Women munitions workers in Britain during the Great War

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Abstract

Women munitions workers in Britain during the Great War were vital to the success of the Allies. The jobs of munitions workers had to be filled by women because of the massive recruitment of men into the army and only with women could the supplies of munitions to the front be kept going. It is through this study that we can understand the effects on women as wage earners outside the home as opposed to working family members. This study demonstrates how women's ability to work outside the home brought about by the critical shortage of manpower for the war effort helped to break down the Victorian stereotypes of gender roles and began to shift the paradigm of power relationships between men and women. Through their war work, British women gained an economic and political voice that resulted in partial enfranchisement.

Chapter One covers the argument in the feminist press between what was seen as the right of women to work in men's jobs as men were removed from labor for the war effort. It argues on whether women were seen as equals to men in their work efforts or simply as a necessity in the accomplishment of supplying munitions to the Front. Acceptance of women into the traditional male workforce is expressed through the writings of economists as to the advantage of female workers in wartime. Resistance to the employment of women is expressed by manufacturers and written into acts passed by the Ministry of Munitions calling for the immediate dismissal of women upon the end of the war in favor of returning men.

Chapter Two concerns the argument that women worked as men did in fulfilling their duty to their country. It tells the story of the struggle, in particular, of female
munitions workers and their desire to “do their bit.” The focus is on the rugged conditions of factory life that broke down the idea of women as the weaker sex, both physically and mentally. Traditional male work was accomplished successfully by women. The dangers of munitions work was comparable to the waging of the war by men at the front, was recognized by British society. It also focuses on the issue that women’s war work may lead to enfranchisement sometime in the future.

Chapter Three emphasizes the need for women to organize into trade unions in hopes of having their grievances for equal pay for equal work recognized. It was through women concentrating on unionizing during the war, rather than suffrage, that women, through their war work, in particular, munitions work, were recognized by government in the granting of partial enfranchisement.

In conclusion, this is a thesis on the partial enfranchisement of British women through their war work, munitions work, especially. It was through this work that women became empowered through unionization which achieved a social recognition of a shift in the paradigm of gender roles that changed British society and the roles of women in other democratic societies in earning the vote. While it may have only been partial enfranchisement, it was a step on the continuum that women are still walking today.
Chapter 1
Equality or Necessity

The women munitions workers in Britain during the Great War were vital to the success of the Allies because of the massive recruitment of men into the army. This study demonstrates how the ability of women to do different and dangerous work helped to break down Victorian stereotypes of gender roles and began to shift the power relationship between men and women. Through their war work, women gained an economic and political voice that culminated in partial suffrage.

Before the war, wages for women were so low that few men would take these sorts of jobs creating gender segregation within the workforce. Even during the war, their work was seen by both men and women as temporary: the women to return to the home once the men came home. Women empowered themselves during the war period by putting down their suffrage work and picking up what they considered their duty to their county enough to make that step on the road to enfranchisement possible, but not enough to change their own mentality of their primary responsibility of hearth and home.

In the late Victorian Age, work outside the home, particularly in the factories, became the norm for working-class girls from their late teens to early twenties. In the twenty-year period between 1891 and 1911, the number of women in manufacturing and transport work rose 40% compared to 21% for all women workers. Some traditional, non-industrial employments, such as charwomen, domestic servants and hotel workers
stagnated or declined. Women were moving into industrial positions that paid higher wages.¹

In his essay, ‘Working Class Women in Britain, 1890-1914’, Peter Stearns stated that by 1911, 54% of all unmarried women over the age of ten were employed and 77% of unmarried women over the age of fifteen were employed. This confirms the existence of the working-class woman’s lifestyle before marriage. Employment of married women evolved more slowly as need arose.²

Young women welcomed factory work as a means of earning higher wages and for the socialization they found there. Even though they turned most of their wages over to their families for room and board, daughters were experiencing a new role in the family. What money they earned and kept gave them an economic independence that they came to enjoy.

Upon marriage, the attitude and reality toward working women was that they should retire from the workplace, devoting themselves to childbearing and rearing, and to homemaking. After the Industrial Revolution, women had found themselves capable of earning independently, however, they encountered the belief that they were taking work away from men by working for lower wages. Another, and most important, aspect of the change in the social attitude toward married women working can be found in the new middle class, developed out of the Industrial Revolution. The new middle class did not approve of women working. A leisured wife came to be seen as a sign of a man’s success. A man, by himself, should be able to keep his family in comfort. Married

women bought into this “cult of domesticity.” At the upper levels of society there came to be what was considered “suitable” and “unsuitable” work for women. As this idea filtered down through society, the working middle class began to disapprove of women working as well.

This attitude insinuated itself into the working-class. While totally inappropriate, economically speaking, as well paid working class men were in the minority, the “cult of domesticity” came to prevail even in the lower class. Working men may have been able to support a family, but it was by no means with any degree of comfort. Wives and children of working-class men who did give up paid labor became particularly vulnerable if the breadwinner found himself laid off or too ill to work. Wives could also not devote themselves to the education of their children, as domestic chores were overwhelming. This would not improve with women working outside the home. With only one wage coming in, cheaper food was bought, clothes mended and re-mended, and housing worsened.

The status of the male with an at home wife still became increasingly influential. Manufacturers found it easier to sack women as they, too, believed that women should be at home caring for their husbands and children. Often, as married women were fired from their employment or when found with child, they found themselves taking in laundry or cleaning other people’s houses to make ends meet. Parliament was forced by pressure groups such as employers and trade unions to consider what “suitable and unsuitable” work was for women. It was only in the textile and pottery industries that women continued to work outside the home. These women were studied by
philanthropists, social workers, and novelists, who took it upon themselves to record the ill effects of the working woman.

A common theme throughout the nineteenth century was not only that working women were seen as susceptible to physical injury on a job, but that these women could also succumb to the moral degradation of the male workplace. Concern was felt by the Government for the physical health of women, as they were the bearers of the next generation and had to remain morally superior in order to raise them to be productive members of society. The answer to the question of the working wife was to ban women from working in certain industries, such as mining, or to curtail the hours of their labor. government, while reluctant to interfere with industry, passed the Factory Acts to limit female labor, bowing to societal pressures to maintain the status quo.

Textiles had been the largest employers of women who were taken on as docile workers ideally suited for machine minding. While this work was considered acceptable for women, it also raised the anxiety of men who felt women were taking jobs that were rightfully theirs by working for lower wages and women realized this as well. A married woman, it was felt, should retire from the workplace to raise children. Women who had worked on the farms fully expected to keep working in the factory, but as society changed so did social attitudes towards women working outside the home.

In order to adapt women to their new “status” a social attitude developed on what was to be considered “suitable” and “unsuitable” labor for women. “Suitable” trades included millinery or dressmaking; certainly not factory work. Criticism of the traditional female textile worker supported the new middle class attitude that women who were economically independent, wives who could support themselves and
daughters who could move away from home were a threat to the family. For working-class women, the “cult of domesticity” that had filtered down from the new middle class was not feasible as economic needs outweighed societal attitudes.

Gail Braybon states in her book, *Women Workers in the First World War*, that since 1900 ‘the health of the race’ had become increasingly important because of the high number of recruits who appeared unfit for service during the Boer War (1899-1902). This war would consist of primarily Boer victories before the British could bring large-scale reinforcements to bear. For Britain, although victorious, the Boer War cost it dearly, in money, equipment and men. Typically, as in any patriarchal society, British women were blamed by her countrymen for the lack of fitness of the soldiers. Mothers, who participated in the factory system leaving the rearing of their children to others were thus putting the fate of the nation at risk should another war occur.

The “health of the race” became of paramount importance to the authorities and became a “catch phrase” for those concerned with the decline in the health of the working-class and their children. Britain believed that the strength of the nation was at stake. Government schemes for reducing the mortality and morbidity rate of children emerged. Maternity care and maternity hospitals were suggested by the government and industry, further strengthening the notion that women should not be working in factories at all during pregnancy or too soon after birth. It was also widely believed among social workers that the highest infant mortality rates occurred amongst mothers who worked outside the home. It was generally ignored by the upper classes that conditions such as

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4 Ibid.
poverty, poor living conditions, and lack of child-care facilities could factor into the high infant mortality rate among factory women. People of all classes maintained that the fix for this problem lay in the banning of married women’s work for the sake of the nation.

While some women still suffered from feelings of inferiority because they were paid less than men, most were satisfied with their condition. However, the massive inflation of 1910 brought women into economic discontent. They began to question their earning power and their treatment by employers. This represented the beginning of a new concern for the freedom of women and the development of a dignity about themselves at the turn of the century.6

With the onset of the Great War in 1914 gender roles changed, at least for the duration. Deborah Thom argues very convincingly in her book, Nice Girls and Rude Girls, that, the state did have an interest in the woman as a worker before the war and that it was not purely male absence that caused mere interest to elevate to interference, but women’s growing awareness of their own rights. Suffragettes, by the late nineteenth century, were certainly campaigning for suffrage and rights for women, citing women’s wage earning power.7 Empowerment of women would lead to partial suffrage.

During the war the question being asked in British society was how far state intervention in these areas could go when the nation was at war. There was discussion between industrialists and the state about the mobility of women’s labor and industry, the labor market, the state and equal pay in the context of contemporary debates about

dilution of labor. What the British deemed "dilution" the Americans used the term "deskilling," was the replacement of skilled men by semi-skilled or unskilled workers. They were concerned as well with substitution. Labor "substitution," meant the substitution of one semi-skilled or unskilled worker for another. In both cases, this meant the hiring of more women. The discussion of what was suitable work for women was linked to the national interest in women's reproduction and motherhood.

Economist and mechanical engineer, C. E. Collet, writing in *The Economic Journal* in December 1915, was critical of the national and municipal authorities for "prescribing the conditions under which women may be employed." By working women, Collett meant professional or otherwise. The first idea he wished to modify was the, "current notion that an unmarried woman can live more cheaply than an unmarried man." He advocated equal pay for equal work saying that inadequate wages could lead to immorality, meaning women might be forced by economic need to turn to immoral means of wage earning through prostitution. Collet asserted that, "Lower salaries are not only unrealistic as the cost of living for an unmarried woman may actually have been higher than that of an unmarried man, considering proper lodging, clothing and food, but also lower salaries tend to bring into the labor market the inefficient and those who use their badly paid employment as a cover for other ways of obtaining money." By this time, young women were beginning to consider it immoral to accept less than a living wage. His other concerns and criticisms of the employment of women at a lower

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9 Ibid. 628.
10 Ibid. 628.
wages concentrate on the number of subordinates doing the same kind of work, requiring a larger than necessary work force.

The economics of raising salaries, coincidentally with an increase in the number of subordinates (meaning those who would work for lower wages), would create a tendency for work to require a larger number of persons to be hired. Collet states, “It is therefore shortsighted for any authority to insist on engaging unpracticed young women at the lowest steps of a scale instead of securing fully competent women at any rate that they may happen to be worth.”\textsuperscript{11} The cost of living rose 25% in the last six months of 1914, however, in contrast, allowances for soldier’s wives and children remained the same. This alone made munitions work attractive from 1915 onward.\textsuperscript{12} Therefore, Collet called for the hiring of competent female workers at equal pay with that of men.

For the first time, many employers had to consider the employment of women and in doing so had to give up notions of what was considered women’s work and wages. C. E. Collet’s suggestions concerned work that required special training or a particular aptitude encompassing experience. In regards to women’s labor by those in the junior grades of professional work, in which little more than a compulsory education was needed along with a few months training, Collet thought women should be hired young and work on a graduated pay scale as their skills improved. This would be a benefit to employers who, rather than hiring unpracticed young women at the lowest possible rate, should hire fully competent women at any rate that they were worth.

\textsuperscript{11} Ibid 628.
\textsuperscript{12} Ibid.
Married women, Collet felt, should remain in the fields of traditional women's work as this work was vital and necessary as well. However, he stated that, “When it becomes compulsory for every local authority to make provision for the prevention of disease, by means of maternity centres, school clinics, trained midwives, health visitors, etc, it will be found that the supply of efficient unmarried women will run short.” Collet also suggested that women should work a six-day work week. In fact, he said, as soon as the quality of work becomes more important than the quantity, work hours should be shortened. As will be seen, terms and conditions of women’s work in the chemical and metal trades were organized by the state which encouraged the terms and conditions of female labor on work formerly done by men.

At the beginning of the war, very few women did take up “unsuitable work;” most remained in the sphere of acceptable work for women, such as clerks, teachers, shopkeepers. Those who did take on non-traditional work understood that it was only for the duration. The general understanding was that when the men returned from the war middle-class and working-class women would return to their homes as men would resume their places in the workforce.

Munitions work in the Great War meant producing metals, chemicals, weapons, ammunition, textiles, and other equipment needed by the troops. That women had a stake in the winning of the war was emphasized by the fact that women munitions workers were the first stage in the production line of the war. Guns, shells, explosives, airplanes, grenades and other war materiel were made by women on the home front to supply the soldier on the front. Their involvement in the war was generally understood

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13 Ibid. 628.
and morally acceptable. Angela Woollacott argues in her book, *On Her Their Lives Depend: Munitions Workers in the Great War*, that munitions making and women munitions workers need to be seen as part of the war experience, with its own dangers and discomforts as well as moral problems. By the end of the war, British industry (and British women) had produced 4,800,000 rifles, 250,000 machine guns, 52,000 airplanes, 2,800 tanks, 25,000 artillery pieces and over 170 million rounds of artillery shells.  

At the start of the war, the British government had no labor policy. This caused a dual problem of creating a labor policy, and men were reluctant to admit women into their workforce. Women demanded the right to serve. In 1915, the Women’s War Register was set up mainly to provide women for work in the munitions factories. Women registered at labor exchanges by the thousands: 33,000 within two weeks and 110,000 by autumn. There was no leadership organization, however, and only 5,000 were placed.  

In March 1915, the Women’s Trade Union League (WTUL) and the National Federation of Women Workers (NFWW) opened, under the direction of Miss Mary MacArthur and Miss Susan Lawrence, respectively. This was a special campaign for the organization of women employed on munitions work. Both men and women were enrolled in the general labor unions in the less skilled trades and became active members. During the war trade union membership rose rapidly.  

The WTUL was a federation of unions, enrolling men as well as women, interested in the organization of women workers. Its principle was, where a “mixed”

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craft or industrial union was available, to hand over to it the women it had organized. Those for whom no such union was available enrolled in the NFWW, a women’s union with which it worked in close partnership. In practice, the two bodies were led by the same people. The Amalgamated Society of Engineers (ASE), which had previously been reluctant to take women into their ranks decided in June to enter into a close alliance with the NFWW in order to organize the women dilutees. The ASE issued a special circular to all its districts to cooperate with the NFWW in securing the enrollment of all women munitions workers in its ranks. Sometimes this alliance worked well, other times, not at all, as there was still resistance to accepting women into the traditionally male union ranks. G. D. H. Cole, a writer of economic and social history of the war, noted, “that in nearly all cases the women remained unorganized; and, of those who were organized, a rather larger number over the whole country joined the ‘mixed’ general labour Unions than became members of the NFWW.”

In their book, Out of the Cage, Gail Braybon and Penny Summerfield assert that 1915 was the turning point for women’s employment in men’s work. With the realization that the war could be long lasting and with a shortage of supplies of munitions, more workers had to be recruited and workshop practices needed to change. As more and more men were killed in action, 750,000 by the middle of 1915, replacements were needed, creating the need for female workers. The government needed to introduce women into the munitions industry quickly so that male workers could be released for the front. One answer lay in the way that arms were produced.

Lloyd George, Prime Minister from May 1915, took charge of the coalition government that became involved in the recruitment, training, and management of munitions workers, including the hiring of women. The state organized the terms and conditions of women's work in the chemical and metal trades and encouraged the use of female labor for work formerly done by men. Did this mean that government and society were willing to abolish the gender roles that had been so firmly entrenched? Or was the state just setting aside convention in order to win the war and only to win the war?

Ironically, the immediate effect of the outbreak of the war was the creation of unemployment due to the uncertainties that any war brings to the economy. The War Emergency Workers National Committee, appointed on August 6, 1914, became active in seeking to secure relief for the unemployed. Its efforts were supported by the Central Committee for Women's Employment, appointed two weeks later. Soon, however, the problem became not one of unemployment, but one of a shortage of workers. In the case of women, the numbers of employed rose and contracted, in the months from September to December, but thereafter the real expansion of female labor began.

An "industrial truce" was declared between labor bodies and government on the outbreak of war. This was done in a statement issued by the Trade Unions Congress, the Labour Party and the General Federation of Trade Unions through the Joint Board on August 24, 1914:

"That an immediate effort be made to terminate all existing trade disputes, whether strikes or lockouts, and whenever new points of difficulties arise during the war period a serious attempt should be made by all concerned to reach an amicable settlement before resorting to a strike or lockout."\footnote{Cole, 52.}
At this time, unemployment and the maintenance of the unemployed were the only industrial questions on which trade union demands were being brought forward.

Soon, however, the first signs of an impending change became manifest as far as the industries supplying munitions were concerned. Trade union members began to complain in November that firms engaged in munitions work were ignoring established workshop practice and trade union regulation by employing unskilled labor introduced for the purpose of work that was claimed as the monopoly of skilled craftsmen. The first serious trouble arose at the Vickers Works at Crayford where the skilled Trade Unionists of the Engineers and Toolmakers Societies objected to "setting up" work on machines, which were to be operated by female labor. The effects of this dispute led to a conference composed of the Engineering Employers' Federations and the two Unions affected in London. On November 26th, the Crayford Agreement was reached and signed by all parties, stating:

"...After discussion it was mutually agreed to recommend the following in settlement:

(1) It is not the intention of the firm to give the work of skilled men to female labour.

(2) All machines requiring adjustment of tools by the operator, either before or during the operation, shall be operated by male labour.

(3) Female labour shall be restricted to purely automatic machines used for the production of repetition work.

(4) A purely automatic machine is a machine which, after the job has been fixed requires no hand adjustment until the operation is finished. All such automatic machines shall be set up by fully skilled mechanics.

(5) Lathes used for turning, screwing, and for boring of shells shall be operated by male labour.

(6) The foregoing shall be observed until the termination of the War, when the whole question shall be discussed, if desired, without the foregoing settlement being argued to the prejudice of either party."18

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18 Ibid. 53-54.
This was clearly a commitment by trade unions to stifle the employment of women in the skilled trades. This stand by the unions could not hold long as the war progressed and the demand to fill these positions increased.

As early as the next month, the Engineering Employer's Federation, a national union of engineering employers, demanded for the abrogation of trade union regulations and customs which prevented employers from utilizing all grades of workers as might be considered best for the purpose of increasing the production of munitions. With the estimated need for 15,000 additional workers, the employers agreed to remove certain trade restrictions without prejudice during the continuance of the War. The trade unions agreed not to press the questions of manning the machines and of hand operations, the demarcation of work between trades, the employment of non-union labor and of female labor, and the question of the limitation of overtime. For the trade unions to allow such changes resulted in an elaborate code of regulations governing the conditions under which dilution might be introduced and extended.

A series of letters went back and forth between the trade unions and the government discussing the aforementioned points, resulting in the ratification of the Shells and Fuses Agreement of March 1915, between the government and the members of the Amalgamated Society of Engineers. This became the first national agreement permitting the introduction of less skilled workers and the relaxation of the trade union customs. In its regard to female labor, the Agreement states:

"Operations on which skilled men are at present employed, but which by reason of the character, can be performed by semi-skilled or female labour, may be done

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19 Ibid.
by such labour during the war period. Where semi-skilled or female labour is employed in place of skilled labour the rates shall be paid at the usual rates of the district obtaining for the operations performed."20

The Agreement, while allowing female labor in the operation of semi or completely automatic machines in munitions work also goes on to provide for the re instituted of male labor at the end of the war in the statement,

"In the event of semi-skilled or female labour being employed as per the foregoing clauses they shall first be affected by any necessary discharges before or after the war period."21

Thus, while agreeing to the necessity of female labor, it was seen as a stopgap measure for the duration of the war period only, and that women, at the end of the war, would go back to their homes or to other jobs.

Even before the ratification of the Shells and Fuses Agreement, steps were being taken by the government to carry dilution even further. Under the Defense of the Realm (Consolidation) Act of March 9th, the government was enabled to take possession of factories required for munitions work and to issue orders to the workers employed in them. The object of the government was to secure the acceptance by the trade unions under a national agreement applied to all classes of workers. The purpose of the Conference was stated in the invitation to the trade unions as being able, "to consider the general position in reference to the urgent need of the country in regard to the large, and larger increase in the output of munitions of war, and the steps which the government

20 Ibid 68.
21 Ibid 68.
proposed to take to organize the industries of the country with a view to achieving that end."  

Lloyd George hastened the process of dilution with the Dilution Scheme of October 1915, which was a resolution pledging the unions' cooperation in the development of dilution, and the Substitution Scheme in 1916, in which special committees were locally formed to arrange for the replacement of workers who were unfit by age or illness, that, in turn, put more women into the work force and moved more women into skilled work. It is important to note that the participating actors in the scheme were Lloyd George, the Central Munitions Labour Supply Committee, the trade unions, the employers and government, and the Women's Workers representative, Mary Macarthur, whose presence thus recognized women's vital interest in dilution. The Dilution and Substitution Schemes were collectively arranged between government, employers and male trade unionists. Gender roles were set aside as need arose. That the need for munitions workers outweighed British society's vision of gender roles was quickly becoming apparent.

The Treasury Agreement was reached between the government, the Chancellor of the Exchequer and thirty-five Trade Unions, allowing women and boys to do parts of a skilled man's work, beginning the use of dilution. The Treasury Agreement also contained statements promising the return to the pre-war status quo once the war was over. When a further series of guarantees was reached, the Amalgamated Society of

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22 Ibid 70.
Engineers accepted the Treasury Agreement, as well, adding much needed weight for the successful operation of the munitions factories.  

Local Armaments Committees were set up with the intention of devolving the actual control of the munitions industries upon the chosen representatives of the industries themselves. This experiment was short-lived, however, due to the actual control by the government over the committees, resulting in a usurpation of the powers and duties these committees had; employers unwilling to agree to the real sharing of control with the Trade Unions and the representatives of the trade unions, themselves refusing to attend meetings with the workers. A strongly centralized and bureaucratic organization replaced the local representative committees.

In June 1915, the Ministry of Munitions was founded, bringing together ninety businessmen as government advisors. They quickly built the ministry into an efficient machine itself, handling all aspects of the training, health and management of munitions workers. It organized the transportation of weapons workers, the building of factories and all that it took to run them. The munitions business came under the control of the state. The ministry owned 250 factories and ran another 20,000, known as Controlled Factories, which were, in fact, privately owned. Governmentally owned industries included arsenals, dockyards, factories, and metals and chemicals works. Other industries, such as textiles, clothing, food, drink, tobacco, paper, wood, mining and building were also contributing to the war effort. Since the outbreak of the war, reports on employment of 23,000 industrial firms employing about 4,000,000 workers, or 43%
of the industrial workforce of Britain, were released. The passage of the Munitions Act set an unprecedented degree of government control over munitions workers in three different ways: the prohibition of strikes, restricting the rights of the workers to leave work, and the establishment of the Munitions Tribunals to try to regulate the leaving of work and punish breaches of workshop discipline.

Irene Osgood Andrews and Margaret A. Hobbs write that the prohibition of strikes and lockouts was the most intrusive of the three. It applied not only to all ‘munitions work’ as defined by the act, but also to all the work done ‘in or in connection with’ munitions work and to any other work to which the act should be applied by proclamation on the ground that stoppage of work would be ‘directly or indirectly prejudicial to the manufacture, transport or supply of munitions of war.’ Strikes and lockouts were forbidden and subject to fines for the employer and employee. Disputes could be referred to the Board of Trade for settlement. Men ordinarily used the “Committee on Production in Engineering and Shipbuilding.” The passage of an amending act in January 1916, authorized a “Special Arbitration Tribunal” to advise regarding conditions of women’s work to settle disputes involving women. The recognition of the special circumstances of women in the workforce illustrated by the formation of a special committee to deal particularly with women’s issues demonstrates that it affects the societal value of women’s participation in the war effort and the workforce.

Andrews and Hobbs report that the clause prohibiting strikes was denounced by

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25 Braybon & Summerfield.
labor and radical groups as having given rise to more strikes than it prevented, and
strikes did, indeed, increase proportionately faster after the passage of the act. As
reported in 'The Scotsmen,' on November 21, 1917, Mr. Anderson, a factory man, was
asked by the reporter if he investigated the circumstances of a strike involving 400
women employed by Messrs. Boardmores at their East Hope Street Factory, Glasgow;

"whether he was aware that the origin of the strike was the dismissal of four
women, who were charged with restricting output; whether he was aware that
three had been in the employment of the firm for two years; whether some of
them had to catch an early train in the morning and return comparatively late in
the evening; whether one of them had gained the highest bonus ten weeks in
succession; whether the reduced output was attributed to bad health; whether one
of the women was the mother of four children and had to look after them and a
paralyzed husband who died three weeks ago; and whether in all the
circumstances he would ask that these women be reinstated."

The Munitions Secretary (Mr. Kollaway) replied that he had only received notice
of the question that afternoon and that he had not had the time to acquaint himself with
the whole of the circumstances. He had, however, given instructions that the women on
strike should be informed that the ministry was prepared immediately to make
investigations or to have the matter referred to the Ministry of Labour if they returned to
work. While there is no further evidence as to the resolution of this particular strike,
women, at least, had representation through the Special Arbitration Tribunal. That the
matter was to be handed over to the tribunal is significant in that women's grievances
were being addressed.

On the day following the passage of the Ministry of Munitions Act, the trade
unions, which had been represented at the First Treasury Conference, were joined for

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27 Ibid 98.
28 'The Scotsmen,' November 21, 1917.
the first time by the NFWW to meet for a consultation with the new minister. The purpose of this meeting was to draft a bill to give definite legislative sanction to the terms of the agreement already entered into and to organize certain measures already undertaken to keep labor on an equal footing.

Braybon and Summerfield state that the first Munitions Act of July 1915, "confirmed that female labor should be allowed into work from which women had been excluded before the war, and introduced the infamous 'leaving certificate.'"30 The leaving certificate clause states that a workman who has left his previous employment shall not be given work for six weeks, or for such time as the Ministry of Munitions deemed appropriate, unless he or she was issued a certificate allowing them to leave that particular employment. In other words, an employee had to have the permission of the employer in order to change jobs. The clause provided for complaints to a munitions tribunal to address requests unreasonably withheld from the employee. It also said that it would be considered an offense under the act if an employer hired someone who did not possess a leaving certificate. Neither men nor women could leave their employers without a leaving certificate, virtually ensuring that workers could not find work with another munitions factory for six weeks, even though wages at another factory may have been higher. This created a captive workforce.

There was no part of the Munitions Act more unpopular with the worker than the requirement of the leaving certificate. A quotation from The Woman Worker clearly illustrates the labor point of view:

"The first Munitions Act came quietly-on tip-toe, like a thief in the night, and not one woman worker in a thousand know of its coming.

30 Braybon & Summerfield, 37.
Their shackles were riveted while they slept... The Foreman's reply to the complaining one is no longer: 'If you don't like it, leave it.' She can't. If she tries, she will find that no other employer will be allowed to engage her, and unless she can persuade a Munitions Court to grant a leaving certificate, six weeks idleness will be her portion. And we know what that means to many a woman worker. Long before the six weeks are up, her little treasures, if she has any, are gone and God help her then. ...One great danger of the new condition is that sweating and bad conditions may be stereotyped.
The other day a munition worker, who was being paid twelve shillings weekly, had a chance of doing the same work for another employer at one pound weekly, but the Court refused her permission to make the change. And thus we have a case of the State turning the lock on the door of the sweater's den. Some people hold strongly that these leaving certificate clauses of the Munitions Act are altogether unnecessary. They hamper and irritate men and women alike, and so far from accelerating output, may actually diminish it. Under the Defense of the Realm Act, it is already illegal for employers to incite munitions workers to change their employment, and that should be sufficient.31

• The leaving certificate was done away with in 1917 due to its unpopularity, allowing workers freedom of movement between employers.

The economic and social historian, G. D. H. Cole states, "Gradually on the basis of its actual experience in fixing rates for particular cases, the Special Arbitration Tribunal developed a mass of precedents."32 In the years 1916-1918, it drafted a series of general recommendations, laying down rates of wages and conditions of employment for women engaging in work falling outside the scope of Circular L2 of the Munitions Act that set the levels of pay and working conditions for female dilutees in munitions work. Circular L2 did not govern the remuneration of all women employed on munitions, but only those engaged on work not recognized as women's work before the war in districts where such work was customarily carried on. As for the women who

32 Cole, 104.
were concerned with this work, it laid down that as a minimum of one pound a week should be paid, but also that women engaged on work customarily done by fully skilled tradesmen should receive the time rates paid to the class of tradesmen in question, and that, in all cases, the piece rates paid to men should be paid to women, also.\textsuperscript{33}

It was, however, one thing to set down in law what should be equal pay for women, and quite another, the reality of it. Not all of the recommendations concerning Circular L2 were taken when forwarded from the Tribunal to the Ministry of Munitions, but most were subsequently issued as General Orders, enforceable at least in Controlled factories. Cole states, “The Minister also acted on the advise of the Special Arbitration Tribunal…in awarding to women munitions workers advances, on the rate originally fixed, as the cost of living increased.”\textsuperscript{34}

In 1918, Circular L2 was finally replaced by the Munitions of War Statutory Rules and Orders No. 594, Employment and Remuneration Order on Women and Girls Employed on Munitions Work, replacing and bringing into balance all previous orders. The Special Arbitration Tribunal continued in its capacity throughout the war in dealing with cases in which either application of orders was in doubt or special rates were claimed for work requiring a special skill, danger or unpleasantness. Note that this order covered controlled establishments; however, some important alterations were put in place, the most important in regard to time workers:

“(1) Women employed on work customarily done by fully-skilled or tradesmen shall in all cases be paid from commencement the time-rates of the tradesmen whose work they undertake.

As for Workers on Systems on Payment by Results:

\textsuperscript{33} Ibid 98.
\textsuperscript{34} Ibid 104.
(1) The principle upon which the following directions proceed is that, on systems of payment by results, equal payment shall be made to women as to the men for an equal amount of work done.

(2) Women employed on piece-work shall be paid the piece-work prices customarily paid for the same or similar work when done by men.

(3) Women employed on premium bonus system shall be allowed the time customarily allowed to men for the same or similar work and the earnings shall be calculated on the basis time-rate used in the case of men.

(4) Where in the establishment in question there are no data from previous operations to enable the parties to arrive at a piece-work price or time allowance, the price or time allowance shall be so adjusted that a woman receive the same percentage over the time rate of the class of men customarily employed on the job as such men would have received had he undertaken the job on piece-work or premium bonus system, as the case may be.

Part V-General Provision:

(1) Where special circumstances exist, women and girls may be paid in excess of the rates prescribed in these directions. In particular, and without prejudice to the foregoing provisions, they shall be so paid when they are employed

(a) in danger zones,

(b) on work injurious to health,

(c) on specially laborious or responsible work, or

(d) on work requiring special ability."

There are many instances of the awarding of pay raises by the Special Tribunal by the NFWW, furthering the evidence of the value of women in industry. It was reported in *The Herald* of May 1917, in the article entitled, 'Women in Industry,' at the Annual Conference of the Women’s Trade Union League, by Miss Gertrude Tucker, who said that, “over 100 settlements have been arranged during the year, and of the cases taken before the Special Arbitration Tribunal, 92 percent have been successfully established.” In the arrangement of settlements women’s rights to equal pay for equal work was recognized. Much Parliamentary work has been done, particularly in relation to TNT poisoning and the suspending of women munitions workers, sometimes for two

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or three weeks without pay.\textsuperscript{37} She goes on to report that women's wages have increased and that membership in women's organizations had also increased.

\textsuperscript{37}Ibid.
Women Munitions Workers at War

Women flooded into the munitions industry. After the passage of the Munitions Act, "over half a million women were added to the ranks of labor between the outbreak of war and the spring of 1916." Figures representing the industrial population by sex from July 1914 to July 1916 show the number of females in substitution of male labor and the number of women directly replacing men.

Table I.

INDUSTRIAL POPULATION, BY SEX, JULY, 1914, AND INCREASE IN NUMBER OF FEMALE EMPLOYEES, FEMALES ON WORK IN SUBSTITUTION OF MALE WORKERS, AND NUMBER OF WOMEN DIRECTLY REPLACING MEN, DECEMBER, 1915, AND APRIL, 1916.

<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>Estimated industrial population, July, 1914.</th>
<th>Increase in females.</th>
<th>Estimated number of females on work in substitution of males.</th>
<th>Number of women directly replacing men.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>967,000</td>
<td>7,000</td>
<td>3,000</td>
<td>5,900</td>
</tr>
<tr>
<td>Mines and quarries</td>
<td>1,220,000</td>
<td>9,000</td>
<td>800</td>
<td>2,200</td>
</tr>
<tr>
<td>Metal trades</td>
<td>1,042,000</td>
<td>7,000</td>
<td>9,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Chemical trades</td>
<td>180,000</td>
<td>10,000</td>
<td>19,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Textile trades</td>
<td>180,000</td>
<td>8,000</td>
<td>10,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Clothing</td>
<td>290,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Food</td>
<td>290,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Paper and printing</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Wood</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Other</td>
<td>290,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Total industrial occupation</td>
<td>6,300,000</td>
<td>2,100,000</td>
<td>1,900,000</td>
<td>2,900,000</td>
</tr>
</tbody>
</table>

1. The figures in this table are as given in the original report, but in some instances the totals are not the sums of the items given.
2. Decrease.


39 Ministry of Munitions. p. 17.
These figures show that in the metal trades from 1914 to 1915 the number of women increased by 49% by December 1915, and by 88% by April 1916. The number of women doing substitution work in the metal trades increased 48% by December 1915 and by 81% by April 1916. The number of women doing substitution work in the metal trades increased 48% by December 1915 and by 81% by April 1916. The number of women directly replacing men in this field increased 11% by December 1915 and 41% by April 1916. In the chemical trades the number of women employed from July 1914 to December 1915 increased 48% and increased 84% by April 1916. The number of women doing substitution work in this field increased 19% and those directly replacing men increased 39%. In the arsenals, dockyards and munitions factories, the number of women increased 650% between July 1914 and December 1915. All of these women did substitution work or directly replaced men. The table shows that the incredible increase in women’s labor in traditional men’s work was an absolute necessity during the war.

The London Society for Women’s Suffrage (NUWSS) put out the call for women workers in the form of flyers, leaflets and advertisements urging employers to not only offer jobs but to train women for jobs hitherto unknown to them. The aim of the NUWSS, as stated in the ads was to enroll women “willing and able to render national service during the present crisis, and after careful selection, to place them in posts where their particular qualifications would be of most value to the country.”\textsuperscript{40} The NUWSS wanted to train women, by means of short courses, to supply the need of semi-skilled workers in aircraft and munitions factories. This was done in order to give

women an opportunity for full and thorough training in professions and trades in which there was the prospect of shortage, permanent or temporary. The NUWSS also sought to send women out to ease the suffering of the sick and wounded overseas.

In registering the thousands of women for voluntary and paid work, many were placed as clerks, railway, factory and agricultural workers, organizers, supervisors of hay baling, forge and munitions work, and canteen (cafeteria) work. It trained women in oxy-acetylene welding and elementary engineering. Scholarships were offered to qualified women for a particular profession or trade in hopes of achieving the ultimate prospect of a successful career.

In calling for munitions workers, the NUWSS explained:

"Women who are strong and able to give their whole time and can stand hard work are registered for Munition Work. Some are drafted straight in Munition Factories, other join one of the Society’s series of classes for acetylene welding, micrometer and venier viewing and engineering tracing which have been arranged to supplement existing opportunities for mechanical training for women."  

In the Ministry of Munitions “Notes on the Employment of Women”, it stated that “prior to the outbreak of the war, the engineering and shipbuilding trades…were practically confined to male workers.”  

Since the war, women were taken into the industries, not as substitutes for men but as additional labor due to death of male workers who had gone to the front. Attracted by high wages, as of the middle of June 1916, 372,000 women were employed in the metal trades. Roughly, 12,000 of these were employed in shell making and shell filling. According to the Ministry of Munitions,

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42 Ministry of Munitions, p. 17.
"Women were engaged in all the processes of the production of shells often the forging, from the small 2 pounder for anti-aircraft guns to the 8" H.E. projectile, which is the largest so far, worked on by women in the district... Despite highly automatic machinery, a considerable amount of attention and skill and manual labor is required by the machine workers. For example, one woman rough-turned 100 shells each weighing 32 pounds in a 10-hour shift. This entailed lifting the shell in and out of the machine every six minutes and the heavy labor of tightening up the chuck which grips the shell." 43

Women also worked on shell fuses, boring, milling, screwing, drilling and topping, as well as shell filling. They filled shells and cartridges with cordite, an explosive powder consisting of nitrocellulose, nitroglycerine and petrolatum that was dissolved in acetone, dried and extruded in cords; and NCT, a form of jellied gasoline used in flame throwers—today’s napalm. They also assembled H.E. (High Explosive) shrapnel shells. TNT (trinitrotoluene), lethal gases or other chemicals were also used in the filling of shells. Women were provided with aprons and overalls to protect their clothing, but were given no other protective equipment or gear.

Miss Gabrielle M. West, a young Englishwoman chronicled the work done by women in the munitions factories and the conditions under which they labored. She also made many amateur drawings of the machines on which the women worked. Miss West began her career as a war worker as a volunteer cook at the Red Cross Hospital in Standish in 1914. She volunteered there for about a year until she could no longer afford to be a volunteer. Employing her skills as a cook, she went to work at the Royal Aircraft Factory at Farnborough Hants, where she earned £60 per year with two meals a day. This canteen was run by the Munition Maker’s Canteen Committee. Miss West moved from munitions factory to munitions factory as she was considered to be an excellent organizer of the canteens for workers. She began training as a woman police

43 Ibid 18.
officer in November 1916 and was hired at Queensferry Factory at £2 per week. She moved to the munitions factory in Pembrey, Wales, where she was promoted to sergeant. Her diaries end in 1917 with her employment as a woman police officer in the Hereford Shell Factory (May 1917). Her entries, and the records of others provide insight into the work of the women munitions workers.

At the Royal Aircraft Factory at Farnborough, Miss West describes the women and their work:

"We have about a dozen very haughty lady clerks who come to dinner before the others. The rest are ordinary factory girls. There are the "welders’ who join the metal parts of the engines with acetylene blow lamps. These give out such dazzling sparks & flames that the girls have to wear dark blue, almost black glasses when at work. Then there are the dope girls who varnish the planes with a quick drying very poisonous varnish. It affects the liver. The girls are under medical supervision, have to drink quantities of lime juice & lemonade, may not eat anything in their work room, must wash between meals etc.

"Codys girls” cover the planes with linen. Mr. Cody is the foreman. He is the son of the lady who invented the Cody biplane & was killed in an aeroplane accident."44

In a later entry regarding the covering of the planes, she writes:

"The most interesting is the shop where the girls cover the planes. First of all the linen is passed slowly over a small glass topped table with a kind of green tent over it, & a powerful light under the glass. In this way any little imperfection can be detected, marked & replaced. The repairing is done by pasting little squares of linen with frazzled out edges over the fault. The tiniest little irregularity in the waving has to be patched as the wind whistling through it might make it tear right across. When the linen has been patched the plane is covered with linen & is then varnished with several coats to make it taught & waterproof. Then the emblems are painted on, & the finished plane sent over to another shed to be fixed onto the bodies."45

44 Diary of Miss G.M. West. Imperial War Museum. [77/156/1].
45 Ibid.
Figure i. Girls with shells of various types & sizes. Chilwell.

Figure ii. Interior of shell-filling Factory. Chilwell.
Figure iii
Canteen

Figure iv
T.N.T. shop.
Woolrich
Arsenal
Bombings by Zeppelins and airplanes were another serious danger to munitions factories and their workers. The raids were common enough to become a regular feature in the London skies. Munitions workers knew they were targets of these raids, causing fear among them. Munitions workers were expected to keep a stiff upper lip, however, and go about business as usual: remaining calm during an explosion and to clean up afterward. During her time at this factory, many Zeppelin raids occurred. In February, 1915, Miss West writes:

"We had several Zeppelin scares. Every now & then all the factory lights go out, the soldiers are all called out by the hooter, & then next morning we hear that there has been a raid on the S.coast or somewhere equally remote."  

In March of that year, West was asked by her friend, Buckie, who had gone on to work at the Woolrich Factory in London, to join her there as cook. She describes the girls there.

"The girls here are very rough, regular cockneys, but mostly amiable if not rubbed the wrong way. If they are it is Billingsgate gone mad. The only thing then is to give it to them hot & they generally shut up after a bit. A good many come from the danger buildings. When they arrive at their work they have to take out all hairpins, & must not wear metal buttons or hooks & eyes. They have to take off their own shoes on one side of the shift room & jump over a barrier onto what is called a clean side in their stockinged feet. There they put on danger shoes which are soft & have no brads. Their work is filling cartridges for bombs."  

For most women war work was boring, repetitious and strenuous. An example of this is found in the memoirs of Miss Olive May Taylor, who recalled her days at a shell filling factory. Taylor was seventeen years old when she was called as a volunteer at a privately owned munitions factory near Morcambe Bay. She was a member of the

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46 Ibid.
47 Ibid.
Women's Army Auxiliary Corps for the duration of the war. She describes the wages as "terribly low." She worked on the night shift from 7 pm to 7am, taking her meal between eleven and twelve midnight. Her rooming house was three miles from the factory to which she had to walk both ways. A large number of women were engaged in the making and filling of shells and cartridges. West states in her diary,

"Shells of all sizes came in to be filled, many of them nine inches across, 9.2's. The filling was a boring and laborious [sic] task. A large amount of powder stood by each shell, and this had to be rammed into the shell using a piece of wood and wooden hammer. Often it seemed impossible to ram in any more powder but with the mallet and stem another small hole had to be made into the powder and more inserted. This was called "stemming.""

Miss West describes Woolrich Arsenal, the largest munitions factory in England as "one huge slum, & in fact there are slums all the way between here & London which is 1 ½ hours by tram." In describing Woolrich Arsenal, Miss West states,

"There are five gates to the Arsenal each about 1 ½ miles beyond the other. We go by tram from our digs to the third gate. After this we have 25 minutes sharp walking through the Arsenal to reach our canteen. The road is called the 'long straight.' Imagine Oxford Street with no lights, no pavements, no islands & intersected by railway lines every short distance. It is in addition a sea of liquid mud. You leap out of the way of a motor lorry & land in front of a train. You scuttle away from this & run into a nevoy [?] whose language becomes blue. The canteen is by the firing pits so that by day the noise is deafening, cups leap off the shelves and every now & then the windows break."

West describes another Zeppelin raid she experienced while at the Woolrich Arsenal:

"A fearful thrill, have been through an air raid. I must give you a full & complete account of the whole performance. As I came to work at about 8 p.m., I met a lot of the gunners also coming into the Arsenal. I said I was surprised at their coming to work at such an hour as all the testing is done by day. They

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58 Memoirs of Miss OM Taylor, Imperial War Museum, [83/17/1].
59 West.
60 Ibid.
Figure v
Girls measuring T.N.T. into buckets.

Figure vi
Girl “stemming” T.N.T. into shell.
Figure vii

Figure viii
Girls wearing respirators in a shell-filling factory. Chillwell
grinned & said they were going to do some tonight they thought I asked them what happened to the shell when they were testing. If they used a real shell wouldn’t it travel miles? They said that anyway tonight they were going to use real shells. But even then I didn’t realize what they meant.

We had not been long in the canteen when the foreman of the bandolier shop came round fidgeting with the blinds & remarked that he could send the boys over for an early meal. Then it began to dawn upon me. For about 20 minutes we served the boys with buns & tea, just as the last boy was served out went the lights. As soon as the lights go out each foreman locks the doors of his shop, the idea being to prevent the workers rushing out in the open & making a row. However we were not locked in, though we had the watchman standing at one door & the foreman at the other, which opens onto the bandolier shop. Some of the girls began to squeal & then to sing, but the boys were quite quiet. All you could hear was the policemen whistling to each other & the foreman & watchman calling, ‘You there, Tom?’ ‘Yes, George.’

Then all the guns began. They don’t make much noise only a sharp bang almost like a revolver shot. The big naval guns are sometimes used, & they make a huge noise, but they weren’t fired tonight. The Zep was very high up like a small sausage in the sky. Three searchlights were playing on it & it appeared to be hit 3 times for it lurched & then gave a bound. Then it rose much higher, turned round & made off. The whole performance took only 4 or 5 minutes. As the Zep retreated it dropped bombs. Some of these landed in the river, one or two in N. Woolrich where several people were killed & the rest in open ground. She appeared to be badly hit as she came down very low & seemed very lopsided as she disappeared. In the morning there was great rejoicing as the Zep had come down in the Thames.”

As part of canteen work, West was concerned with the nutrition of her workers. At Woolrich, she found such disorganization and lack of responsibility on the part of the Health of Munitions Workers Committee, as the number of workers continued to grow, that she gave notice in May of that year. She stayed on, however. In July she was shown the factory, “as a great favor.” Her description is as follows:

“First I saw cordite made into charges. Each charge consists of 5 or 6 little bagsful & a core. Each little bag is shaped like a lifebelt. The quantity of cordite it contains has to be weighed to a pins head. Even the silk it is sewn up with is weighed. Each bag contains a different weight, & the five or 6 are then threaded on the core. The core is made of a bundle of cordite like a faggot. The whole charge is then packed in a box with a detonator.

51 Ibid.
Then I was shown the lyddite works. This is a bright canary yellow powder (picric acid) & comes to the factory in wooden tubs. It is then sifted. The house, (windows, doors, floor & walls) is bright yellow, & so are the faces & hands of all the workers. As soon as you go in the powder in the air makes you sneeze & splutter & gives you a horrid bitter taste at the back of the throat. After sifting the acid is put in cans & stood in tanks where it is boiled until it melts into a clear fluid like vinegar. Then it is poured into the shell case. But a mould is put in before it has come to solidify. This mould when drawn out leaves a space down the middle of the shell. Before it is drawn out beeswax is [poured] in, & then several cardboard washers put in. Then the mould is replaced by a candle shaped exploder of TNT or some other very highly explosive is put in. After this the fuze cap is screwed in, & then two screws have to be put in to hold it firm. The holes for these screws must not be drilled straight into the detonator, if they do the thing explodes. A [+] is put as a warning, just where the detonator is, but they get careless & don’t look. A girl was blown up in this way last week. After the fuze is screwed in the shells are painted with distinctive colours, stenciled with date, place of manufacture, etc. & packed in twos in a box with 2 charges. On the box 40 different stencils have to be put before it is ready to dispatched to the Germans. Only small shells are made here.”

Working with picric acid turned the skin and hair bright yellow, distinguishing these workers as “canary girls,” that stigmatized them in the eyes of other female war workers because filling was seen as the lowest of jobs.

Finally, in November 1916, West “escaped from Woolrich at last!” She was off to London with her friend, Buckie to look for better opportunities. One has to admire the pluck of these women to move from place to place in a time when this was considered impossible for women. They applied for several different jobs but then heard that women police were badly needed.

“Then we heard that Women Police were badly needed, so we went off to their offices to see what that was like. All the W.P’s we saw looked very smart in a very dapper uniform of navy blue. We were interviewed by an Inspector who gave us the foll [owing] details. They are anxious to get W. police recognized as an official part of the police service. They would deal especially with women & children. So far, they have not got this recognition, only a sort of toleration but certain county & borough councils have employed w. police on their own responsibility. These are paid out of local funds, & work independently of the

52 Ibid.
Figure ix
Weighing cordite.
Woolrich Arsenal.

Figure x
Assembling fuses.
Woolrich Arsenal
men police & are not sworn in. But the Government (i.e. Ministry of Munitions) are employing W.P.'s inside munition factories to control the women workers & it is for this work that they want recruits. Pay is £2 a week, but recruits have to buy their own uniforms. They have take up our references, & if we are accepted I think we shall take it on."

By the beginning of December 1916, West and Buckie were hired and began their training which consisted of lectures, attendance at police courts and children's courts and taking notes of the cases heard. They drilled in the evenings and patrolled neighborhoods. Later in the same month, they went to stay in Chelsea near the Queensferry Factory, about three miles away.

Their work at Queensferry consisted of searching incoming workers for such things as matches, cigarettes, and spirits. They searched outgoing workers for stolen property. They kept guard at the gate, allowing no one to enter without a pass and conducted visitors and new workers into the factory as well as various other perfunctory duties. At Queensferry Miss West described what went on there:

the factory makes the following: sulphuric acid, nitric acid, oleum, gun cotton and TNT.
The result of this mixture is the most terrific collection of stinks that you could possibly imagine.
For patrolling it is divided into four areas.
1) The Grillo consisting of five sulphur burners, acid coolers, platinising plant, etc. The burners each have 40 furnaces, 20 doors on each side. Occasionally for learning purposes the 'blowers' are taken off. What that means I don't know but the result is lovely. Out of each furnace door & each damper comes a huge shy blue flame 3 or 4 feet long, so that the whole place is an avenue of gorgeous colour. Then first on, & then another flame begins to get pink at the base, & then pink all over, then they get flame coloured tips, & lemon yellow bases, & then they gradually turn from yellow to pink, then green, & then deep royal blue. Then the flames flicker out, but while it lasts it's the most gorgeous display of colour you could possibly imagine, Devonshire Park fireworks are like a 2d [monetary designation] dip compared to it. When the blowers are on the Grillo

Ibid. 53
Figure xi
Miss Lilian Barker, O.B.E. Lady Police Superintendent. Woolrich Arsenal.

Figure xii
hasn’t much to recommend it, being enriched with an evil sulphurous smell, such as I imagined was reserved for the Devil & his angels. I wonder if they ever take the blowers off down there, it must be worth seeing.

2) G [un] Cotton section. The first few times you go round you think how very interesting it all is. Then one joyful day Sergeant takes you round & tells you exactly what everything is & what it does. The next few times you are perfectly happy escorting new constables round & airing all your recently acquired knowledge. After a bit they get to know as much as you do, or they think they do. After that the G.C. ceases to interest you, & the evil smell from the G.C. retorts becomes more noticeable.

3) The TNT. Stinks, no other work describes it, an evil sickly chokey smell that makes you cough until you feel sick. But even the TNT is not so absolutely suffocating & overwhelming as the

4) Middle section., there sulphuric is turned into nitric & nitric into Oleum, the air is filled with white fumes & yellow fumes & brown fumes. The particles of acid land on your face & make you nearly mad with a feeling like pins & needles, only more so, & they land on your clothes & make brown spots all over them, & they rot your hankies so that they come back from the laundry in rags & they get up your nose & down your throat & into your eyes, so that you are blind & speechless by the time you escape. All over the place to cheer you on your way are notices telling you what to do if anyone swallows brown fumes.

If conscious give an emetic.
If blue in the face apply artificial respiration & if necessary oxygen. Being quite sure that you have swallowed numberless brown fumes, this is distinctly cheering. Each time you emerge from the Middle Section you feel like Dante returning from Hell.”

Few if any safety precautions were taken in working in this particular factory. The same can be said for most munitions factories. The atmosphere was dangerous and the work damaging to the health of the workers. Efforts were made to reduce the poisoning that occurred in explosives factories. The workers view of explosions themselves was fatalistic. Some positive steps that were taken to control explosions were inspections of workers to remove any contraband such as matches and metal objects, firefighting equipment and personnel on hand at every factory, and first aid facilities.

54 Ibid.
More evidence is provided by West:

"Many girls fainted from in the T.N.T. room but I was not affected so was often exposed to that deadly poison. I did, however, begin to faint fairly often, mostly with trapped fingers between the largest shells. Not having enough to eat probably helped to cause the fainting. My perfect set of teeth were ruined & gave me years of pain."\(^{55}\)

In January, they were off to Pembrey in Wales, where West was promoted to Sergeant. West describes Pembrey as, “the back of beyond.” It was a small coal mining village that once had a silver works. There, she and Buckie lived in Swansea, a twenty mile journey by “Shift Train.” Pembrey Factory was built on the sandhills of the “Burrows.” Worksheds were built among the sandhills, but the most dangerous work was done in sheds actually inside the hills, resembling something like a rabbit warren:

“\[\text{In these very dangerous sheds only 5 or 6 workers are allowed at a time & if an extra person wants to go in, one of those inside must come out. These are the }\]‘sieving’ \[\text{sheds, where the powder intended for making cordite & ballistite is put through a metal sieve. This factory makes T.N.T., g. cotton. cordite & ballistite.} \]

\[\text{Gun cotton is made in the following way. The cotton is first put through the teasing machine, then it is picked over by hand & then sent to the acid room where it is soaked in a mixture of nitric, sulphuric, oleum & water. Then it is taken out & sent to the vat house where it is boiled in soda water. From here it goes to the pulping house. At this stage it looks like very dragged little bits of cotton wool floating in a brownish liquid. In the pulping house it is stirred round} \]

\& \[\text{run between rollers till it becomes a smooth creamy coloured mass like rather thin porridge. From the pulping house it passes on to the press house where it is pressed into blocks which resemble yellow soap. Some of this is used as it is for laying mines, etc. but a good deal is ground down into powder & made into cordite.} \]

\[\text{To make it into cordite a certain amount of nitro glycerine is mixed with it. It is then called paste although it isn’t in the least like paste. It is a dry but slightly greasy powder, very like flour into which a certain amount of fat has been rubbed in order to make a cake. This paste is then sent to the incorporating mills where it is mixed with ether alcohol} \]

\& \[\text{mineral jelly into a dough} \]

\& \[\text{sent on to the press houses. Here the dough is put into cylinders, hydraulic pressure is applied & it is pressed out in long tubes, very like macaroni except that it is brownish} \]

\& \[\text{the hole up the centre is very much smaller, hardly visible in fact.} \]

\(^{55}\) Ibid.
The tubes are sent to the stores which are like immense linen cupboards with shelves all round. They are kept at about the same heat as a linen cupboard for several days, & thence to the Blending houses. In the Blending houses, defective & broken pieces are thrown out & the different trays full of cordite are mixed together in order to ensure uniformity of strength. That is to say, a girl takes two or three pieces from each of a dozen different trays & puts them into a box, which is screwed down when full, labeled & sealed, & is then ready to be dispatched to the filling factory.56

West goes on to describe the effects of the cordite on the girls:

"The ether in the cordite affects some of the girls. It gives them headaches, hysteria, & sometimes makes them unconscious. If a worker has the least tendency to epilepsy, even if it has never shown itself before, the ether will bring it on. There are about 15 or 20 girls who sometimes get these epileptic fits, & on a heavy windless night as many as 30 girls will be overcome by the fumes in one way or another. By rights girls who show signs of epilepsy when put to work on the cordite ought to be transferred or dismissed at once, for if this is not done they will become confirmed epileptics & go on having fits even when not in contact with the fumes. However this is not done, & some of them will have as many as 12 fits one after another. When these girls get taken ill we are generally called in to render what assistance we can & to take them up to the surgery on a stretcher. There is one girl here who gets the most appalling fits. She goes dead & stupid for a minute, then very red in the face & then starts the most violent struggles pulling at her own hair & twisting herself into the most fearful contortions. It takes 4 or 5 people to hold her & prevent her from hurting herself. The favorite 'cures' amongst the girls is to souse the sufferer with cold water, thump & slap her, shake her, pour hot drinks between her teeth (although being quite unconscious she can't swallow) stand her on her head ( when she is purple in the face already) & last but not least 'sit on her stumminck [sic].’ This particular girl told me after her last fit that she was so glad the P. Women had looked after her & kept the other girls away as last time she was that bruised in her inside that it made her sick for a week."57

West found the girls at Pembrey much more interesting than those at Queensbferry, full of life and cheerful, with a good many "characters" amongst them.

She had 800 in her care in one section and about 500 in other sections in each shift.

56 Ibid.
57 Ibid.
making a total of about 3,900 women workers. Some of the girls were from the sheep farms in the mountains and only spoke Welsh; others were the wives and other relatives of the miners from the Rhondda Valley and other coal pits nearby. She tells us that they were very socialistic and always ready to get up a strike. Some of her girls were from the Swansea docks, and she considered some of them very bad characters. She describes these girls as a mixed lot of a different type from the Welsh girls as descended from a colony of Germans who settled the lower peninsula, with a large mix of Welsh, English, Irish and many other foreigners. A fine example of the character of the girls can be found in the description of an explosion at the factory one day in April 1917:

"Such a day! I came home at 5 to our rooms [by this time Miss West and "Buckie" had moved to within 2 ½ miles of the factory]. At about 6 oclock there was a tremendous explosion & then a whole succession of little bangs. I rushed upstairs & from the window saw flames & smoke coming from the factory in volumes. The landlady wept & flapped & said poor Miss Buckpitt was no doubt already dead, & all the poor dear girls blown to atoms & all the women police & so on.

When I got near the factory I met several girls running for their lives. One of them stopped me to say that she had left her case containing her food in the dining room, could I please be sure to go & rescue it as soon as I arrived at the factory! When I did arrive I found the danger gates barred, & all the girls huddled just inside them. A large shed behind the G.Cotton section was in flames, & going off into small explosions every now & then. All the policewomen on duty were busy pacifying the girls, & attending to various cases of fainting & fits. After about half an hour of this performance the fire was put out & we were told to get the girls back to their shed. This was easier said than done. However after another half hour of persuasion one girl announced that she was going back & she hoped if she perished the policewomen would remember that she had left all her money to her mother, we should find the will under the drawing room carpet. Of course when one started all the rest followed & back they marched singing:

Where's the use of worrying
It never was worth while
So pack up your troubles in your old kit bag
And smile, smile, smile.⁵⁸

⁵⁸ Ibid.
To say that the working conditions for women munitions workers were not very good is an understatement; conditions were dangerous despite all the attention given by the Ministry of Munitions. More often than not, their recommendations were ignored.

At Pembrey:

“This factory is very badly equipped as regards the welfare of the girls. The change rooms are fearfully crowded, long troughs are provided instead of wash basins, & there is always a scarcity of soap & towels. The girls danger clothes are often horribly dirty & in rags, many of the outdoor workers, who should have top boots, oilskins & westers, haven’t them. Although the fumes often mean 16 or 18 casualties a night, there are only 4 beds in the surgery for men & women & they are all in the same room. There is another large surgery but it is so far from the girls section of the factory that unless it is a serious case girls are not taken there. There are no drains owing to the ground being below sea level, but there could be some sort of incinerator, but there isn’t. The result is horrible & smelly swamp. There were until recently no lights in the lavatories, & as these same lavatories are generally full of rats & often very dirty the girls are afraid to go in. But by dint of great opportunity Buckie has at last persuaded the manager to put lights. But it is not really his fault. The lady Welfare Superintendent should see to all this, but doesn’t & what few reforms have been brought about by the W.P. 59

In May 1917, West and Buckie moved on to Hereford Shell Filling Factory. Here she describes the Amatol Section:

“The Amatol section is now working, there are eventually to be 7 units, each unit employing 100 girls on each shift. Amatol is made of nitrate of ammonia & TNT pounded together into a fine pinkish powder. The internal arrangement of a shell are very complicated. As there are smoke bags, washers, exploder bags & what not to be put in, I won’t attempt to describe it as I don’t understand it. The Amatol is in some ways more dangerous that the Picric. The n of a [nitrate of ammonia] is dried in a big cylinder. When it & the TNT are put into the mills, things very like old fashioned cider presses, a trough, with a crushing wheel which runs round & round in it. Occasionally the mixture catches on fire, so each mill has a fireproof cover, drenching tap, & fireproof doors to it in case of emergency. One of them did go off one day, & the charge hand pulled the handle of the drencher, drew down the fireproof cover & shut the fire doors of all the sections before leaving. She never got any recognition for this.” 60

59 Ibid.
60 Ibid.
In describing the Amatol girls, West writes in September 1917:

“I never knew such an unruly wild set of hooligans in my life. The new Amatol girls are at the bottom of all the trouble. They are recruited in batches of 20 to 100, some from the midlands, some from Yorkshire, Ireland, Scotland, & Wales. They are brought down here, & if accepted are put into very rough hostels or cheap lodgings. Naturally under these circumstances only the roughest of the rough will come, & a good many are girls that have come away from home because they had made things too hot for themselves. Anyhow they are a great trial. They steal like magpies, fight, get up scandalous tales about each other, strike, & do their best to paint things red.”

Being in such a rough and dangerous place, Buckie put in for a transfer as the picric acid made her ill and gave her several gastric attacks. West, ever loyal put in for a transfer, as well. Both women went on to Waltham Abbey Royal Gunpowder & Royal Small Arms Factories in October 1917.

Male resistance to women workers could be seen in the day-to-day working environment of the factory. From being simply rude to downright hostile, men were wary, to say the least, and even resorted to sabotage. From refusing to set machines for women to nailing the drawers of their work stations shut, men expressed their displeasure and disapproval of female munitions workers. While women understood this, it did not make for the best of working conditions between men and women. Women had to prove themselves as capable as men, who had trained for years at their skilled labor and saw women coming into their fields so easily due to the need for munitions. One woman who had asked her employer for equal pay was denied as she

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61 Ibid.
62 Unfortunately, Miss West’s diaries stop here. However, we know from correspondence between Miss West and the Imperial War Museum in London that she died at the age of ninety-five in 1990. She told the curators at the War Museum that as soon as the War ended all the Women Police Constables were suddenly without a job, and so she set up a tearoom with her fellow WPC, which closed after about four years. She then went back to live with and care for her mother. She did not explain why she stopped her diary entries in 1917 or what she did afterward. She did, however, leave us this invaluable record.
could not set her own tools. Once she learned toolsetting, however, the attitude of the men in this shop changed to acceptance.  

In a letter written by Joe Hollister of New Cross, London, to his father, Cpl. H.S. Hollister, who was at the Front in March 1917, he jokingly writes:

"...it's extraordinary the amount of female labour employed in the City now, in the trains of a morning of ten passengers in a compartment there is generally an average of eight females, the Bank of London employ over 400, there was a flutter of excitement in Gracechurch St. the other day at two girls with trouser overalls cleaning windows of shops, the Railway Companies have employed them of course for a long while, trams, omnibus, mail-vans, motor-cars, barter Paterson vans, all the Caterers, newsvendors, bootblack, lamplighters, latherers in barbers shops, in fact almost every sphere of activity: when "Tommy" comes home he will be keeping house & minding the kids while the missus earns the pieces."  

Women also had to form their own unions. It seems that union men did not understand that if men and women stood together they would both benefit, or that men's fears stood between their acceptance of women into their ranks. The number of women in trade unions tripled during the war. In 1914, women trade union members numbered 437,000, and by 1920 they had reached a peak of 1,342,00. Most joined the National Federation of Women Workers (NFWW), or the Workers Unions, as they were barred from the skilled workers unions.

There may have been genuine concern for working women, thought of as the present and future "mothers of the nation." Certainly this is not apparent compared to the observations of West. The Ministry of Munitions conducted studies on munitions factories to determine if the environment and atmosphere in factories was conducive to

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63 Braybon and Summerfield, 73.
64 Imperial War Museum. Joe Hollister to H. S. Hollister. 19 March 1917. [98/10/1].
65 Braybon and Summerfield, 73.
what were then considered humane conditions. Recommendations were made to improve working conditions, although they were not necessarily followed by employers. The Ministry made concessions for women with rest periods during the long night shifts in the munitions factories. Traditional work was done in two shifts-day shift and night shift. The normal work week for a woman on day shift was from forty-four to fifty-four hours. Daily shifts in the shell factories ran from 6am to 6pm with two breaks for meals; one of fifty minutes and another for one hour. Rest breaks were initiated for women in addition to meal breaks. Night shifts were common for women, lasting from twelve to twelve and a half hours with two meal breaks of thirty to forty minutes each. Two short breaks were also given of ten to fifteen minutes for women. The Ministry of Munitions noted that, "Women as a rule work the same hours in the night shift as men, but experience has shown that they do not take kindly to night work."\textsuperscript{66} Later, after some experimenting, alternate fortnights of night shifts were introduced.

The health of the woman worker was also of great concern to the Ministry of Munitions. In addition to shortening working hours the ministry improved health conditions by giving consideration to matters of ventilation, light, temperature, and cleanliness. Lavatory accommodations were made for women, along with changing rooms and cloakrooms. Welfare supervisors, mainly the more educated women, were hired to look after the women, both inside and outside of work to monitor their well-being. Canteens were set up on site for women to take their meals at the factories as many had too far to travel to and from home for meals.

\textsuperscript{66} Ibid.
It was commonly believed that women munitions workers worked for a higher cause than wages, their intentions being fired by patriotic feelings of nationalism. In *The Suffragette* of April 23, 1915, it was reported in a speech delivered by Emmeline Pankhurst, a leading suffragette, in the Sun Hall in Liverpool just what she thought a woman’s duty was:

“If all were trained to contribute something to the community, both in time of peace and in time of war how much better would it be.
What bitterness there was in the hearts of many women when they saw work and business going on as usual, carried on by men who ought to be in the fighting line. There were thousands upon thousands of women willing, even if they were not trained, to do that work and release men, and we have urged the authorities to take into account the great reserve force of the nation, the women who are or might be capable to step into the shoes of the men when they were called up to fight.”67

Women realized they were risking their health and their lives by working in the munitions factories. Their sacrifice was greeted with respect and gratitude expressed in the papers and in a few public ceremonies in which women war workers were presented with the Order of the British Empire for bravery during explosions and accidents that happened at their plants. At a special service for war workers held at St. Paul’s Cathedral on 20 April 1918, a women’s Role Of Honor was read for 312 female munitions workers who died accidentally, through poisoning, TNT poisoning, in particular. Deaths due to accident totaled ninety-seven compared to death due to some type of poisoning totaling 142 and deaths due to TNT poisoning, in particular, totaled seventy-two.68

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67 *The Suffragette*, no. 98, vol. IV, 23 April 1915, 26. Imperial War Museum
68 Imperial War Museum. Special Service for War Workers. MUN 34/2/2 and MUN 34.2/15.
It is estimated that hundreds, if not thousands of women died as a result of industrial accidents, explosions, and aerial attacks on factories. Other women were maimed, poisoned, or injured in the process of making explosives, filling shells, and working with the heavy machinery. Women munitions workers suffered and died on the home front along with those at the battlefront. Numbers cannot be accurate because factory injuries and deaths, where possible, were kept from the public eye for fear of a drop in public morale. The historian Angela Woollacott estimates that the number was well into the hundreds and perhaps over a thousand. She arrived at this figure by assessing the prevalence of explosions for which there are records and extrapolating to account for those that went unreported. 69

In her compilations of the Women’s Work Sub-Committee during the Great War, Agnes Conway, working for the Imperial War Museum, sent out calls for information on the work that women had done during the war. Among the responses were many letters from families who had lost their members to war work. From Mr. E. Bunce, we learn that his daughter Mary, aged 19, died while working at the Old Park Works as a crane driver. From Mrs. Haufman we learn of the death of her daughter, Gladys, in the Hope Works near Cardiff; she was only fourteen years old. From John Hughes, of Coatbridge, we hear of the death of his daughter, Rose, who worked at a Boring Machine. Contrary to safety norms, her scarf caught in the machine and she was killed instantly. Writing on behalf of the parents of Miss S. Taylor, A.G. Revill tells of the woman’s death by explosion in the Cable & Accessories Co. She was engaged in

69 Woollacott. 9.
Figure xiii
Funeral of woman munition worker at Swansea on Aug Bank Holiday 1917. She had been killed at work. Note the wearing of the uniform by her fellow workers.

Figure xiv
Another view of the same funeral.
lacquering hand grenades. Miss Taylor was the chief support of her family. The daughter of Mrs. Ling met her death at the age of twenty-two when struck in the head with a revolving fan. In a particularly poignant letter, Laura E. Phillips of Stafford writes of her sister Mary, who worked at the Hereford Factory.

"Dear Madam:
Re, your letter of the 11th July 1918 asking for a photograph of my Dear Sister, Marion Constance Lotinga. My mother and I quite appreciate your kindness in taking such an interest; as deceased like many more died for her country, it was a bitter blow for my poor Mother, she was her baby, and a great comfort to her, my Mother, she has been Fatherless [a] many years, I have 3 brothers out of 4 fighting, they have been out since August 1914. It is just 12 months since my Sister went to Hereford and she has been dead 7 months, we can hardly realize it, as she was such a nice girl and full of life, she died a week before her twentieth birthday. It seems so hard to think that she should be called first, so sudden too..."

In another letter written by Mildred Hart of Willingham, Cambs, she tells us of the death of her daughter who had:

"contracted blood poisoning through working in the Edmonton Munition works using the TNT...she worked there two months and was taken to the Military Hospital at Edmonton. From there to St. Mary’s Hospital in Paddington, where she died [...] she went under an operation when they took from her 14 pints of poison blood from her she rallied a few days longer then died, she was 23 years old and left a little boy..."

In one incident in July, 1918, at the No. 6 National Shell filling Factory at Chilwell, an explosion in the mixing house killed 134 people, including 109 men and twenty five women. Lottie Barker, a day shift crane operator described the huge mushroom spiral of smoke and debris rising to the sky:

"What a scene of horror met us. Every available vehicle had been commandeered to take the casualties to the hospitals. Men, women and young people burnt, practically all their clothing burnt, torn and disheveled, their faces black and

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1 Imperial War Museum. Letters to Miss Conway. MUN 34.2/11. MUN 34.2/9.
2 Imperial War Museum, MUN 34.2/6.
3 Imperial War Museum. MUN 34.2/5.
charred, some bleeding with limbs torn off, eyes and hair literally gone. It was rumored that it was possible the whole mixing house and mills would go up and dad decided it would be best if we made our way to the fields, which we did, still hearing the carts, lorries and ambulances making their way with their gruesome loads to the hospitals. We came back home after mid-night, but still the conveyances were making their way to Nottingham. The High Road, Beeston had never before seen a cavalcade such as this and I hope please almighty God it never will again.”

Women were breaking a gender barrier that had prevailed for years in western society’s opinion of what were the proper roles for men and women. Men found it hard, if not impossible, to believe that women could perform similar work after being socially indoctrinated to believe that women were weaker, careless, and temporary workers. As proof of the predominant point of view on women workers a male employer, representing the Yorkshire and Lancashire Manufacturers, gave evidence to the Committee on Women in Industry, saying,

“There is one experience we have about the employment of women and this particularly relates to piece-work as distinct from time-work. They stay away more for what are from the point of view of the employer trivial reasons. A day’s washing may be a very serious thing for a woman, but to stay away and leave the machine idle for a day’s wash does not appear to be anything but trivial to her employer.”

Although the majority of women felt their work was only temporary, until the war ended, many men feared that women would not want to leave their work at war’s end. Many did not. The fact that women wanted equal pay for equal work did not sit well with males or employers either. Employers were locked into traditional gender thought patterns that women were to be paid at lower rates even if they were doing men’s work. Employers certainly increased profits through this continued stereotyping.

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73 Lottie Barker, “My Life as I Remember It,” 58-61, quoted in Woollacott, 84.
74 Majority Report on Women in Industry, Mr. G. H. Wood, p. 90, quoted in Braybon, 89.
but there was an added dimension. Employers shared their workmen's opinions that women did not need the so-called “family wage” and they should not expect it. Men did not want to be undercut and were supported by their trade unions. But by 1916, however, women were making the same wages as men in the munitions factories, giving them an economic freedom hitherto unknown.

Woollacott argues that munitions work, more than any other wartime work, offered women, for the first time, experiences of the war that were most comparable with men. Woollacott writes of an army of women who were responsible for supplying the forces and therefore conducting the war on the home front.

Woollacott focuses on the fact that female munitions workers came from all classes and strata within each class. All over Britain, women worked in the munitions factories in different jobs and earned varying wages with considerable discrepancies. Woolacott also focuses on the differences of age and class and other factors in an attempt to shed light on these factors. Rather than bonding in their common work for a common cause, class tensions intensified between women.75

Upper class women took jobs as nurses, or workers in the war effort or in the professions and more typically took clerical jobs or did charitable work. Middle-class women learned new skills with machinery allowing them a considerable increase in wages. Women who trained in new jobs formerly considered to be in the realm of men, including welders, drivers, crane operators, locomotive and truck operators, fitters and turners, felt privileged to be able to join a trade that had been normally reserved for

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75 Woollacott.
men. 76

The war created a great demand for labor allowing for the introduction of
women into different kinds of jobs. The employment of women in munitions work was
made possible by a relaxation of the Factory Acts and an acceptance of women into the
trade unions. War allowed women to thwart social conventions on what was proper
work for women as well as proper living arrangements, living on their own for the first
time without adult male supervision. Munitions work offered women wages comparable
with that of men, giving them a freedom hitherto unknown to them.
Enfranchisement Through War Work and Trade Unionism

That the war came at a time when women were seeking suffrage was fortuitous in that it was through women's efforts during the war that led to the "modern woman:" one who could think, work, earn, spend and speak for herself. By the end of the war, and demobilization, women munitions workers were demanding recognition of a public commitment to allow them to remain in industrial work rather than return to pre-war servility, low pay, long hours, and the lack of autonomy found in domestic service.

The Great War overshadowed and overtook the suffragist movement as most women's groups, including the NUWSS and WSPU, collectively put down their activism for the higher cause of winning the war. In the NUWSS report entitled *War Work of the National Union*, Mrs. Henry Fawcett writes of the daylong meeting of August 3, 1914, the day before the declaration of war of their decisions concerning their course of action should England declare war:

"We sent out circulars to five hundred Societies recommending the we should suspend our ordinary political activities in order to devote our organization and money-raising power to helping the Nation through the great crisis with which it was confronted. We asked our Societies to communicate their views to us by post, and by the following Thursday, August 6, a large number of replies were received, and by an overwhelming majority our Societies had agreed to act on the lines we had indicated."

Their support went to the war effort, not to women's suffrage. Fawcett felt that restraint from pressure on politicians for the vote would pay off at the end of the

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war. She stated, “Let us show ourselves worthy of citizenship whether our claim to it be recognized or not.” The NUWSS felt that as the situation had changed, so had its duties, “we had to give up many of our most capable, trained and experienced workers, and encourage them to take up work under the Government as Factory Inspector, Health & Welfare Inspectors, munitions workers, and the other hundred and one new occupations that made new demands on women’s labor.”

During the war, The Suffragette, was renamed, The Britannia, which was a platform for the advocacy of military conscription, the war of attrition and the internment of enemy aliens. The publishers (and suffragists), mother Emmeline and daughter Cristobel Pankhurst, spoke from recruiting platforms, urging public service. They attached themselves to Lloyd George, who in his role as the new Minister of Munitions was anxious to absorb women workers into the engineering industry. At a massive rally in July 1915, 20,000 women marched from Westminster to Blackfriars. Complete with patriotic bands and contingents from foreign nations, these women stood shoulder to shoulder and demanded to do war work. Emmeline Pankhurst and the delegates were received by Lloyd George at the Ministry of Munitions. She made no mention of the vote. “There was not the faintest suggestion that women who are to be registered as war workers today should be placed on the vote register in times of peace. ‘We want to make no bargain to serve our country,’ said Emmeline Pankhurst.” At this same rally, Mansell spoke on behalf of the leisured woman who wanted to do more than give their loved ones to the front lines. Lady Parsons asked for residential

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77 The Daily Chronicle, July 19, 1915. IWM, EMP 13/2.
79 Ibid.
59
workshops for girls eager to make munitions. Annie Kenney spoke on behalf of working women: "Would the thousands of women who were yearning to help the Motherland be denied the right to serve? Or would the Minister of Munitions, boldly and emphatically, mobilize women for the more speedy defeat of the enemy?" 81

Accompanied by Winston Churchill, Lloyd George congratulated the deputation on the very fine procession:

"If any additional proof were required of the organizing capacity of women...he should say it was amply demonstrated by that procession. He did not think an effectively organized nation for a war such as that which they had embarked upon was possible until they had organized the women of this country as well as the men...It was not merely the question of utilizing the services of women for munitions. It was a question of mobilizing the energies of women for the purposes of discharging the duties and functions of commercial and industrial life which they are capable of doing as well as men." 82

According to the *Daily Chronicle*, "there were 50,000 women working at various factories, turning out munitions of war." 83 Yet, this represented only about five to twenty percent of the number of women employed in the same fashion in France. In Germany, some one-half million women were turning out munitions. 84 Mr. Lloyd George saw no reason why this could not be so in England, as well. He spoke to the one serious obstacle in the employment of women:

"Prejudice is a serious obstacle in the way. It is not merely prejudices of all trade unionists, but it is a conservatism—not political conservatism, but conservatism of businessmen, who have been accustomed to see men carry out that work, and one, cannot persuade them that women can do it as well." 85

Lloyd George suggested that in combating this prejudice, that women must make it clear

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81 Ibid.  
82 Ibid.  
83 Ibid.  
84 Ibid.  
85 Ibid.
that the work was war work and that when the war is over there would be no need for it.

The Ministry of Munitions highest priority was first to equip the nation with an adequate supply of the machinery for turning out munitions. The government had assumed control of all machine tool making establishments in the country, which was readily accepted. During the time it took to set up these establishments, Lloyd George asked women for two things: for a national organization to be set up to register the names of those who were prepared to devote the whole of their time to any task to which women were suited in the turning out of war materiel, and for help in the training of women who would labor in these establishments.

In regard to wages, Lloyd George agreed that women should be paid exactly the same price as men for any piece she has turned out. In response to Emmeline Pankhurst’s statement about women being sweated in private establishments, Lloyd George replied:

"...all those establishments are now going to be under government control... The Government will see that there is no sweated labour. For some time women will be unskilled and untrained and they cannot turn out quite as much work as men can who have been at it for some time. Therefore, we cannot give the same time rate of wages. Mrs. Pankhurst is quite right in insisting that whatever these wages are they be fair and there should be a fixed minimum."86

By 1916, the stabilization of women’s employment in munitions factories occurred. The question was not what women were capable of but to what extent trade unions and employers would tolerate them. Women employment in munitions work, "had increased by almost 300% in government controlled establishments, but by only 36% in uncontrolled ones; in chemicals the use was 244% in controlled and 49% in

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86 Ibid.

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uncontrolled ones. If women were to achieve the employment and wages they sought, women would need to join the trade unions.

The Secretary of the NFWW, Mary MacArthur and Margaret Bondfeld, another woman active in the labour movement, felt that the unions should be amalgamated, but progress here was limited by a traditional male hostility towards women whom they regarded as unskilled, low-paid workers who would frustrate the male ambition of a family wage. The Amalgamated Society for Engineers (ASE) felt it was better to treat female labor as a temporary necessity in wartime, brought out in the Treasury Agreement that the dilution of labour was to be terminated at the end of the war. Bargaining by Mary MacArthur and the National Federation of Women Workers did, however, have the positive effect of guaranteeing women munitions workers a minimum weekly wage of £1. Still, the majority of women remained outside the unions, because of male hostility and women’s own belief that their jobs were only temporary.

Trade unionism among women, however, was provided a great stimulus by the war. Before 1914, women in industrialized countries, such as Britain, were extremely hard to organize and formed only a small percentage of trade union membership of almost 4,500,000 unionized workers in England, less than one-half million were women. The usual reason for the lack of union organization among women, except textile workers, were that most female workers were young and expected to marry, thus removing them within a few years from industry. Many of the unions also refused admission to women and were antagonistic toward any extension of their work.

The Women’s Trade League and the NFWW were devoted to the promotion of trade unionism among women. The older of the two organizations, the Women’s Trade League, was formed with the idea that a place could be found for women in existing organizations. However, in many trades where there were large numbers of women employees, trade unions did not exist or men’s unions forbade the employment of women. The NFWW, which had 20,000 members in 1913, gave its attention to these occupations.

During the war, the number of women trade unionists increased exponentially. At the end of 1914, their number was officially reported as 472,000, at the corresponding period in 1915, as 521,000, and at the end of 1916, 1917, and 1918, respectively, as approximately 650,000, 930,000, and 1,224,000—an increase of nearly 160% between 1914 and 1918. Male unionism during this period increased only by 45%. Of the many women’s unions that formed during the war period, an interesting one was that of women oxy-acetylene welders, a skilled trade that women entered for the first time during the war. These were mainly educated women who were actively engaged in attaining equal pay to that of men.

Another interesting development in trade unionism was the so-called “mixed unions,” composed of both men and women. In these unions a large number of women were elected as branch secretaries and local officials. This was mainly because of the removal of men for military service, but by all accounts women performed their duties in these capacities, “as a whole extremely satisfactory.”

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Throughout the war, women actively sought equal pay for equal work. Constantly, in the daily papers and periodicals, there appeared articles calling for equal wages, for although the Treasury Agreement promised this, it was rarely effective. An article in *The Suffragette*, stated:

"The need of equal pay for equal work, as between men and women, is an imperative one, not only for the sake of women, but for the sake of men, themselves, and as a means of maintaining a high standard of living, for the community at large. The matter is especially important just now, because of the enlistment of women for industrial war service, which service, as the Prime Minister declared at Newcastle, is just as important in its way as military service, so that the women who are working in our factories are again, to quote Mr. Asquith, ‘...serving their country just as well as the men lying in trenches.’"89

The article goes on to bemoan the fact that had women had the vote before the war broke out, women’s positions would not be as precarious. J.J. Mallin of the Anti-Sweating League opposed equal pay for equal work on the grounds that this may mean equal pay for unequal work, meaning that women’s work was not of the same quality as men’s and therefore should not be paid the same rate. The *Suffragette* rebutted, "The contention is groundless, because save where the crudest form of physical labour demanding mere muscular strength rather than other qualities is concerned, women’s output of work is equal to that of men. The higher in the scale any work happens to be, the more evident it is that women’s work as regards both quality and quantity is equal to the work of men."90

At another meeting at Newcastle, Asquith confirmed the equality of women’s work in the munitions factories. "Now *prima facia*, one would think that the manufacture of shells was not exactly the kind of work for which the hand or the brains

90 Ibid.
of women were particularly appropriate, but that is a great mistake. In the making of the fuse, which in some ways is the most important part of the shell, female labour is just as good--I am not sure it is not a little better--than the labour of men.\textsuperscript{91} Asquith went on to say that, in regards to the recruiting of women from other fields into munitions work, "I think the employers, if their be any such, who at first sight might feel a doubt as to the practicality of replacing their skilled male assistants by female labour, may take encouragement by the example which has been set them by the great munitions firms of the country."\textsuperscript{92} This was a model for Britain.

In a 1916 article in \textit{The Daily News}, Mrs. Phillip Snowden, in an article entitled, \textit{Men's Work and Women's Wages}, addressed the problem of equal pay for equal work. She spoke to the point of women filling the positions of men in all areas of industry. However, in the fact that women must accept lesser wages, disastrous economic conditions would arise in the long run, not only for women, but for men as well.

"When the war is over, and the men whose places their women have taken return it will be found that there is little disposition to dismiss these women, and reinstate men at considerably higher wages. They will be disinclined to cease working. They will, if they are dismissed from one post, enter into competition in the general labour market with men, and if the practice of paying women less than men has been established, these qualified women will drive men out because of their cheapness."\textsuperscript{93}

Snowden went on to suggest three things, "which ought to be done now in order to utilize the services of women during the war to the best advantage, and at the same time to prevent as far as possible, serious industrial difficulties when the war is over."\textsuperscript{94}

\textsuperscript{91} \textit{The Suffragette.} May 14, 1915. 79.
\textsuperscript{92} Ibid. 79.
\textsuperscript{93} \textit{The Daily News.} June 6, 1915. IWM.
\textsuperscript{94} Ibid.
First, Mrs. Snowden called for a national organization of women’s labor, suggesting that only those women who had been employed before the dislocation of labor at the start of the war be absorbed first and only then should women who had not worked previously be employed.

Second, she called for equal pay for equal work. “If women are going to take men’s places... they must be paid the same wages as the men previously received.” She reasoned that if equal pay were not achieved, then the employers would reap the advantage in the difference in wages. Mrs. Snowden felt that the result of unequal pay would be that the women’s rate of wages will become the standard wages for a particular occupation, and if men were employed at the same occupation and set the wages, women would work for a reduced wage with severe competition. This not only speaks to the right of women to equal pay, but to the lowering of the standard of living for Britons as a whole once the war was over. She called for a legal obligation on employers who took women on to pay the same wages for the same work, saying that this would be no additional burden on the employers, but an equal one.

Thirdly, she asked for the women to get organized in trade unions, arguing that the great disparity between the wages of men and women was due in large part to the unorganized condition of the women. Snowden said, “Whatever the State may do in the way of laying down regulations about equal pay for equal work, a trade union for women will be necessary to see that these regulations are observed.” She called for Representatives on the Advisory Board of the Board of Trade if the three points she set

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95 Ibid.
96 Ibid.
forth were to be observed. Snowden knew that there were women completely capable of
avoiding the dangers of industry and supplying an army of women for industry and
could render invaluable service.

Snowden felt that if the condition of equal pay for equal work could be firmly
established, then the problems to be faced after the war would be far easier. The most
important of these problems being that of displacement of labor, that if equal pay for
equal work would be established, then it would not be the women who would oust the
men because of lower pay, but that the person who would get the job would be the most
qualified.

Irene Osgood Andrews and Margaret A. Hobbs, who wrote on the economic
effects of the war on women and children in Great Britain, state that, “It is equally
believed that the chief reason for the growth of trade unionism among women during the
war was the increase in their wages, together with the resentment aroused at the same
time by frequent failure to achieve equal pay for equal work.” There were, however,
other reasons that caused women to enter the trade unions having to do with the effect of
the war on women themselves. In the absence of a dominating male presence, women
lost their docility and were being forced to take more initiative. Public recognition of
the value of women’s work gave women more confidence in themselves. The harsh
realities of war reduced the irresponsibility of young workers and the “petty caste”
feelings of inferiority among women of all ages and classes. The shortage of workers
strengthened labor’s position and government support of trade unionism weakened the
employer’s opposition.

Andrews & Hobbs, 89.
In an article in *The New Witness*, Mary MacArthur pointed out that, “though Trade Unionism among women had undoubtedly made great strides during the war, the percentage of women workers so organized is still woefully small, and that their organization is one of the most pressing problems facing the labour movement to-day.” She also suggested, “that the educational function of the Trade Union movement is at once its most important and its greatest asset, ... it is obvious that now is the time and opportunity for a crusade which shall bring in recruits and converts to the cause.”

In *The Everyman* that same year, MacArthur spoke to the reasons why women must organize. MacArthur spoke to the awakening of women to the realization that to put a low value on their labor was not merely a deprivation to themselves of material advantage and opportunity, but to their physical, mental and moral development. Women, MacArthur said, were beginning to see that if they did men’s work for less money than men, their wages would fall upon their return to the workplace after the war. This would affect not only their fathers, brothers, husbands, but the birthright of their children as well.

This recognition was key to the trade unionism movement among women during the war. MacArthur called for women to take part in the administration of their trade union and its policies to increase their own power. She thought that leaving the administration of mixed trade unions to men was a grave mistake. In speaking to the value of women’s membership in trade unions in the future, MacArthur said, “The coming political enfranchisement of women makes their economic education imperative.

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98 *The New Witness*. 1917. IWM, EMP 16/16.
There will certainly be an attempt by vested interests to exploit mere feminism, but if the trade union movement is wise that attempt would be foredoomed to failure.  

By this time it was clear that the war was won. It was simply a matter of time. With the threat to male enfranchisement due to lack of residency requirements on their absence from home during the war, suffragettes saw an opportunity to include themselves in any new enfranchisement bill. Clearly, the women’s movement, while dedicating its efforts to the war, was looking out for the movement through education, value in their labor, trade unionism and the power that it could bring economically and therefore potentially politically. Trade unions became a forum for the empowerment of women.

At a meeting of the NUWW in Gloucester, an address was made by Ogilvie Gordon, President of the NUWW, “One of the most serious problems to be dealt with in future was the question of demobilization, and the change which would come with the curtailment of the present chances and activities of women. The Union should be prepared to take an active part in making the difficulties which will be presented by demobilization as few as possible.”

On the question of votes, Gordon said six million women would be enfranchised by the new act and “while it was perhaps always true that women had always been voters through the influence of the home, it was right that women should have direct responsibility.” Women needed to be educated on the responsibilities of the vote. According to Gordon, “It was essential that women should be brought to realize that class prejudice between women and sex prejudice between women and men should be

100 Ibid.
102 Ibid.
beaten down. Women had to teach the men that they brought into public life not only their ingenuity but an element of self-sacrifice and fine idealism.”

The wartime efforts of the WSPU and the NFWW sought to draw as many parallels as possible between their war work and the empowerment of women. War work could and should be considered a contribution to the suffrage movement. It’s payback would come with the winning of the war. Throughout the war, the NFWW worked to secure equal opportunities for women, as well as equal pay, better working conditions and better opportunities, all of which would empower and benefit women in the long-run.

By 1916, it had become inevitable that women would be included in a bill extending the franchise. Suffrage societies renewed their demands for women’s suffrage and an extension of the franchise to the men who had lost it due to their absence from home, causing them to lose their residency requirement to vote. The loss of the vote for men who were away fighting the war did not seem right, causing many to support revising the voting registers. Suffragists jumped at the opportunity to be included in any bill to extend the franchise. Women’s suffrage was back in the forefront and enhanced by the impact of the war on women’s status.

In August 1916, the government officially proposed reforming the Parliamentary Register to allow servicemen the suffrage. Prime Minister Asquith recommended extending the vote to some women. Asquith said that women had taken the place of men in the workforce and being servants of the State had aided in the prosecution of the

103 Ibid.
war. Asquith was making a direct correlation between women's war work and the vote.

Public opinion and the press picked up the refrain saying that, "women should be allowed to vote for the same reason sailors and soldiers should be given the vote--both had served their country well." Women had taken the place of men in the workplace, particularly in the munitions industry, where they had died as valiantly as the men on the front lines. Women had earned the vote.

In October 1916 at the Conference on Electoral Reform considered the question of franchise, including women's suffrage. In early 1917 the conference unanimously recommended, "...to abolish the property qualification for men, to require only six months residence in property valued at £10 a year and to enfranchise soldiers and sailors. By a majority vote they decided that some measure of suffrage should be conferred on women." Immediately, the attention of the suffrage societies shifted from the war to the development of the Representation of the People Bill. In an effort of government to ensure that men retain a majority, age and property qualifications were placed on women's suffrage. Women had to have attained the age of thirty years; "and occupy land or premises (not being a dwelling house) of a yearly value of not less than £5, or of a dwelling house, or is the wife of a husband entitled to be so registered." While a breakdown of women employed in the different spheres of war work is not possible, some six million women were enfranchised. Although this was only a partial

105 Ibid. 167.
106 Ibid. 167.
107 The Representation of the People Act, 1918, 14-19. IWM, W78/6852.
victory for women, it marked the beginning of the end of the patriarchal hierarchy and male dominance. Women could consider themselves valuable members of society because of their war contributions. They took their wage earning power and war experience and turned them into political power that would change the lives of women in Great Britain.

After the war ended demobilization of women raised the issue of the status of women in the labor force. The Restoration of Pre-War Practices Act of 1919 stated that “dilutees” were to give up their jobs. The act was created in order to restore prewar trade practices, union rules and the privileges of skilled workers by compelling all munitions industries to return to the old practices within two months of the passing of the act and to maintain such practices for a year following the act. The excuse used to justify the collapse of demand for women from munitions jobs after the war was that all women had some male to support them. This attitude prevailed from the earliest days of the war when women who had signed on for “temporary” work understood that they were to give back their jobs to the men once the war was over. Along with the great reduction in the size of the workforce, men were determined to put women back in their prewar gendered role and restore the hierarchy of labor.

Many women workers returned to domesticity after the war, bending to the social pressure against women working. Some planned to marry and start their own households. Women who were already married looked forward to a return to their family lives. Many munitions workers planned to return to their former domestic service, while others planned to emigrate due to the knowledge gleaned from American and Canadian soldiers on the wonderful opportunities to be had in the New World.
The top priority of the government was to see to the re-employment of returning service men and unemployed men. War expenditures on foreign debt and the vagaries of international trade pushed the issue of women's post-war employment to the background, even though there was the real need of women workers who had been widowed and/or had dependent children. The long held patriarchal desire for women to maintain traditional roles in the home, however, supported the removal of women from the workforce.

There can be no doubt that the forty years of the suffrage movement before 1914 moved women toward the direction they were able to take during the war. The previous forty years had done much for women in the eyes of British society. The empowerment women achieved during the war for their work in filling men's positions, particularly in the munitions factories, and making them their own, for that time and after, earned them the suffrage they deserved. Although full enfranchisement was some years away for both women and men, the Representation of the People Bill of 1918 was one of the giant steps that British women took in the ongoing struggle for equal rights with men.
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