually represented industrial categories demonstrated, however, that gender based wage discrepancies were also prominent within the industries themselves.

In the food industry, where the gender ratio between employed men and women was about equal, the average yearly earnings fell between that of textiles and the iron and steel industry discussed above. Yet within the food industry itself, between 1890 and 1913, women were the primary workers in only confectionery and fruit and vegetable canning. Men dominated the other three industrial divisions (Table XVII). In 1899, in these two female oriented industries, women earned on the average one-third to one-half that of men's wages working in the same industries. The percent increase of women's wages from 1899 to 1913 was 26 percent for confectionery, and 70 percent for the fruit and vegetable divisions. Yet, in the three male dominated divisions, the percentage of increase in wages was 27 percent for slaughtering and meat-packing, and 35 percent for both the bread and bakery division and the butter and cheese industry. Although the percent increase in women's wages in the fruit and vegetable industries was quite high,

by 1913, women still earned at least one-third less than their male counterparts in the food industry.[12]

Similar wage variations occurred within the paper and printing industry as well (Table XVIII). Within this industry, women dominated paper box making, while men were predominant in the other three industries. As in the food industry, in 1899, women earned one-third to almost one-half less than their male counterparts. By 1913, the percent wage increases for all industries ranged from 40.3 to 45.9 percent. Because wage increases were stable among the four divisions within paper and printing, women's wages in 1913 remained one-third to one-half that of men's earnings. And their situation persisted relatively unchanged.

The statistics demonstrated that between 1889 and 1913 women were paid less than men in American factories. Moreover, the evidence also illustrated during this period that even within individual industries, gender based wage discrepancies abounded. Yet, wage discrepancies did not end in 1913. Although wage inequalities were reduced during wartime, World War I continued the earning segregation that had already dominated the American industrial system for several decades.

TABLE XVII

AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE-EARNERS IN THE FOOD INDUSTRIES, 1899-1913

Year	Confect-ionery	Bread and bakery products	Butter, cheese Cond. milk	Fruit and vegetable canning, preserving	Slaughter-ing, meat-packing
1899	299	463	480	240	488
1900	279	---	---	144	---
1901	294	---	---	174	---
1902	295	---	---	208	---
1903	363	---	---	243	---
1904	323	531	541	287	544
1905	354	---	---	291	533
1906	287	---	---	299	580
1907	265	---	---	322	593
1908	222	---	---	320	559
1909	349	592	601	318	574
1910	343	579	596	370	586
1911	331	600	635	311	602
1912	333	602	647	411	607
1913	376	626	650	391	622

Source: Douglas, Real Wages, 254.

TABLE XIX

AVERAGE FULL-TIME WEEKLY EARNINGS IN 'PAYROLL' MANUFACTURING INDUSTRIES, IN DOLLARS, 1914-1921

Year	Cotton	Hosiery and knit products	Woolens	Clothing
1914	8.69	9.43	10.01	13.13
1915	8.97	9.94	10.10	13.00
1916	10.19	11.03	12.33	14.27
1917	12.01	12.61	15.10	16.29
1918	14.95	15.34	18.57	19.79
1919	18.22	15.99	24.83	21.36
1920	24.86	20.99	30.33	32.25
1921	18.31	18.78	26.73	30.76

TABLE XIX CONTINUED

Year	Boots and shoes	Lumber (sawmills)	Slaughtering meat-packing	Iron and steel
1914	13.29	11.97	12.06	19.52
1915	12.96	11.25	12.48	19.45
1916	14.14	13.03	14.10	24.63
1917	15.35	15.44	15.72	31.05
1918	17.35	19.61	19.19	38.43
1919	22.67	22.08	20.59	43.16
1920	27.17	25.07	22.13	47.01
1921	25.71	19.29	24.05	36.22

Source: Douglas, Real Wages, 124.

TABLE XVIII

AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE-EARNERS IN THE PAPER AND PRINTING INDUSTRY, 1899-1913

Year	Paper and wood pulp	Paper boxes	Book and job printing	Newspaper and periodical printing
1899	418	295	496	532
1900	418	307	495	536
1901	441	318	520	567
1902	470	307	512	564
1903	477	329	556	614
1904	485	318	555	618
1905	491	334	552	617
1906	496	340	562	629
1907	512	350	578	647
1908	526	346	612	683
1909	537	355	612	685
1910	548	366	624	699
1911	556	375	637	713
1912	590	402	675	753
1913	608	419	696	776

Source: Douglas, Real Wages, 292.

From 1914 to 1921 in the same survey of the eight industries mentioned for the period 1899 to 1913, wage discrepancies persisted throughout the war period (Table XIX and Appendix D, Table XL). Textiles remained one of the lowest paying industries for women. In particular, female oriented occupations in "cotton" and "hosiery and knit," remained the lowest paid vocation for women. The "iron and steel" industry persisted as the highest paying, and mainly male dominant, industry. Again, the earnings presented in Table XIX were based on averages of male and female workers. The actual wage discrepancies within many factory occupations were not evident. Only in three industries were wage inequalities apparent. One was the iron and steel industry, where 90 percent of the workers were male. The other two were cotton, and hosiery and knit, where women were 70 percent of the workers.[13] In industries where the percent of employed male and female workers were relatively equal, wage inequalities were difficult to detect, unless male and female wages in the same occupation were examined.

A further breakdown of these same industries into their divisions, however, most clearly demonstrated the existence of these salary disparities between men and women (Tables XX and XXI). The industries that demonstrated these discrepancies before the war, continued to do so during and after the war. These two industries were "food" and "paper and printing." In the five divisions of the food industry, women concentrated in "confectionery" and in "fruit and

vegetable canning and preserving." In both these industrial divisions in 1914, women earned one-third to one half less than the male workers in the same industry. Even with wage increase for both sexes, this trend continued in 1921. In the four paper and printing divisions, women only were dominant in box making. In 1914, they too received one-third to one-half less than that of male workers in their specified industries. By 1921, although some wages had improved, women still only earned one-fourth to one-half less.[14] Thus, the available evidence shown clearly illustrated that wage inequalities continued through World War I.

TABLE XX

AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE EARNERS IN THE FOOD INDUSTRY, 1914-1921

Year	Confect-ionery	Bread and bakery products	Butter, cheese, cond. milk	Fruit and vegetable canning, preserving	Slaughter-ing, meat-packing
1914	400	620	687	367	629
1915	387	637	671	401	650
1916	414	682	709	420	731
1917	477	757	751	455	853
1918	553	940	925	602	1078
1919	712	1118	1074	739	1301
1920	860	1134	1264	861	1447
1921	823	1326	1198	706	1306

Source: Douglas, Real Wages, Table 90.

TABLE XXI

AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE EARNERS IN THE PAPER AND PRINTING INDUSTRY, 1914-1921

Year	Paper and wood pulp	Paper boxes	Book and job printing	Newspaper and periodical printing
1914	602	413	693	774
1915	625	405	715	789
1916	681	452	737	807
1917	798	493	769	830
1918	1028	621	918	969
1919	1193	776	1150	1199
1920	1454	938	1436	1528
1921	1206	875	1496	1621

Source: Douglas, Real Wages, 292.

TABLE XXII

TOTAL PAYROLL AVERAGES IN DOLLARS PER WEEK FOR 1914-1919, BY INDUSTRY, FOR MEN

Industry	1914	1918	1919	1920
Metal	13.18	26.80	24.75	29.79
Cotton	10.00	20.60	17.10	24.87
Wool	11.52	23.21	18.61	28.70
Silk	11.77	21.54	22.69	28.98
Boots/shoes	14.70	24.04	25.90	28.70
Paper	12.73	22.40	22.40	28.82
Rubber	14.00	28.60	29.35	36.32
Hosiery/knits	11.25	22.50	22.55	27.65
Printing/publishing	18.33	23.69	24.84	31.67

Source: National Industrial Conference Board, Wartime Changes in Wages: September, 1914-March, 1919, Research report no. 20 (Washington D.C.: Government Printing Office, 1919), 12, 24, 39, 55, 67, 78, 85; and National Industrial Conference Board, Changes in Wages During and Since the War: September, 1914-March, 1920, Research report no. 31 (Washington D.C.: Government Printing Office, 1920), 7, 13, 20, 27, 32, 36, 39, 44-48.

TABLE XXIII

TOTAL PAYROLL AVERAGES IN DOLLARS PER WEEK FOR 1914-1919, BY INDUSTRY, FOR WOMEN

Industry	1914	1918	1919	1920
Metal	6.45	14.35	14.50	17.01
Cotton	7.70	15.37	12.75	19.34
Wool	8.70	16.42	13.46	20.78
Silk	7.47	14.06	15.10	18.87
Boots/shoes	9.18	14.24	14.69	17.18
Paper	7.47	13.95	12.24	16.54
Rubber	9.25	12.94	14.90	19.43
Hosiery/knits	6.38	15.25	13.87	18.31
Printing/publishing	8.27	11.16	12.51	16.03

Source: National Industrial Conference Board, Wartime Changes in Wages, 12, 24, 39, 55, 67, 78, 85; and National Industrial Conference Board, Changes in Wages During and Since the War, 7, 13, 20, 27, 32, 36, 39, 44-48.

For Table XXII and XXIII, 1914 and 1918 averages were taken in September; and for 1919 and 1920, averages were from March.

The National Industrial Conference Board presented similar information on the changes of wages between 1914 and 1919.[15] Between September, 1914 and March, 1920, there were considerable changes in wages, for both men and women. In general, the weekly earnings for men increased between 73 and 159 percent.[16] The smallest increase occurred in "printing and publishing," while the greatest increase was in the "rubber" industry. The weekly wages for women increased between 87 and 187 percent during the same period. The smallest increase occurred in the "boot and shoe" industry, while the largest earnings increase was received

in the "hosiery and knit" industry. Even with the greater percentage increase in women's wages over men's, women's weekly earnings continued to remain lower than those for men (see Table XXII and XXIII). In the nine occupations listed, women on the average earned one-fourth to one-half less than male workers (Appendix D, Table XLI). The greatest wage inequalities existed in the primarily male dominated industries, such as metal, rubber, and paper and printing. Within these three industries, women earned one-third to one-half as much as male workers did in the same industries. The smallest wage discrepancies between men and women existed in the industries where women were the primary workers, such as cotton factories and wool mills. In these two industries women only earned one-fourth less than male workers. Although by 1920, wages for both men and women increased compared to 1914 figures, only five industries actually received high enough wage increases to actually close the gap between male and female earnings. The metal industries saw an 8.2 percent increase, while hosiery and knits received a 9.5 percent increase. The other three industries, cotton, silk, and paper and printing, obtained slight increase of .8, 1.6, and 5.5 percent. The last four industries listed, actually saw a widening of the wage based gap. Wool, boots and shoes, paper, and rubber industries reported a 1.3 to 12.6 percent decline in wages for women.

In the American industrial system, manufacturers employed women for several reasons. One reason was the

belief that women were working only for extra spending money, and not working to support a family. Therefore, women did not need substantial pay. The primary reason, however, was the abundance of women in the labor market. Because of the great competition among women for jobs, they often accepted any position, rather than face unemployment. This situation was brought to the forefront of American society through several federal government publications in the early 1900s. Despite the increased awareness, women's wages still remained twenty-five to fifty percent lower than men's wages. Furthermore, women continued to concentrate in only a few specific occupations. Additionally, those few women employed in male dominated industries received one-third to one-half less for their work than their male counterparts. This trend, present from the mid nineteenth century, continued through the war period. Wage discrimination not only was perpetuated between gender oriented industries, but also within the individual industries. Ultimately, World War I neither decreased the differences in earnings between the sexes, nor changed the attitudes that predominated American labor history since the middle of the nineteenth century.

Endnotes

1. United States Department of Labor, Women's Bureau, Women at Work: A Century of Industrial Change, Bulletin no. 115 (Washington D.C.: Government Printing Office, 1933), 7.

2. Ibid., 7.

3. Ibid., 6.

4. United States Department of Labor, Women's Bureau, The Development of Minimum-Wage Laws in the United States, 1912 to 1927, Bulletin no. 61 (Washington D.C.: Government Printing Office, 1928), 3-4.

5. Ibid.

6. Ibid., 4.

7. Ibid.

8. South Dakota was the first state after 1913 to enact a minimum wage law. Eight more states soon followed: Arizona, Arkansas, the District of Columbia, Kansas, North Dakota, and Texas. This study also includes "Porto Rico" as one of the eight states.

9. William Henry Chafe, The American Woman, Her Changing Social, Economic, and Political Roles, 1920-1970 (New York: Oxford University Press, 1972), 81.

10. United States Bureau of the Census, Statistics of Women at Work (Washington D.C.: Government Printing Office, 1907), 32.

11. The wages used were provided by Paul Douglas' Real Wages in the United States, are disputed by many economists, political scientists, and historians. Albert Rees' Real Wages in Manufacturing, 1890-1914, explained that they disputed Douglas' figures because he claimed a slight rise in real wages, and that his figures were based only on statistics from Massachusetts. Douglas' statistics, however, were only used in this thesis as a comparative aspect of men's and women's wages, not as evidence for the rise or fall of wages.

In Rees' explanation he stated that there were five indexes of hourly wages (six weekly) beginning with Bulletin 77 of the Bureau of Labor Statistics. This report determined that there was a rise in real hourly wages for 1890 to 1907. In 1914, I.M. Rubinow in "The Recent Trend of Real Wages," indicated a sharp fall in real wages after 1907, but he also extended the figures to cover 1912. In 1917, F.W. Jones in "Real Wages in Recent Years," amended

Rubinow's version. He states that wages fell slight less than before, but he did not significantly alter Rubinow's conclusion. in 1921, Paul H. Douglas and Frances Lamberson in "The Movement of Real Wages, 1890-1918," extended the figure to 1918. They rejected Jones' conclusions, and instead demonstrated a slight rise from 1912-1914, but not enough to offset the fall of 1907-1912. In 1925, Alvin H. Hansen, in "Factors Affecting the Trend of real Wages,' accepted Douglas' and Lamberson's proposals, but also included a new cost of living index. This was the first time that the purchasing power of wages was not expressed in terms of food. It included clothing, fuel, lights, and house furnishings. Hansen concluded that there was no trend. In 1930, Douglas in Real Wages in the United States, provided a revision also using Hansen's cost of living estimates. Within industries the averages were weighted averages of actual rate rather than relatives, as used in the past. The information about the industries were combined from Census and Manufacturing employment rates. His conclusion stated that there was a slight rise in hourly earnings, while weekly rates were slightly below Hansen's. Rees concluded that although, Douglas' figures may not accurately reflect United States employment wages as a whole, they were the best estimates previously available. In any case, Rees provided his own revision, which is provided in Table XXXVIII next to Douglas' figures.

Willford Isbell King's The Wealth and Income of the People of the United States, demonstrated a similar trend to Douglas'. In 1912, his information (pp. 265-66) provided the same wage discrepancies as Douglas.

Average Money Wage Per Hour in 1912 for Women and Men

Industry	Women	Men
All	.1541	.2749
Cotton	.1446	.1725
Wool	.1783	.2330
Silk	.1528	.2148
Knit	.1444	.2148
Boots and Shoes	.1985	.3288

12. This figure is from the minimum and maximum wage discrepancies.

$$\frac{240 \times 100}{488} = 49.18 \qquad \frac{299 \times 100}{463} = 64.57$$

For percent increase between 1899 and 1913:

$$\frac{1913 - 1899}{1899} \times 100$$

The final formula used to determine the percent of earnings:

$$\frac{391 \times 100}{622} = 62.86$$

13. Statistics are from Table II and Iv in Chapter IV.

14. The maximum and minimum wage discrepancies were determined through he same formula in footnote eleven.

15. The National Industrial Conference Board published over one hundred publication on the war period. Three publication in particular deal specifically with wages of this period.

National Industrial Conference Board, Changes in Wages During and Since the War: September, 1914-March, 1920, Research report no. 31, September, 1920 (New York: National Industrial Conference Board, 1920). See also by the same author: Wages, Hours and Employment in American Manufacturing Industries: July, 1914-January, 1924, research report no. 69 (New York: National Industrial Conference Board, 1924); and Wartime Changes in Wages: September, 1914-March 1919, Research report no. 8 (New York: National Industrial Conference Board, 1919).

16. The percent increase was determined as follows, for example the percent increase for either men or women in a specific division is:

$$\frac{1920-1914}{1914} \times 100 = \text{percent increase}$$

CHAPTER VI

CONCLUSION: A COMPARISON OF RUSSIAN AND AMERICAN WOMEN

During the late nineteenth century, the industrial revolution fundamentally altered society and changed women's lives forever. As factories developed, they incorporated many traditionally held women's occupations. Weaving, spinning, and cloth making moved from the home to the factory. In Russia, this industrial transformation often decreased the family's earnings. As a result, Russian women were drawn into the factories to supplement their family's income. Russian women worked in industrial occupations similar to the work they had done at home, work such as cloth making or other textile related occupations. Manufacturers paid women less because of traditional attitudes that viewed women as being inferior, thus deserving of less pay.

Later, factory owners discovered that not only would women work for lower wages, but also that they were more stable and reliable than men. Accordingly, Russian employers, whenever possible, replaced men with women workers. By 1900 Russian women were one-fourth of the total Russian industrial labor force.

Industrialization also radically altered late nineteenth century American women's lives. Many women found factory work as a temporary means to supplement their own or their family's income until they married. Yet, traditional views about women's work confined many American women to appropriate, "ladylike" occupations. These jobs were almost exactly the same as those that done by Russian women: spinning, cloth making, and lace making.

In most cases, however, American bosses believed that women worked only to acquire "pin money," or extra spending money, not to earn money to support a family. By the 1900s, American manufacturers, like their Russian counterparts, realized that women workers were inexpensive and expendable sources of unskilled labor. By 1900, women made up eighteen percent of the American labor force.

Although market conditions created a greater necessity for Russian women to enter the job market than was the case in America, women in both societies faced similar biased attitudes that restricted them to specific low paying occupations. By the early 1900s, Russian and American women laborers were clear and visible segments in many factories within both countries, particularly in the textile industry. In 1910 not only were women in the textile industry, but also slowly, they began working in other industrial sectors. Russian and American women worked in areas such as food preparation and preservation and also box making. By years end, Russian women were over one-third of all industrial

laborers, while American women made up over one-fifth of industrial workers.

The employment of women during World War I continued to expand in both nations. This wartime employment, however, was not the prodigious catalyst in changing the economic status of Russian or American women workers as previously believed. In many surveys for both nations, women constituted almost two-fifths of all factory workers by the war's end. Yet in the postwar economic slump that lasted until 1922, the number of employed women fell to less than the pre-war figures.

In the case of Russia, the war did not significantly alter earlier trends because the drainage of manpower occurred primarily from the countryside, within the peasant population. Furthermore, military exemptions were granted to many men employed within important industrial positions; and in other cases, male refugees and prisoners of war filled the vacated industrial ranks before women were considered for employment.

In the American situation, few new positions opened for women during this period. As the war effort increased, many women shifted from textiles to war material production. After the war was over, these women returned to their traditional occupations. Very little new opportunities for American women occurred during the war period. Furthermore, the actual duration of the American involvement in World

War I was so short that American industries did not feel an excessive male manpower drain.

Low wages characterized women's labor history in both Russia and the United States. Women's earnings remained anywhere from twenty to fifty percent lower than their male counterparts. In part, the reason existed in the age-old male attitudes on the inferiority of women. Employers in both countries believed that women's work required less strength and skill than men's work, and that women were not essential to the continuity of the family. As a result, women were paid smaller wages than men in the same occupations. Yet, another reason for women's low wages was the fact that women perpetuated their own situation: they would work for these low wages, rather than confront unemployment.

These wage inequalities, prevalent in the decades before World War I, continued through the war period. In Russia, however, wage disparities diminished near the end of the war. In industries where women were the primary workers wage differences were smaller, but in industries where women were the minority, the wage discrepancies were greater: despite the Marxist dogma dictating equal wages for all proletarians. The reduction of wage disparities that did occur came because of new Soviet War Communism legislation that required equal pay for equal work, which prohibited any more than a one-and-three-quarter-times wage difference between skilled and unskilled workers. Although these laws

were implemented, enforcement of them remained relaxed, and wage inequalities persisted. Women continued to receive one-third to one-half less than their male counterparts for the same work. Neither World War I nor the ideological commandments of the new Soviet State had any great impact on women's labor and wage equalization.

American women encountered similar situations in their capitalist environment. Wage disparities persisted throughout the war period. By 1920, American women industrial laborers earned one-fourth to one-half less than men in the same occupations. As in Russia, the end of the war created smaller wage disparities. However, these wage disparities only were less in industries where women were the primary workers. They remained the same, and some instances greater, in industries where women were the minority.

In the late nineteenth century, Russian and American women were an integral portion of both countries' industrial development. By the early twentieth century women had become permanent fixtures in many industries. World War I had little influence on the attitudes over and employment of women. In many respects, the war actually perpetuated the traditional attitudes of both societies that confined women to selected, low paying occupations instead of accelerating the integration of women into the general labor force. World War I created no significant transformation of the Russian and American woman workers' economic situation,

beyond consolidating their role as a continuing and essential part of each countries' industrial life.

SELECTED BIBLIOGRAPHY

Bibliographical Essay

Since the 1970s, Russian women's history has been an expanding field. Studies within this field, however, have been limited to two general areas: nineteenth century feminism, and twentieth century communism. In both areas until recently, access to primary sources has been difficult, if not impossible, owing to the capricious nature of the Soviet archival administration.

The Factory Reports (Svod otchetov fabrichnykh), one of the rare and accessible primary sources, were limited in themselves because they contained no information about workers wages in Imperial Russia. They also provided no information on the war period because they ended in 1914. Other primary source material specifically related to women's work and wages was virtually non-existent. Such documents as A. G. Rashin's Formirovanie promyshlennovo proletatiata, A. Riazanova's Zhenskii Trud, and Susan Kingsbury and Mildred Fairchild's Factory Family and Woman provided only a few brief and general pages on women's economic lives in the pre-Soviet period. Additionally, these author mainly emphasize the improved conditions of women's work in the new Soviet state, not the condition of

women laborers in the early twentieth century. However, these volumes provided access to further data, such as Kozminih-Lanin's Zarabotki fabrichno-zavodskikh rabochikh v Rossii, V. V. Sviatlovskii's Fabrichnyi rabochii, and otherwise unavailable materials.

Research into the war period provided difficulty again because of the inaccessibility of primary materials. Statistical reports from the Soviet government were not only difficult to access, but most also overlooked the war. Control Figures (Kontrolnie Tsifri), Statistical Yearbook (Statisticheski Ezhegodnik), and Statistical Collection (Statisticheski Sbornik) furnished little information on women's work and wages between 1914 and 1918. Zlata Lilina's work "Soldaty Tyla," although an interesting comparative study of European women's wartime efforts, only supplied limited material on Russian women.

Many scholars focused their research on the development of the Russian women's feminist movement, emphasizing political, economic, and intellectual developments. Most of the statistical material used in this study on employment and wages during the war period, however, was extrapolated from studies by the Carnegie Endowment for International Peace. The only available and accessible primary sources for 1914 to 1918 were Semen O. Zagorsky's State Control of Industry in Russian During the War, and Stanislas Kohn's The Cost of the War to Russia. Although these two studies focus on general economic and social impact of World War I, they

also provided the only wage information available for men and women.

In secondary materials, Richard Stite's The Women's Liberation Movement in Russia, Linda Edmondson's Feminism in Russia, 1900-1917, and Barbara Engel's Mothers and Daughters, were among the finest works in that area. Despite their exceptional research, however, they neglected several important aspects of social and cultural development. Other scholars such as Jay Bergman's Vera Zasulich: A Biography, Barbara Clements' Bolshevik Feminist, and Beatrice Farnsworth's Aleksandra Kollontai expanded the biographical collections, through research on Russian political or intellectual female figures.

Other scholarship concentrated on the effects of communism on women, particularly the integration of women into the political and economical realms. This composed the largest available collection of materials on Russian women. Within this area, researchers emphasized the significance of three time periods. The first encompassed the period of time between the mid-twenties with its first five year plan to the European onset of World War II in 1939. Fannina Halle's Woman in Soviet Russia and Solomon Schwarz's Labor in the Soviet Union both were outstanding works that provided a general survey of women's economic and political developments during this period. The second time period emphasized within the field extended from the death of Stalin to the mid 1970s. Norton T. Dodge's Women in the

Soviet Economy, and Gail Warshopsky Lapidus' Women, Work, and Family emphasized again the political and economic aspect of Russian women's lives. The third period, and a majority of this scholarship, combined both periods into a general overview of Russian women's history since 1917. By the late 1970s, there were increased publication of these types of works. T. H. Rigby's Communist Party Membership in the USSR, an in depth history of women in politics, exemplified much of the work done on women and political history. Yet, women's history also saw an expansion into other topics. William Mandel's Soviet Women, Lapidus' Women in Soviet Society, and Dorothy Atkinson, Alexander Dallin, and Gail Lapidus' Women in Russia explored more than politics and economics. These authors also examined areas previously ignored--education, law, and social issues. By the 1980s, through the release of Barbara Holland's Soviet Sisterhood, social issues such as alcoholism, abortion, and birth control entered the historians analytical realm. The 1990s continued the expansion of women's studies into fields previously unexamined. Barbara Evans Clements, Barbara Alpern Engel, and Christine D. Worobec's Russia's Women discussed subjects from medieval family life and witchcraft, to modern medicine.

Even with the expansion of women's studies in the late 1980s and 1990s, several areas of Russian women's history remain neglected. One field, already well developed in American history, was the impact of wars on the societal

development of women. In Soviet literature, the lack of primary source material severely limited research in this area. To date, Susan Linz's The Impact of World War II on the Soviet Union remains the foremost authority on the economic impact of the Second World War on the Soviet Union; however, very little was mentioned about women. On the subject of World War I, Alfred G. Meyer provided a brief examination of some economic and social effects of the war on both the countryside and the front in "The Impact of World War I on Russian Women's Lives." Meyer did not discuss the war's impact on urban women, their work, or their wages.

A final area neglected was Russian women's labor history. As with the societal development of women, this was due to the lack of primary sources. Some limited work on women in the Soviet period, such as Michael P. Sacks Women's Work in Soviet Russia, and Alastair McAuley's Women's Work and Wages in the Soviet Union was undertaken, but both these author's omitted research on sexual inequality in the Soviet economic system. There was even less research into women's labor in pre-Soviet society, especially within the war period, 1914-1917. Only one study existed that examined Russian women's labor, Rose Glickman's Russian Factory Women. She primarily covered the period 1860 to 1914, by utilizing the Factory Inspector reports of 1900-1914 (Svod otchetov fabrichnyky inspektorov). Although this was the foremost work in the field, upon close

examination with the primaries, it contained many statistical problems. Calculations and citations at times were omitted completely. Moreover, within her work many tables contained errors that led to statistical miscalculations. Only a few non-Soviet works were accessible and pertinent on Russian women during World War I. S. A. Smith's Red Petrograd, while focusing on Petrograd, supplied limited insight into the situation of women workers and their wages in several industries. Yet, this work contained several pertinent primary documents that are now unattainable.

Thus, there were two research problems associated with women's labor history from 1900-1920. There were no comprehensive studies that encompass this entire period. Moreover, the available sources, primary and secondary alike, furnished only a few pages to women's work and wages.

Unlike the Russian field, many primary source were available relating to American women's labor. For the 1900 to 1914 period, The United States Censuses provided some information about industrial employment, while the Women's Labor Bureau and Bureau of Labor Statistics supplemented this information with in depth reports on women's employment. Willford King's The Wealth and Income of the People of The United States also supplied information, while Paul Douglas' Real Wages extended men's and women's wages through the war period. The National Industrial Conference Board published several reports as well, not only

on women's employment in war related industries, but also wartime changes in wages.

Within American secondary sources, most studies of the modern period have related to few areas of concentration. Many scholars focused their research on the political development of American women such as Aileen Kraditor's The Ideas of the Woman Suffrage Movement, Eleanor Flexner's Century of Struggle, and Barbara Steinson's American Women's Activism in World War I. Other historians minutely expanded their political research to also include some social and economic developments of women. William Chafe's The American Woman, Sophonisba Breckinridge's Women in the Twentieth Century, and Sarah Eienstein's Give Us Bread But Give Us Rose exemplified the research in that area. While Susan Kennedy's If All We Did Was to Weep at Home and Claudia Goldin's Understanding the Gender Gap focused on women's economic history, they overlooked many aspects of women's labor and wages.

A final area of extensive research explored the impact of wars on the lives of women. The social, political, and economic historians in this area however, have reduced their scholarship to an argument over whether World War I or World War II was the watershed event in American women's social and economic development. They in turn have neglected many aspects of women's lives, including labor and wages. Of the historians promoting World War I, Maurine Greenwald's Women, War, and Work slightly expanded into labor issue by

exploring telephone and railroad women workers and their wages.

Primary Sources

Adams, Abigail. Familiar Letter of John Adams and His Wife Abigail Adams During the Revolution. New York: 1876. Letter dated March 31, 1777. As cited by: Eleanor Flexner. Century of Struggle: The Woman's Rights Movement in the United States, 15. Cambridge, Mass.: The Belknap Press of Harvard University Press, 1975.

Adams, Elizabeth Kemper. Women Professional Workers. New York: The Chautuaqua Press, 1921.

Baker, Ray Stannard and William E. Dodd, eds. The Public Papers of Woodrow Wilson: War and Peace. New York: 1925-1927. Vol. I, 263-267. As cited by: Eleanor Flexner. Century of Struggle: The Woman's Rights Movement in the United States, 321-322. Boston: Routledge & Kegan Paul, 1983.

Baklanova, I.A. Rabochie Petrograda v period mirnogo razvitiya revolyutsii, mart-iyun', 1917g. Leningrad: 1978. As cited by: Smith, S.A. Red Petrograd: Revolution in the Factories, 1917-1918, 3. Cambridge: Cambridge University Press, 1983.

Bogart, Ernest L. Direct and Indirect Costs of the Great World War. New York: Oxford University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1920.

Central Bureau of National Economic Accounting (Tzunhu). Unpublished data, Moscow, 1931 and 1932. As cited by: Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman in the Soviet Union, 44. New York: G. P. Putnam's Sons, 1935.

_____. Labor in the U.S.S.R., Handbook 1926-1930. Moscow: 1930. As cited by: Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman in the Soviet Union, 44. New York: G. P. Putnam's Sons, 1935.

Clarke, Ida Clyde. American Women and the World War. New York: D. Appleton and Company, 1918.

Dempsey, Mary V. The Occupational Progress of Women, 1910-1930. Bulletin no. 104. Washington D.C.: Government Printing Office, 1933.

de Tocqueville, Alexis. Democracy in America, vol. II. New York: Random House, Inc., 1945.

Douglas, Paul H. Real Wages in the United States, 1890-1926. Chicago: The University of Chicago Press, 1930; reprint, New York: Augustus M. Kelley Publishers, 1966.

Elnett, Elaine. Historic Origin and Development of Family Life in Russia. New York: Columbia University Press, 1926.

Florinsky, Michael T. The End of the Russian Empire. New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1931.

Foner, Philip S., ed. Clara Zetkin Selected Writings. New York: International Publishers, 1984.

Halle, Fannina W. Woman in Soviet Russia. New York: The Viking Press, 1935.

Hooks, Janet. Women's Occupations Through Seven Decades. U.S. Department of Labor. Women's Bureau. Bulletin no. 218. Washington D.C.: Government Printing Office, 1947.

Ibsen, Henrik. Eleven Plays of Henrik Ibsen. New York: The Modern Library, 1946.

King, Willford Isbell. The Wealth and Income of the People of the United Stats. New York: The MacMillan Company, 1922.

Kinley, David, ed. Preliminary Economic Studies of the War. New York: Oxford University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1920.

Kozminih-Lanin, I.M. Mechanical Weaving in the Government of Moscow. Moscow: 1912. As cited by: Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman in the Soviet Union, 12. New York: G. P. Putnam's Sons, 1935.

_____. Zarabotki fabrichno-zavodskikh rabochikh v Rossii. Vyp. 1. Moscow: 1918. As cited by: Glickman, Rose. Russian Factory Women: Workplace and Society, 1880-1914, 107. Berkeley: University of California Press, 1984.

Kohn, Stanislas and Alexander F. Meyendorff. The Cost of the War to Russia. New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1932.

Labor in U.S.S.R., Statistical Handbook, 1926-1930 (Trud v SSSR, Spravochnik 1926-1930). Moscow, 1930. As cited by: Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman in the Soviet Union, 34. New York: G. P. Putnam's Sons, 1935.

Leland, Waldo G. and Newton D. Mereness, comp. Introduction to the American Official Sources for the Economic and Social History of the World War. New Haven: Yale University Press for the Carnegie Endowment for International peace, Division of Economics and History, 1926.

Lenin, Vladimir. Emancipation of Women. New York: International Publisher, 1966.

_____. On the Emancipation of Women. Moscow: Progress Publishers, 1974.

Lilina, Zlata Ionovna. "Soldaty Tyla," Zhenskii trud vo vremia i posle voiny. Perm: 1918.

Marsh, Charles. Recollections, 1937-1910. Chicago: 1910. As cited by: Sarah Eisenstein. Give Us Bread But Give Us Roses: Working Women's Consciousness in the United States, 1890 to the First World War, 66. Boston: Routledge & Kegan Paul, 1983.

Ministerstvo torgovli i promyshlennosti. Svod otchetov fabrichnykh inspektorov za 1900. St. Petersburg: Otdel promyshlennosti, 1902.

_____. Svod otchetov fabrichnykh inspektorov za 1901. St. Petersburg: Otdel promyshlennosti, 1903.

_____. Svod otchetov fabrichnykh inspektorov za 1903. St. Petersburg: Otdel promyshlennosti, 1906.

_____. Svod otchetov fabrichnykh inspektorov za 1904. St. Petersburg: Otdel promyshlennosti, 1907.

_____. Svod otchetov fabrichnykh inspektorov za 1905. St. Petersburg: Otdel promyshlennosti, 1908.

_____. Svod otchetov fabrichnykh inspektorov za 1906. St. Petersburg: Otdel promyshlennosti, 1908.

_____. Svod otchetov fabrichnykh inspektorov za 1907. St. Petersburg: Otdel promyshlennosti, 1909.

_____. Svod otchetov fabrichnykh inspektorov za 1908. St. Petersburg: Otdel promyshlennosti, 1910.

_____. Svod otchetov fabrichnykh inspektorov za 1909. St. Petersburg: Otdel promyshlennosti, 1910.

_____. Svod otchetov fabrichnykh inspektorov za 1910. St. Petersburg: Otdel promyshlennosti, 1911.

_____. Svod otchetov fabrichnykh inspektorov za 1911. St. Petersburg: Otdel promyshlennosti, 1912.

_____. Svod otchetov fabrichnykh inspektorov za 1912. St. Petersburg: Otdel promyshlennosti, 1913.

_____. Svod otchetov fabrichnykh inspektorov za 1913. St. Petersburg: Otdel promyshlennosti, 1914.

_____. Svod otchetov fabrichnykh inspektorov za 1914. Petrograd: Otdel promyshlennosti, 1915.

National Industrial Conference Board. Changes in Wages During and Since the War: September, 194-March, 1920. Research report no. 31, September, 1920. New York: National Industrial Conference Board, 1920.

_____. The Hours of Work Problem in Five Major Industries. Research report no. 27, March, 1920. Boston: National Industrial Conference Board, 1920.

_____. Wages, Hours and Employment in American Manufacturing Industries: July, 1914-January, 1924. Research report no. 69. New York: National Industrial Conference Board, 1924.

_____. Wartime Changes in Wages: September, 1914-March, 1919. Research report no. 20, September, 1919. Boston: National Industrial Conference Board, 1919.

_____. Wartime Employment of Women in the Metal Trades. Research report no. 8, July, 1918. Boston; National Industrial Conference Board, 1918.

Nol'de, Boris Emmanuilovich, Baron. Russia in the Economic War. New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1928.

Riazanova, A. Women's Labor. Moscow-Leningrad: 1926. As cited by: Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman, 35. New York: G. P. Putnam's Sons, 1935.

Rashin, A. G. Formirovanie promyshlennovo proletariata v rossii-statistiko-ekonomicheski ocherki. Moscow: Gosudarstvennoe sotsial'no-ekonomicheskoe izadatel'stvo, 1940.

_____. "Women's Labor in the USSR," Labor Questions in Figures (Voprossii Truda v Tsifrak). Vol. 1, no. 8, 1928.

Serebrennikov, G.M. The Position of Women in the USSR. London: Books for Libraries, 1937.

Serebrovskii, A. P. Revolyutsiya i zarabotnaya plata metallicheskoi promyshlennosti. Petrograd: 1917. As cited by: Smith, S.A. Red Petrograd: Revolution in the Factories, 71. Cambridge: Cambridge University Press, 1983.

Sviatlovskii, V.V. Fabrichnyi rabochii (iz nabliudeniia fabrichnogo inspektora). Warsaw: 1889. As cited by: Glickman, Rose. Russian Factory Women: Workplace and Society, 1880-1914, 108. Berkeley: University of California Press, 1984.

Trotsky, Leon. Women and the Family. New York: Pathfinder Press, 1970.

United States Bureau of the Census. Statistics of Women at Work. Washington D.C.: Government Printing Office, 1907.

United States Census Office. Twelfth Census of the United States, 1890. Washington D.C.: Government Printing Office, 1891.

_____. Thirteenth Census of the United States, 1900. Washington D.C.: Government Printing Office, 1901.

_____. Fourteenth Census of the United States, 1910. Washington D.C.: Government Printing Office, 1911.

_____. Fifteenth Census of the United States, 1920. Washington D.C.: Government Printing Office, 1921.

U.S. Department of Labor. Women's Bureau. "The Effects of Labor Legislation on the Employment Opportunities of Women." Bulletin no. 65. Washington D.C.: Government Printing Office, 1928.

_____. "The New Position of Women in American Industry." Bulletin no. 12. Washington D.C.: Government Printing Office, 1920.

The Woman Question. New York: International Publisher, 1951.

Zagorskii, Semen Osipovich. State Control of Industry in Russia During the War. New Haven: Yale University Press for the Carnegie Endowment for International Peace, Division of Economics and History, 1928.

Secondary Sources

Anderson, Karen. Wartime Women: Sex Roles, Family Relations, and the Status of Women During World War II. Westport, Conn.: Greenwood Press, 1981.

Atkinson, Dorothy, Alexander Dallin, and Gail Warshofsky Lapidus, eds. Women in Russia. Stanford: Stanford University Press, 1977.

Bergman, Jay. Vera Zasulich: A Biography. Stanford: Stanford University Press, 1983.

Bilshai, Vera. The Status of Women in the Soviet Union. Moscow: Foreign Languages Publishing House, 1957.

Bobroff, Anne. "The Bolsheviks and Working Women, 1905-20." Soviet Studies 26 (Oct 1974): 540-67.

Breckinridge, Sophonisba P. Women in the Twentieth Century. New York: McGraw-Hill Book Company, Inc., 1933.

Campbell, D'Ann. Women at War With America: Private Lives in a Patriotic Era. Cambridge, Mass.: Harvard University Press, 1984.

Central Statistical Board of the USSR Council of Ministers. Women and Children in the USSR: Brief Statistical Returns. Moscow: Foreign Languages Publishing House, 1963.

Chafe, William H. Paradox of Change: American Women in the 20th Century. Oxford: University of Oxford Press, 1992.

_____. The American Woman: Her Changing Social, Economic, and Political Roles, 1920-1970. New York: Oxford University Press, 1972.

Clements, Barbara. Bolshevik Feminist: The Life of Alexandra Kollontai. Bloomington: University of Indiana Press, 1979.

Connelly, Owen. French Revolution-Napoleonic Era. New York: Holt, Rinehart and Winston, Inc., 1979.

Crisp, Olga. Studies in the Russian Economy Before 1914. London: 1976.

Dewar, Margaret. Labour Policy in the USSR 1917-1928. New York: Royal Institute of International Affairs, 1956.

Dodge, Norton T. Women in the Soviet Economy: Their Role in Economic, Scientific, and Technical Development. Baltimore: Johns Hopkins Press, 1966.

Edmondson, Linda Harriet. Feminism in Russia, 1900-1971. Stanford: Stanford University Press, 1984.

Eisenstein, Sarah. Give Us Bread But Give Us Roses: Working Women's Consciousness in the United States, 1890 to the First World War. Boston: Routledge and K. Paul, 1983.

Engel, Barbara Alpern. Mothers and Daughters: Women of the Intelligentsia in Nineteenth Century Russia. New York: Cambridge University Press, 1983.

Farnsworth, Beatrice. Aleksandra Kollontai: Socialism, Feminism, and the Bolshevik Revolution. Stanford: Stanford University Press, 1980.

Flexner, Eleanor. Century of Struggle: The Woman's Rights Movement in the United States. Cambridge, Mass.: Belknap Press of Harvard University Press, 1959.

_____. Century of Struggle: The Woman's Rights Movement in the United States. rev. ed. Cambridge, Mass.: Harvard University Press, 1975.

Geiger, H. Kent. The Family in Soviet Russia. Cambridge, Mass.: Harvard University Press, 1968.

Glickman, Rose L. Russian Factory Women: Workplace and Society, 1880-1914. Berkeley: University of California Press, 1984.

Goldin, Claudia. Understanding the Gender Gap: An Economic History of American Women. Oxford: Oxford University Press, 1990.

Greenwald, Maurine N. Women, War and Work: Impact Of World War I on Women in the United States. Westport, Conn.: Greenwood Press, 1980.

Higonnet, Margaret Randolph. Behind The Lines: Gender and the Two World Wars. New Haven: Yale University Press, 1987.

Holland, Barbara, ed. Soviet Sisterhood. Bloomington: Indiana University Press, 1985.

Kennedy, Susan Estabrook. If All We Did Was to Weep at Home: A History of White Working-Class Women in America. Bloomington: Indiana University Press, 1979.

King, Beatrice. "Women in the USSR: Fifty Years of Emancipation." New World Review 35 (Aug/Sept 1967): 44-49.

Kingsbury, Susan M. and Mildred Fairchild. Factory Family and Woman in the Soviet Union. New York: G. P. Putnam's Sons, 1935.

Kinnear, Mary. Daughters of Time: Women in the Western Tradition. Ann Arbor: The University of Michigan Press, 1982.

Kraditor, Aileen. The Ideas of the Woman Suffrage Movement, 1890-1920. New York: Columbia University Press, 1965.

Lapidus, Gail. Women in Soviet Society; Equality, Development, and Social Change. Los Angeles: University of California Press, 1978.

_____. Women, Work, and Family in the Soviet Union. New York: ME Sharpe, 1982.

Lebergott, Stanley. Manpower in Economic Growth: The American Record Since 1800. New York: McGraw-Hill Inc., 1964.

Linz, Susan J. The Impact of World War II on the Soviet Union. New Jersey: Rowman and Allanheld, 1985.

Lorimer, Frank. The Population of the Soviet Union: History and Prospects. Geneva: League of Nations, 1946.

McAuley, Alastair. Women's Work and Wages in the Soviet Union. London: University of Essex, 1981.

Mandel, William M. Soviet Women. New York: Anchor Press/Doubleday, 1975.

Meyer, Alfred G. "The Impact of World War I on Russian Women's Lives," in Russia's Women: Accommodation, Resistance, Transformation, eds. Barbara Evans Clements, Barbara Alpern Engel, and Christine D. Worobec, 208-224. Berkeley: University of California Press, 1991.

Miller, Margaret. The Economic Development of Russia 1905-1914: With Special Reference to Trade, Industry, and Fiance. London: Frank Cass and Company Limited, 1926; reprint, New York: A. M. Kelley, 1967.

Rees, Albert. Real Wages in Manufacturing, 1890-1914. Princeton: Princeton University Press, 1961.

Sacks, Michael Paul. Women's Work in Soviet Russia: Continuity in the Midst of Change. New York: Praeger Publishers, 1976.

Schlesinger, Rudolf. The Family in the USSR. London: Butler and Tanner Ltd., 1949.

Schwarz, Solomon. Labor in the Soviet Union. New York: Praeger, 1951.

Siegelbaum, Lewis H.. The Politics of Industrial Mobilization in Russia, 1914-17: A study of the War-Industries Committees. New York: St. Martins Press, 1983.

Smith, S. A. Red Petrograd: Revolution in the Factories 1917-1918. Cambridge: Cambridge University Press, 1983.

Steinson, Barbara J. American Women's Activism in World War I. New York: Garland Publishers, 1982.

Stites, Richard. The Women's Liberation Movement in Russia. New Jersey: Princeton University Press, 1978.

Tsentralnoe Statisticheskoe Upravelenie Pri Sovete Ministrov SSSR. Narodnoe Koziaistvo SSSR. Moscow, 1956.

_____. Zhenshchiny i deti v SSSR. Trans. Moscow: Foreign Languages Publishing House, 1963.

Wertheimer, Barbara Mayer. We Were There. The Story of Working Women in America. New York: Pantheon Books, 1977.

"Women in the USSR: Statistical Data." reprinted from "Zhenshchiny v SSSR: Statisticheskie Materialy." In Vestnik Statistiki 1 (1971): 1-17.

"Women in the USSR: Statistical Data." Soviet Review 13 (Summer 1972): 144-173.

Women in the Soviet Union: Statistical Returns. Moscow: Progress Publisher, 1970.

"Zhenshchiny v SSSR." Vestnik Statistiki 1 (January 1977): 82-95.

APPENDICES

APPENDIX A

SUPPLEMENTARY TABLES FOR CHAPTER II

TABLE XXIV

CHANGES IN THE COMPOSITION OF THE WORKING CLASS ACCORDING TO AGE AND SEX IN 1913 (AS PERCENTAGES OF THE TOTAL FOR EACH GROUP) IN THE PRIVATE INDUSTRIES OF RUSSIA

Branches of industry	Children	Adolescents	Women	Men
1. Cotton	1.3	9.0	50.5	39.2
2. Wool	2.2	9.5	35.3	53.0
3. Silk	3.0	11.3	55.2	30.5
4. Linen	4.0	12.1	45.9	38.0
5. Mixed textiles	0.4	8.1	52.5	39.0
6. Paper	1.5	9.0	26.6	62.9
7. Printing	4.7	17.3	8.1	69.9
8. Sawmills and plywood	0.5	7.3	4.6	87.6
9. Iron and steel	0.5	8.3	6.8	84.4
10. Engineering	0.1	9.3	1.1	89.5
11. Glass, china and ceramics	5.7	9.7	13.6	71.0
12. Manufacture of animal products	0.8	7.9	14.3	77.0
13. Flour	0.1	6.0	5.6	88.3
14. Sugar	0.1	7.1	14.8	78.0
15. Chemical	0.6	2.0	2.8	94.6
16. Gunpowder and explosives	0.5	2.8	30.1	66.6
Total average percentage	1.6	8.5	23.0	66.8

Source: Zagorsky, State Control of Industry in Russia During The War, appendix xxvi.

TABLE XXV

CHANGES IN THE COMPOSITION OF THE WORKING CLASS ACCORDING TO AGE AND SEX IN 1914 (AS PERCENTAGES OF THE TOTAL FOR EACH GROUP) IN THE PRIVATE INDUSTRIES OF RUSSIA

Branches of industry	Children	Adolescents	Women	Men
1. Cotton	1.3	9.4	52.4	35.9
2. Wool	2.1	10.2	37.4	50.3
3. Silk	2.6	11.4	56.3	29.7
4. Linen	4.7	13.0	47.0	35.3
5. Mixed textiles	0.6	7.2	57.9	34.3
6. Paper	1.6	8.6	27.5	62.3
7. Printing	5.1	17.9	8.4	68.6
8. Sawmills and plywood	0.5	8.1	5.7	85.7
9. Iron and steel	0.6	8.8	7.3	83.3
10. Engineering	0.2	8.9	1.5	89.4
11. Glass, china, and ceramics	5.2	11.1	13.8	69.9
12. Manufacture of animal products	0.5	8.6	16.2	74.7
13. Flour	0.008	7.1	3.2	89.6
14. Sugar	0.2	8.3	13.8	77.7
15. Chemical	0.2	2.1	3.2	94.5
16. Gunpowder and explosives	0.8	2.9	22.5	73.8
Total average percentage	1.6	9.0	23.4	66.0

Source: Zagorsky, State Control of Industry in Russia During The War, appendix xxvi.

TABLE XXVI

CHANGES IN THE COMPOSITION OF THE WORKING CLASS ACCORDING TO AGE AND SEX IN 1915 (AS PERCENTAGES OF THE TOTAL FOR EACH GROUP) IN THE PRIVATE INDUSTIRES OF RUSSIA

Branches of industry	Children	Adolescents	Women	Men
1. Cotton	1.8	10.7	56.6	30.9
2. Wool	3.1	11.6	40.6	44.7
3. Silk	4.1	13.6	65.7	16.6
4. Linen	5.1	14.8	49.9	30.2
5. Mixed textiles	1.4	7.5	64.7	26.4
6. Paper	1.4	11.6	30.2	56.8
7. Printing	6.4	20.1	10.8	62.7
8. Sawmills and plywood	0.9	11.1	9.2	78.9
9. Iron and steel	0.9	10.8	12.4	75.9
10. Engineering	0.5	9.5	6.2	83.8
11. Glass, china, and ceramics	8.5	13.1	18.9	59.5
12. Manufacture of animal products	0.9	9.7	22.8	66.6
13. Flour	0.4	9.7	4.8	85.1
14. Sugar	0.8	10.9	19.8	68.5
15. Chemical	0.3	4.3	9.0	86.4
16. Gunpowder and explosives	0.5	2.2	30.1	66.2
Total average percentage	2.3	10.7	28.2	58.7

Source: Zagorsky, State Control of Industry in Russia During The War, appendix xxvi.

TABLE XXVII

CHANGES IN THE COMPOSITION OF THE WORKING CLASS ACCORDING TO AGE AND SEX AS OF THE 1ST JANUARY, 1917 (AS PERCENTAGES OF THE TOTAL FOR EACH GROUP) IN THE PRIVATE INDUSTRIES OF RUSSIA

Branches of industry	Children	Adolescents	Women	Men
1. Cotton	2.4	11.1	61.1	25.4
2. Wool	4.5	12.7	41.8	41.0
3. Silk	5.0	15.5	56.0	23.5
4. Linen	5.8	15.3	52.5	26.4
5. Mixed textiles	2.1	9.0	67.8	21.1
6. Paper	5.8	16.5	29.5	48.2
7. Printing	--	--	--	--
8. Sawmills and plywood	1.6	11.3	16.2	70.9
9. Iron and steel	[a]			
10. Engineering	1.1	10.6	14.3	72.0
11. Glass, china and ceramics	--	--	--	--
12. Manufacture of animal products	1.8	10.5	26.2	61.5
13. Flour	[b]			
14. Sugar	0.9	11.9	29.3	57.9
15. Chemical	2.4	12.0	32.5	53.1
16. Gunpowder and explosives	--	--	--	--
Total average percentage	3.2	12.4	38.8	45.5

a Category "Iron and steel" was combined with "Engineering."

b Category "Flour" was combine with "Sugar."

Source: Zagorsky, State Control of Industry in Russia During The War, appendix xxvi.

TABLE XXVIII

PERCENTAGE INCREASE OF THE COMPOSITION OF FACTORY WORKERS IN RUSSIA, 1901-1917

Year	Total	Men	Women
1901-1903	-1.18	-2.39	+2.15
1903-1904	-1.62	-1.86	-0.99
1904-1905	+1.82	+0.67	+4.84
1905-1906	+1.76	+0.09	+5.98
1906-1907	+5.11	+4.67	+6.46
1907-1908	-0.18	-0.85	+1.67
1908-1909	+1.36	+0.36	+3.43
1909-1910	+6.58	+6.24	+7.34
1910-1911	+5.08	+5.02	+5.22
1911-1912	+4.87	+5.02	+4.55
1912-1913	+7.83	+7.53	+8.48
1901-1913	+34.80	+26.90	+59.68
1914-1917	+6.24	-6.94	+35.79[a]
1914-1917	+49.59	+53.44	+38.84

Material obtained in this table are from Table II, Chapter I.

a The figure for 1917, is of January 1.

The formula used to obtain increased/decrease is the later year in question minus the former, divided by the former year, multiplied by one hundred, i.e.:

$$\frac{(1903)1,690,478 - (1901)1,710,735}{(1901)1,710,735} \times 100 = -1.18$$

TABLE XXIX

PERCENTAGE OF WOMEN IN THE TOTAL FACTORY LABOR FORCE, BY PROVINCE, 1901-1914

Year	St. Petersburg	Moscow	Vladimir	Petrov
1901	24.7	33.8	43.9	--
1903	24.9	31.8	45.3	--
1904	24.2	33.9	46.3	--
1905	25.9	35.3	46.3	--
1908	29.8	37.9	48.1	--
1910	29.3	39.1	50.9	39.4
1911	28.9	39.1	51.0	39.8
1912	29.1	39.5	51.7	40.3
1913	29.5	40.0	52.4	40.7
1914	29.2	41.5	55.0	--

Year	Kostroma	Barshov	Kiev
1901	40.7	--	--
1903	44.0	--	--
1904	45.6	--	--
1905	46.3	--	--
1908	49.0	--	--
1910	50.0	31.4	17.3
1911	50.6	30.1	17.7
1912	51.1	30.2	16.8
1913	52.2	30.4	18.4
1914	54.9	--	20.0

Source: Svod otchetov fabrichnykh inspektorov za 1900 - [1914], 1910, xxxiv; 1911, l; 1912, xlvii; 1913, xlvi; 1914, xli; for 1901 to 1908 see Glickman, Russian Factory Women, 81.

TABLE XXX

PERCENT OF WOMEN IN THE TOTAL FACTORY LABOR FORCE, BY DISTRICT, 1901-1914

Year	St. Petersburg	Moscow	Kiev
1901	--	--	--
1903	--	--	--
1904	--	--	--
1905	--	--	--
1908	--	--	--
1910	30.4	43.5	18.6
1911	30.1	43.6	18.8
1912	30.3	43.9	18.0
1913	30.6	44.5	19.1
1914	31.5	46.5	19.7

Year	Varshov	Khar'kov	Povol
1901	--	--	--
1903	--	--	--
1904	--	--	--
1905	--	--	--
1908	--	--	--
1910	33.6	14.1	16.2
1911	33.3	14.7	15.8
1912	33.5	14.7	15.5
1913	34.3	14.5	15.3
1914	--	15.0	16.3

Source: Svod otchetov fabrichnykh inspektorov za 1900 - [1914], 1910, xxxiv' 1911, 1; 1912, xlvii; 1913, xlvi; 1914, xl.

APPENDIX B

SUPPLEMENTARY TABLES FOR CHAPTER III

TABLE XXXI

AVERAGE MONTHLY WAGES OF A WORKER IN RUSSIA DURING THE PERIOD 1913 TO 1916

Wages in term of merchandise rubles calculated on the basis of the index-number of prices				
Branches of industry	1913	1914	1915	1916
1. Industries connected with the working of stone	20.0	19.3	15.8	14.9
2. Mining	22.1	21.0	16.9	20.8
3. Metallurgical	29.7	31.5	32.0	31.9
4. Engineering	37.2	40.2	43.6	40.6
5. Timber and plywood	24.0	28.0	25.5	24.0
6. Cotton manufacturing	17.2	17.2	17.6	16.6
7. Wool manufacturing	15.8	15.5	14.9	14.1
8. Silk manufacturing	20.2	16.1	16.2	14.4
9. Linen manufacturing	--	15.5	15.5	14.0
10. Mixed textiles	22.8	21.9	30.4	24.0
11. Paper	17.5	18.0	18.5	14.8
12. Printing, engraving, etc.	42.7	42.6	36.6	32.9
13. Chemical	26.1	32.4	27.4	31.5
14. Food	17.6	17.7	16.5	17.3
15. Leather	22.4	26.2	26.3	24.3
Average wage	21.7	22.8	24.3	24.7

Source: Semen Osipovich Zagorskii, State Control of Industry in Russia During the War (New Haven: Yale University Press for the Carnegie Endownment for International Peace, Division of Economics and History, 1928), appendix xxv.

TABLE XXXII

AVERAGE DAILY WAGES OF WOMEN DURING THE WAR IN SELECTED TEXTILE INDUSTRIES IN PETROGRAD

Industry	Daily wages of women, in kopecks
Spining	63.4
Spinning-weaving	86.0
Weaving	76.9
Cotton printing	55.7
Average daily wages	70.5

Source: Zlata Ionova Lilina, "Soldaty Tyla, "Zhenskii trud vo vremia i posle viony (Perm, 1918), 44.

TABLE XXXIII

PETROGRAD METAL WORKERS GROUPED ACCORDING TO WAGES IN JANUARY AND JUNE 1917

Monthly earnings in rubles	Percentage of men		Percentage of women	
	January	June	January	June
under 60	--	--	--	--
60-89	8.8	0.7	54.2	11.9
90-119	10.4	3.9	37.4	31.9
120-149	17.1	7.1	6.9	36.5
150-179	15.2	6.7	0.8	11.1
180-209	12.6	9.1	0.8	7.4
210-239	8.5	10.8	--	2.2
240-269	7.8	12.4	--	--
270-299	7.0	11.5	--	--
300-329	4.3	11.4	--	--
330-359	2.5	9.5	--	--
360-389	2.3	5.0	--	--
390-419	1.2	3.0	--	--
420-449	1.8	7.0	--	--
450 or more	0.4	2.0	--	--
Total number of workers	1313	1451	131	135

Source: A. P. Serebrovskii, Revolytsiya i zarabotnaya plata metallicheskoi promyshlennosti (Petrograd, 1917), 9; and I. A. Baklanova, Rabochie Petrograda v period mirogo razvitiya revolyutsii, mart-iyun', 1917g (Leningrad, 1978), 3; cited in: S. A. Smith, Red Petrograd: Revolution in the Factories 1917-1918 (Cambridge: Cambridge University Press, 1983), 71.

TABLE XXXIV

PETROGRAD SKOROKHOD SHOE FACTORY WORKERS GROUPED ACCORDING TO WAGES IN JANUARY AND JUNE 1917

Monthly earnings in rubles	Percentage of men		Percentage of women	
	January	June	January	June
under 60	9.0	1.1	54.2	0.5
60-89	17.7	1.5	36.5	1.7
90-119	32.6	1.9	7.2	7.4
120-149	26.8	4.6	1.0	10.3
150-179	9.1	3.7	0.6	76.7
180-209	2.8	5.5	0.1	3.0
210-239	1.0	14.8	0.04	0.3
240-269	0.5	51.0	--	0.1
270-299	0.06	9.5	--	0.04
300-329	--	2.7	--	0.08
330-359	--	1.2	--	--
360-389	--	1.3	--	--
390-419	--	0.7	--	--
420-449	--	--	--	--
450 or more	--	--	--	--
Total number of workers	1551	1628	2277	2470

Source: Serebrovskii, Revolytsiya i zarabotnaya plata metallicheskoi promyshlennosti, 9; and Baklanova, Rabochie Petrograda v period mirogo razvitiya revolyutsii, mart-iyun', 1917g, 3; cited in: Smith, Red Petrograd, 71.

TABLE XXXV

PETROGRAD NEVKA WOOLEN MILL WORKERS GROUPED ACCORDING TO WAGES IN JANUARY AND JUNE 1917

Monthly earnings in rubles	Percentage of men		Percentage of women	
	January	June	January	June
under 60	--	--	83.6	--
60-89	62.4	--	16.3	--
90-119	18.0	--	--	--
120-149	8.8	--	--	81.8
150-179	7.3	--	--	17.6
180-209	2.9	49.0	--	0.5
210-239	--	29.4	--	--
240-269	0.4	14.4	--	--
270-299	--	3.7	--	--
300-329	--	1.4	--	--
330-359	--	--	--	--
360-389	--	--	--	--
390-419	--	0.1	--	--
420-449	--	--	--	--
450 or more	--	--	--	--
Total number of workers	205	214	1970	2000

Source: Serebrovskii, Revolytsiya i zarabotnaya plata metallicheskoi promyshlennosti, 9; and Baklanova, Rabochie Petrograda v period mirogo razvitiya revolyutsii, mart-iyun', 1917g, 3; cited in: Smith, Red Petrograd, 71.

APPENDIX C

SUPPLEMENTARY TABLES FOR CHAPTER IV

TABLE XXXVI

MALE AND FEMALE BREADWINNERS 16 YEARS AND OVER, BY OCCUPATION IN THE UNITED STATES, 1900

Occupations	Male	Female	Percent	
	Percent distribution	Percent distribution	Male	Female
All occupations	100.0	100.0	82.3	17.7
Agricultural	38.0	15.9	91.7	8.3
Professional services	3.7	8.9	65.8	34.2
Domestic and personal services	14.9	40.4	63.2	36.8
Barbers/hairdressers	0.6	0.1	95.8	4.2
Boarding/lodging house keepers	0.1	1.2	16.6	83.4
Hotel keepers	0.2	0.2	84.4	15.6
Housekeepers/stewards	(1)	3.0	5.3	94.7
Janitors/sextons	0.2	0.2	85.8	14.2
Laborers (unspecified)	10.6	2.2	95.7	4.3
Launderers/laundresses	0.2	6.8	13.2	86.8
Nurses/midwives	0.1	2.2	10.1	89.9
Servants/waiters	1.1	24.1	18.1	81.9
Other	1.8	0.3	96.4	3.6
Trade and Transportation	18.5	10.0	89.6	10.4
Manufacturing and mechanical	24.9	24.8	82.4	17.6
Bookbinders	0.1	0.3	49.5	50.5
Boot and shoe	0.7	0.8	81.8	18.2
Boxmakers (paper)	(1)	0.3	18.4	81.6
Confectioners	0.1	0.2	73.2	26.8
Glovermakers	(1)	0.1	37.4	62.6
Gold/Silver workers	0.1	0.1	76.7	23.3
Paper/pulp operatives	0.1	0.2	75.0	25.0
Printers/lithographers	0.6	0.1	89.7	10.3
Rubber operatives	0.1	0.1	66.7	33.3

TABLE XXXVI CONTINUED

Occupations	Male	Female	Percent	
	Percent distri-bution	Percent distri-bution	Male	Female
Textile operatives	1.0	0.1	50.0	50.0
Carpet	(1)	0.2	53.8	46.2
Cotton	0.5	2.0	51.9	48.1
Hosiery/knitting	(1)	0.6	27.2	72.8
Silk	0.1	0.5	41.9	58.1
Wool	0.2	0.6	59.2	40.8
Other	0.2	0.9	52.2	47.8
Textile workers	0.9	14.0	22.6	77.4
Dressmakers	(1)	7.0	0.6	99.4
Hat/cap makers	0.1	0.1	67.6	32.4
Milliners	(1)	1.7	2.0	98.0
Seamstresses	(1)	2.9	3.2	96.8
Shirt/collar/cuff makers	(1)	0.6	22.4	77.6
Tailors/tailoresses	0.7	1.3	71.9	29.1
Other	(1)	0.4	30.9	69.1
Tobacco/cigar operatives	0.4	0.8	69.1	30.9
Other manufacturing and mechanical	20.9	2.9	97.1	2.9

(1) less than one-tenth of 1 percent

Source: Department of Commerce and Labor, Bureau of the Census, Statistics of Women at Work (Washington D.C.: Government Printing Office, 1907), 32.

TABLE XXXVII

PERSONS 10 YEARS OF AGE IN SPECIFIC OCCUPATIONS FOR 1900

Occupation	Percent men	Percent women
Dressmakers	0.6	97.5
Milliners	1.9	94.4
Seamstresses	3.0	91.9
Shirt/collar/cuffmakers	20.3	70.5
Boxmakers (paper)	15.5	68.7
Glovemakers	34.8	58.4
Bookbinders	46.3	47.2
Textile mill operatives	42.5	42.5

Source: United States Bureau of the Census. Statistics of Women at Work, 82.

APPENDIX D

SUPPLEMENTARY TABLES FOR CHAPTER V

TABLE XXXVIII

AVERAGE HOURLY EARNINGS IN 'PAYROLL' MANUFACTURING INDUSTRIES, IN DOLLARS

Year	Cotton		Hosiery and Knit goods		Woolens		Clothing
	D	R	D	R	D	R	D
1890	.097	.109	.113	.103	.121	.127	.143
1891	.095	.108	.115	.106	.120	.129	.144
1892	.095	.108	.107	.111	.122	.131	.148
1893	.101	.116	.108	.118	.128	.147	.144
1894	.095	.121	.103	.120	.115	.136	.141
1895	.094	.114	.111	.118	.116	.140	.143
1896	.099	.116	.106	.120	.118	.147	.146
1897	.096	.117	.101	.115	.121	.145	.144
1898	.093	.110	.102	.116	.125	.149	.152
1899	.092	.111	.100	.123	.124	.150	.152
1900	.103	.118	.101	.121	.135	.155	.151
1901	.104	.119	.109	.120	.136	.154	.152
1902	.107	.121	.118	.120	.138	.156	.155
1903	.111	.124	.125	.125	.143	.158	.160
1904	.109	.120	.120	.121	.139	.154	.167
1905	.111	.116	.129	.127	.143	.157	.173
1906	.120	.121	.135	.141	.154	.165	.181
1907	.135	.132	.144	.131	.163	.164	.185
1908	.134	.132	.144	.133	.154	.169	.166
1909	.130	.130	.142	.136	.156	.171	.185
1910	.133	.137	.145	.138	.159	.170	.190
1911	.135	.137	.145	.139	.160	.169	.218
1912	.148	.140	.154	.144	.179	.176	.222
1913	.149	.142	.167	.147	.176	.175	.253
1914	.153	.141	.172	.160	.182	.190	.256
1915	.158	--	.183	--	.184	--	.257
1916	.179	--	.205	--	.225	--	.286
1917	.213	--	.237	--	.277	--	.331
1918	.267	--	.291	--	.342	--	.408
1919	.338	--	.307	--	.484	--	.446
1920	.480	--	.406	--	.628	--	.692
1921	.350	--	.366	--	.550	--	.679
1922	.330	--	.354	--	.474	--	.728
1923	.371	--	.397	--	.527	--	.757
1924	.372	--	.409	--	.533	--	.760
1925	.350	--	.423	--	.517	--	.760
1926	.328	--	.441	--	.491	--	.750

TABLE XXXVIII CONTINUED

Year	Boots and Shoes		Lumber (sawmills)	Slaughtering and meat-packing	Iron and Steel	
	D	R	D	D	D	R
1890	.169	.176	.150	.174	.229	--
1891	.167	.174	.150	.174	.225	--
1892	.171	.178	.148	.174	.222	.187
1893	.173	.182	.148	.175	.229	.191
1894	.171	.187	.141	.158	.199	.184
1895	.173	.184	.138	.157	.207	.182
1896	.172	.179	.140	.156	.212	.189
1897	.173	.177	.138	.157	.203	.185
1898	.173	.172	.142	.162	.205	.192
1899	.175	.175	.145	.168	.218	.217
1900	.178	.175	.149	.164	.234	.222
1901	.178	.177	.152	.162	.238	.230
1902	.186	.178	.158	.170	.254	.235
1903	.195	.188	.163	.181	.258	.230
1904	.200	.183	.163	.183	.240	.216
1905	.204	.194	.169	.176	.245	.219
1906	.207	.194	.180	.178	.255	.225
1907	.216	.197	.187	.183	.264	.229
1908	.212	.201	.172	.173	.239	.233
1909	.220	.201	.177	.179	.245	.241
1910	.219	.205	.189	.184	.268	.245
1911	.222	.208	.189	.190	.273	.260
1912	.223	.210	.191	.192	.283	.255
1913	.241	.212	.198	.197	.306	.277
1914	.243	.212	.194	.201	.298	.266
1915	.237	--	.182	.208	.297	--
1916	.259	--	.215	.235	.371	--
1917	.287	--	.260	.262	.462	--
1918	.336	--	.337	.369	.577	--
1919	.449	--	.388	.429	.653	--
1920	.559	--	.436	.461	.745	--
1921	.529	--	.332	.497	.574	--
1922	.501	--	.331	.449	.513	--
1923	.523	--	.362	.484	.601	--
1924	.516	--	.356	.493	.644	--
1925	.513	--	.357	.492	.642	--
1926	.528	--	.361	.494	.637	--

Source: D = Paul H. Douglas, Real Wages in the United States, 1890-1926 (New York: Augustus M. Kelley, 1966; reprint, 1930), 101. R = Albert Rees, Real Wages in Manufacturing, 1890-1914 (Princeton: Princeton University Press, 1961), 124.

TABLE XXXIX

AVERAGE ANNUAL EARNINGS OF EMPLOYED WAGE EARNERS IN SELECTED INDUSTIRES, 1889-1913

Year	Food	Textiles	Clothing	Iron/ steel	Misc. metals	Lumber
1889	---	318	355	---	511	---
1890	---	320	362	556	542	399
1891	---	326	365	567	575	404
1892	---	326	369	559	565	409
1893	---	331	382	532	469	384
1894	---	287	376	481	513	355
1895	---	311	388	519	499	365
1896	---	306	362	491	519	367
1897	---	306	366	493	501	370
1898	---	294	373	515	518	387
1899	395	307	372	529	502	397
1900	---	324	386	538	504	416
1901	---	325	391	553	506	424
1902	---	340	418	575	531	454
1903	---	344	428	588	534	461
1904	447	328	418	566	542	472
1905	---	336	435	588	563	454
1906	---	360	454	617	546	492
1907	---	386	460	636	563	502
1908	---	372	408	569	552	488
1909	490	372	448	629	584	497
1910	498	371	463	651	592	465
1911	499	375	468	652	603	487
1912	522	397	480	665	655	507
1913	535	416	503	700	677	575

Food industries averages include confectionery; bread and bakery products; butter, cheese, and condensed milk; fruit/vegetable canning; and slaughtering/meat-packing.
Textile industries averages include woolens and worsted; cottons; silks; and hosiery and knit goods.
Clothing industries averages include of men's clothing/ women's clothing; and shirts.
Iron and steel industries averages include blast furnaces, steel works, and rolling mills; and foundries and machine shops.
Miscellaneous metal products averages include farm and electrical machinery; brass, bronze, and copper; and silver and plated ware.
Lumber industries include averages of: sawmills; planing mills; and furniture.

TABLE XXXIX CONTINUED

Year	Leather	Paper and printing	Chemicals	Stone, clay and glass	Tobacco/ beverages
1899	---	478	---	---	---
1890	508	493	444	489	517
1891	507	484	442	494	518
1892	511	486	418	502	512
1893	479	495	430	487	530
1894	451	471	453	427	522
1895	440	465	454	470	520
1896	435	451	455	440	505
1897	432	447	447	442	523
1898	425	426	455	456	516
1899	419	443	445	472	494
1900	416	447	454	484	511
1901	438	470	462	495	508
1902	442	471	466	518	534
1903	466	503	446	532	524
1904	473	503	480	547	527
1905	475	507	458	563	527
1906	486	515	481	616	537
1907	503	527	516	593	557
1908	514	548	526	540	567
1909	514	553	549	572	556
1910	530	565	543	573	573
1911	542	576	550	562	582
1912	533	611	565	586	594
1913	571	633	616	614	606

Leather products include averages of: leather, tanned, curried, and finished; boots and shoes; trunks and valises; and saddlery and harness.
Paper and printing include averages of: paper and pulp; paper boxes; book and job printing; and newspaper and periodical printing.
Chemicals include averages of: petroleum refining; and druggists' preparations.
Stone, clay, and glass industries incude averages of: marble and stone work; clay products; and glass.
Tobacco and beverages includes averages of: beer and soft drinks; and cigars and cigarettes.

Source: Douglas, Real Wages, Table 90, 258, 265, 271, 276, 283, 287, 292, 296, 299, 303.

TABLE XL

AVERAGE ANNUAL EARNING OF EMPLOYED WAGE EARNERS IN SELECTED INDUSTRIES, 1914-1921

Year	Food	Textiles	Clothing	Iron/ steel	Misc. metals	Lumber
1914	542	412	480	711	646	560
1915	549	418	502	684	646	551
1916	594	480	570	820	738	608
1917	665	573	639	1012	826	692
1918	830	731	780	1324	1018	862
1919	999	845	1013	1487	1187	1030
1920	1128	1033	1222	1725	1422	1221
1921	1085	870	1102	1331	1220	1055

Year	Leather	Paper and printing	Chemicals	Stone, clay and glass	Tobacco/ beverages
1914	572	629	620	583	603
1915	585	642	651	570	601
1916	634	675	720	606	629
1917	728	728	849	714	668
1918	878	893	1002	911	782
1919	1078	1090	1175	1104	965
1920	1259	1354	1387	1394	1135
1921	1144	1313	1278	1258	1030

For the make-up of these industries see source citation on Table XXXIX.

Source: Douglas, Real Wages, Table 90, 258, 265, 271, 276, 283, 287, 292, 296, 299, 303.

TABLE XLI

PERCENTAGE OF WOMEN'S WAGES COMPARED TO MEN'S IN SELECTED INDUSTRIES, 1914-1920

Industry	1914	1918	1919	1920	+/-
Metal	48.9	53.5	58.6	57.1	+8.2
Cotton	77.0	74.6	74.6	77.8	+0.8
Wool	75.5	70.7	72.3	72.4	-3.1
Silk	63.5	65.3	66.5	65.1	+1.6
Boots/shoes	62.4	59.2	56.7	59.9	-2.5
Paper	58.7	62.3	54.5	57.4	-1.3
Rubber	66.1	45.2	50.8	53.5	-12.6
Hosiery/knit	56.7	67.8	61.5	66.2	+9.5
Printing/publishing	45.1	47.1	50.4	50.6	+5.5

Original numbers from Table XXIII.

TABLE XLII

FIVE INDEXES OF REAL HOURLY WAGES, 1890-1914
(1890-99=100)

Year	Bulletin 77	Rubinow	Jones	Douglas and Lamberson	Douglas, all Manufacturing
1890	97.9	98.3	97.9	97.5	95
1891	96.6	96.6	96.2	96.0	98
1892	98.9	98.7	98.4	98.5	98
1893	96.6	97.2	96.9	97.1	101
1894	98.2	99.7	99.2	98.8	102
1895	100.5	101.5	100.8	101.1	101
1896	104.4	105.0	104.7	105.3	102
1897	103.4	103.0	103.4	103.6	100
1898	101.5	100.5	101.5	101.2	100
1899	102.5	100.6	101.9	101.6	101
1900	104.4	101.6	103.6	103.7	101
1901	102.7	98.6	101.7	100.1	100
1902	101.2	97.9	101.0	98.5	101
1903	105.4	100.7	104.7	102.2	100
1904	104.7	100.0	104.1	101.7	101
1905	105.8	102.8	106.4	103.1	103
1906	107.3	102.7	106.8	103.9	103
1907	106.8	102.7	107.2	104.2	101
1908	--	98.8	103.0	101.2	102
1909	--	94.7	98.5	97.2	102
1910	--	93.0	96.5	95.1	100
1911	--	95.3	99.0	97.8	98
1912	--	91.8	95.0	94.6	102
1913	--	--	--	96.1	102
1914	--	--	--	96.5	102

Source: Rees, Real Wages im Manufacturing, 7.

Note: All indexes except Douglas' include the purchasing power of wages in terms of food only. Douglas' also includes cost-of-living weights.

TABLE XLIII

FIVE INDEXES OF REAL FULL-TIME WEEKLY WAGES, 1890-1914
(1890-99=100)

Year	Bulletin 77	Rubinow	Jones	Douglas and Lamberson	Hasen	Douglas, all Manufacturing
1890	98.6	99.4	98.9	98.4	94	96
1891	97.1	97.5	97.1	96.8	95	99
1892	99.4	99.4	99.1	99.3	98	99
1893	96.9	97.6	97.3	97.5	97	101
1894	98.0	98.9	98.4	98.7	99	101
1895	100.6	102.2	101.4	101.2	101	102
1896	104.2	104.7	104.4	104.6	104	101
1897	103.0	102.5	102.9	103.2	107	100
1898	101.2	100.1	101.1	100.5	104	100
1899	101.7	99.8	101.1	100.3	101	100
1900	103.0	100.2	102.1	101.6	99	100
1901	100.7	96.8	99.8	97.6	101	99
1902	98.5	94.3	98.4	95.1	101	99
1903	101.8	97.3	101.3	97.6	100	98
1904	100.4	96.0	99.9	96.9	100	98
1905	101.4	98.6	102.1	98.3	102	100
1906	102.4	98.0	101.9	98.6	101	99
1907	101.5	97.7	102.0	98.2	100	97
1908	--	93.0	97.3	94.6	102	97
1909	--	89.4	92.9	90.7	99	98
1910	--	87.2	90.6	87.8	98	95
1911	--	88.9	92.4	90.1	100	93
1912	--	85.3	88.4	85.9	100	96
1913	--	--	--	86.8	98	95
1914	--	--	--	87.0	98	95

Source: Rees, Real Wages in Manufacturing, 8.

Note: All but the last two indexes show purchasing power of wages in food only.

APPENDIX E

SUPPLEMENTARY FIGURES FOR LISTED TABLES

Figure 1. Percent Russian Women Employed:
Comparison to Total Employment

The numbers were obtained from Table II.

Year	Percent	.323 x Year - 586.08
1900	26.1	26.9523
1901	26.8	27.27495
1903	27.4	27.92024
1904	27.6	28.24289
1905	28.4	28.56553
1906	29.6	28.88818
1907	29.7	29.21083
1908	30.2	29.53348
1909	30.9	29.85612
1910	31.1	30.17877
1911	31.1	30.50142
1912	31.1	30.82406
1913	31.2	31.14671
1914	31.8	31.46936
1917	30.0	32.4373

Regression Output:

Constant	-586.077
Std Err of Y Est	0.931457
R Squared	0.758343
No. of Observations	15
Degrees of Freedom	13
X coefficient(s)	0.322647
Std Err of Coef.	0.050515

Figure 2. Average Russian Workers'
Wages: War Years

The numbers were obtained from Tables IX and XXXI.

Year	Paper Rubles	Indexed Rubles
1913	21.7	21.7
1914	22.8	23.0
1915	24.3	31.6
1916	24.7	50.1

Figure 3. Women's Payroll Gains:
Percent of Men's Wages

The numbers were obtained from Table XXXVIII, where wages were indexed to steel workers wages, which were set to 1, for 1896 the indexed number was: $\frac{\text{steel}}{\text{cotton}} = 0.42$

Year	Cotton	Knits	Packing	Steel
1896	0.097	0.113	0.174	0.229
index	0.42	0.49	0.76	1.00
1906	0.120	0.135	0.178	0.255
index	0.47	0.53	0.70	1.00
1916	0.179	0.205	0.235	0.371
index	0.48	0.55	0.63	1.00
1926	0.328	0.441	0.494	0.637
index	0.51	0.69	0.78	1.00

Figure 4. Average Hourly Earning:
United States

The numbers were obtained from Table XXXVIII.

	Cotton	Knit	Woolens	Clothing
X-Bar	0.178	0.193	0.237	0.301
Range	0.388	0.341	0.513	0.619
STD	0.106	0.111	0.159	0.220

	Shoes	Lumber	Meat	Steel
X-Bar	0.273	0.216	0.250	0.345
Range	0.392	0.298	0.341	0.546
STD	0.132	0.088	0.124	0.166

Regression for Cotton
Regression Output:

Constant	-15.816
Std Err of Y Est	0.059
R Squared	0.707
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.008382
Std Err of Coef.	0.000913

Figure 4. Continued

Regression for Hosiery and Knit Goods
Regression Output:

Constant	-17.0918
Std Err of Y Est	0.056219
R Squared	0.757826
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.009059
Std Err of Coef.	0.000866

Regression for Woolens
Regression Output:

Constant	-23.284
Std Err of Y Est	0.092207
R Squared	0.682948
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.012327
Std Err of Coef.	0.001420

Regression for Clothing
Regression Output:

Constant	-32.6641
Std Err of Y Est	0.123788
R Squared	0.701280
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.017277
Std Err of Coef.	0.001906

Regression for Boots and Shoes
Regression Output:

Constant	-19.8506
Std Err of Y Est	0.071605
R Squared	0.723344
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.010547
Std Err of Coef.	0.001103

Figure 4. Continued

Regression for Lumber
Regression Output:

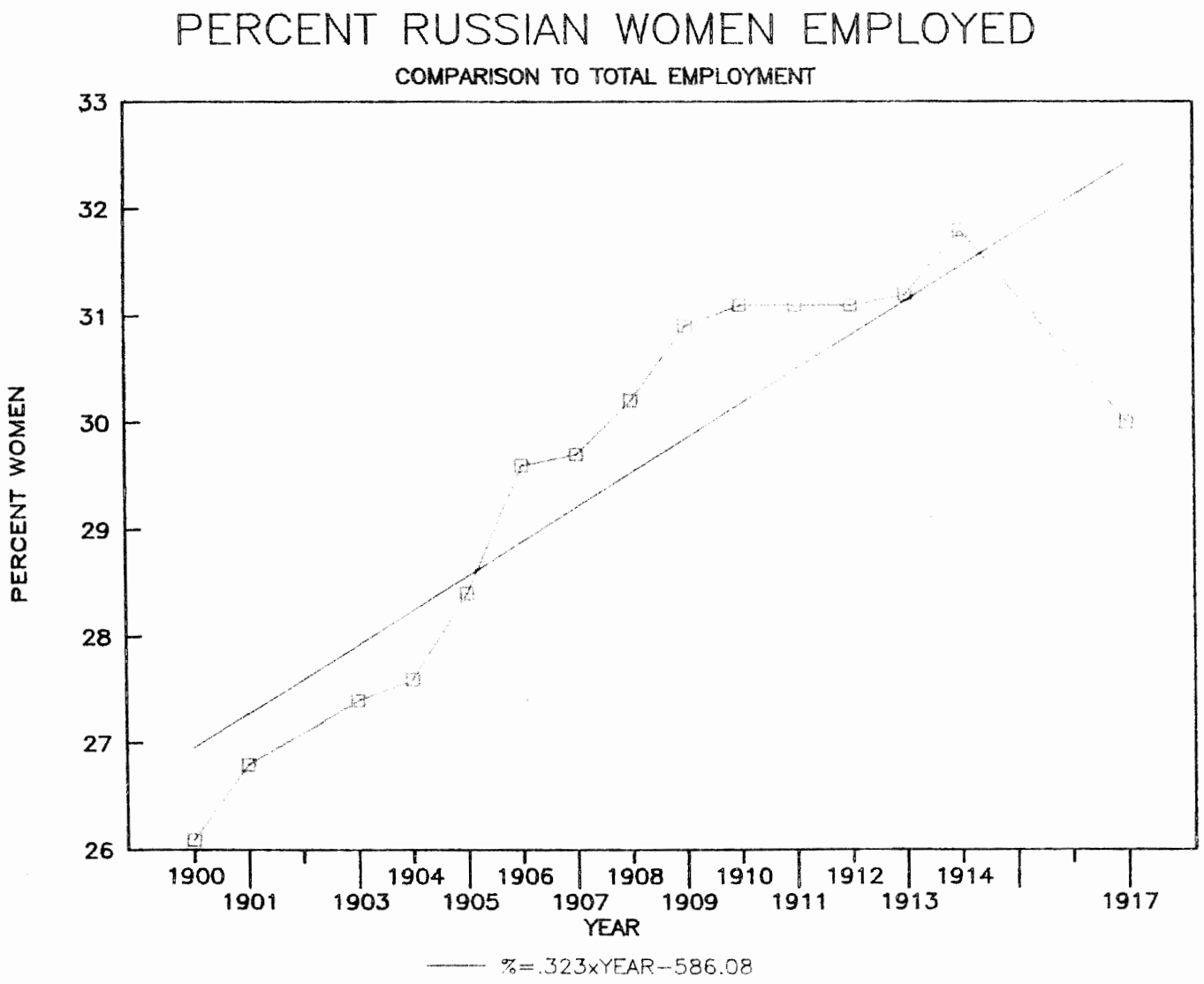
Constant	-13.1885
Std Err of Y Est	0.046704
R Squared	0.731679
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.007025
Std Err of Coef.	0.000719

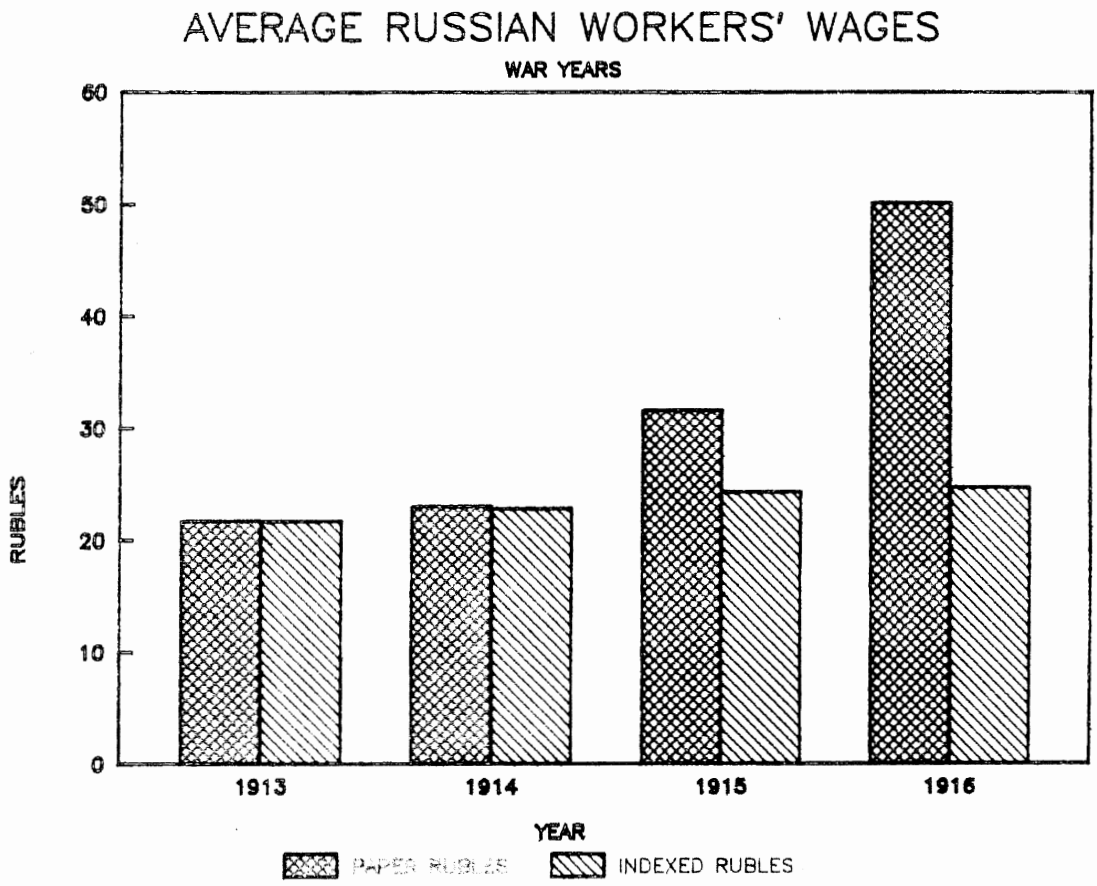
Regression for Slaughtering
Regression Output:

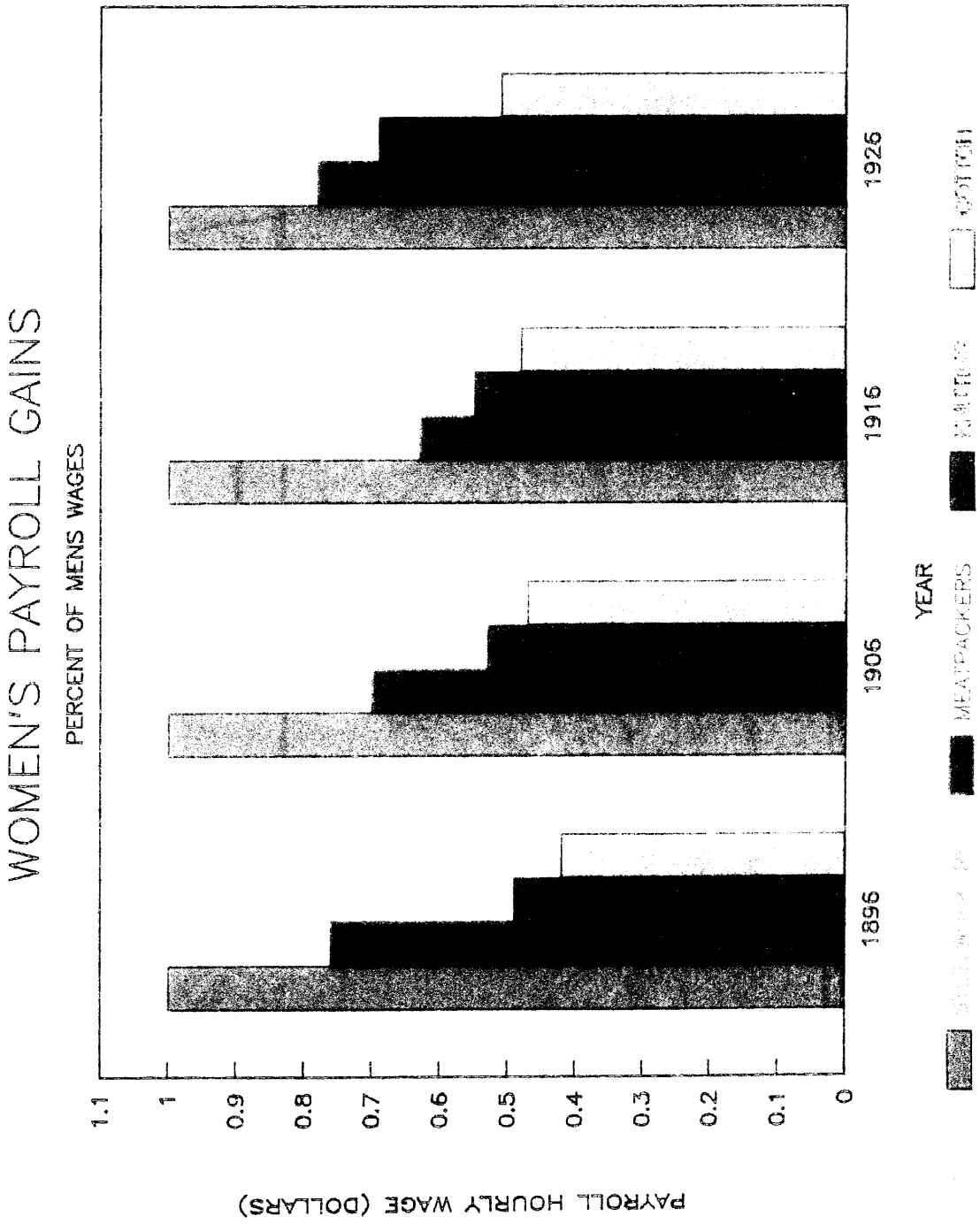
Constant	-17.9387
Std Err of Y Est	0.073198
R Squared	0.671484
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.009533
Std Err of Coef.	0.001127

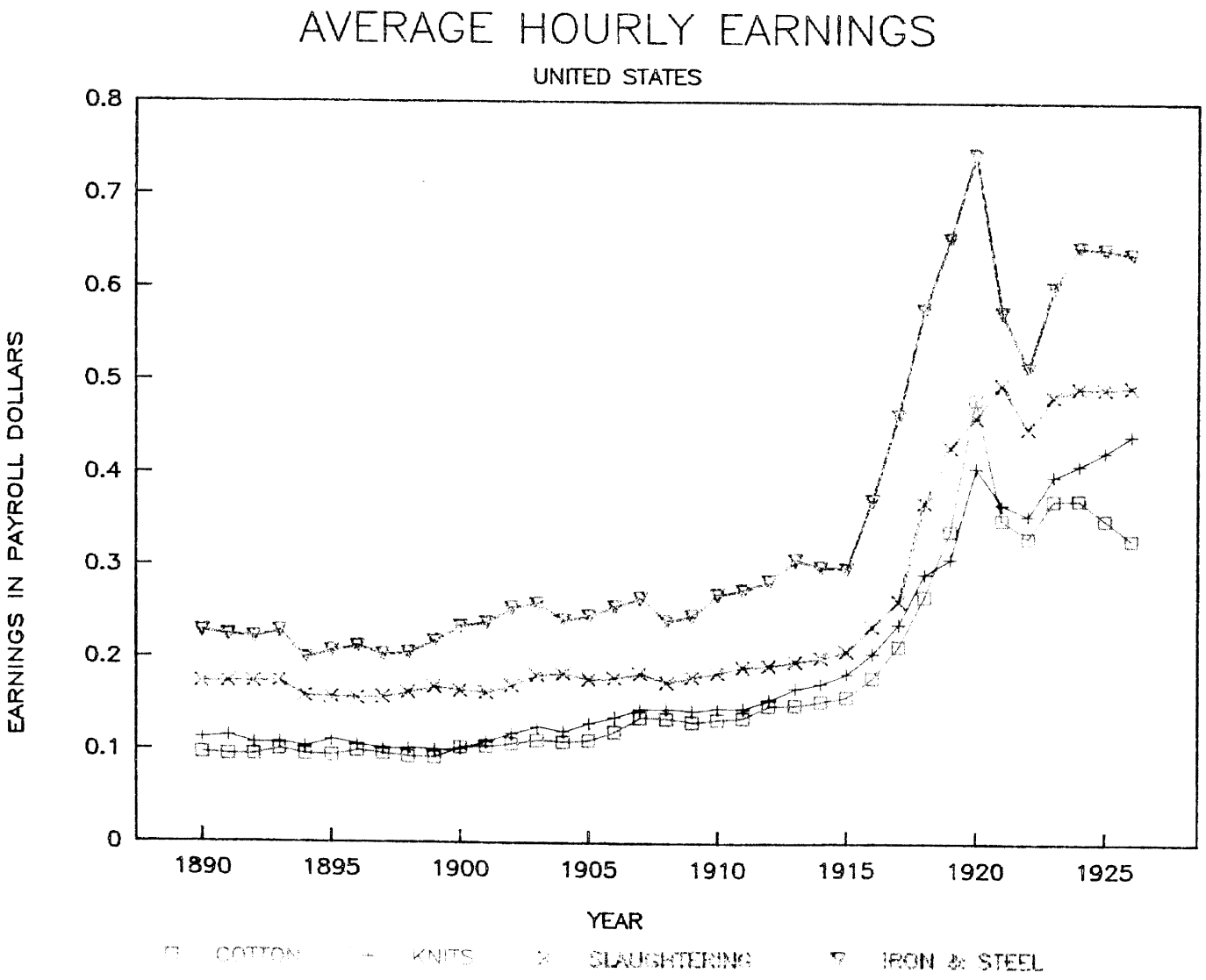
Regression for Iron and Steel
Regression Output:

Constant	-24.7467
Std Err of Y Est	0.091115
R Squared	0.71514
No. of Observations	37
Degrees of Freedom	35
X Coefficient(s)	0.013151
Std Err of Coef.	0.001403


PERCENT RUSSIAN WOMEN EMPLOYED
COMPARISON TO TOTAL EMPLOYMENT
PERCENT WOMEN
33
32
31
30
29
28
27
26
1900
1901
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1917
YEAR
%=.323xYEAR--586.08


AVERAGE RUSSIAN WORKERS' WAGES
WAR YEARS
RUBLES
60
50
40
30
20
10
0
1913
1914
1915
1916
YEAR
PAPER RUBLES
INDEXED RUBLES


WOMEN'S PAYROLL GAINS
PERCENT OF MENS WAGES
PAYROLL HOURLY WAGE (DOLLARS)
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1896
1906
1916
1926
YEAR
MEATPACKERS


AVERAGE HOURLY EARNINGS
UNITED STATES
EARNINGS IN PAYROLL DOLLARS
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1890
1895
1900
1905
1910
1915
1920
1925
YEAR
KNITS
IRON & STEEL

VITA

Monica Lynn Tietz-Gehringer

Candidate for the Degree of

Master of Arts

Thesis: FACTORY WORK AND WAGES: RUSSIAN AND AMERICAN WOMEN 1900 TO 1920

Major Field: History

Biographical:

Personal Data: Born in Tulsa, Oklahoma, 25 March 1969, the daughter of Henry and Janet Tietz; married Christopher P. Gehringer, 21 December 1992.

Education: Graduated from Claremore High School, Claremore, Oklahoma, in May, 1987; received Bachelor of Arts Degree with an independent major of Russian and Soviet Studies, in May 1991, and graduated Phi Beta Kappa from The University of Tulsa; completed the requirements for the Master of Arts Degree at Oklahoma State University in May, 1993.

Professional experience: Teaching Assistant, Department of History, Oklahoma State University, August, 1991 to May, 1993.