

Middlesex University Research Repository

An open access repository of

Middlesex University research

<http://eprints.mdx.ac.uk>

Croucher, Richard ORCID: <https://orcid.org/0000-0002-9617-734X> and Houssart, Mark ORCID: <https://orcid.org/0000-0002-8536-8220> (2018) 'Send us more arms!' Bringing British women into war production through films in World War Two. *Labor History*, 59 (2) . pp. 121-137. ISSN 0023-656X (doi:10.1080/0023656X.2018.1385883)

Final accepted version (with author's formatting)

This version is available at: <http://eprints.mdx.ac.uk/22567/>

Copyright:

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address:

eprints@mdx.ac.uk

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: <http://eprints.mdx.ac.uk/policies.html#copy>

‘Send Us More Arms!’ Bringing British women into war production through films in World War Two.

Richard Croucher and Mark Houssart.

Abstract

We analyse four propaganda films designed to support women’s conscription into British arms production in 1941-2, examining their approach and comparing that to women’s lived experience on entry to factories. The films recognised minor difficulties, stressed the support network available and the need for sacrifice. They sought to inspire but provided little information on matters important to women. In the factories, women experienced a range of substantive issues. While the propaganda was immediately successful in its main aim, its lacunae were significant since these issues generated increasing industrial conflict led by women.

Keywords

Internal cinematic propaganda; UK; World War Two; women; industrial mobilisation

Introduction

Four short motivational films designed to support women’s conscription into British arms production in 1941-2 are analysed, to determine how issues that government knew interested women were acknowledged and either confronted or avoided. The films are then compared with women’s factory experiences to define the scale and nature of the propaganda-lived experience gap. The exercise illuminates how government and filmmakers sought to overcome women’s reservations, and shows the extent of their success. Women’s industrial conscription was perceived as potentially problematic; women’s concerns were apparent and demanded a propaganda effort which the British state was only weakly-equipped to undertake.

Similar compulsory industrial mobilisation was not attempted in wartime Nazi Germany (Harrison, 1988). Cinema was important to British industrial recruitment propaganda because of its huge popularity among young working class women and because they attended cinemas together and then discussed and disseminated their reactions (Richards, 1994, p. 147 and *passim*). It has been authoritatively suggested that women's attitudes were impacted by such recruitment propaganda (Summerfield, 1998, p. 87)¹. The paper examines recruitment films' approach and how it compared to women's factory experiences as reflected in extensive state archival deposits.

Britain achieved a very high level of women's participation in war production (Harrison, 1988). Substantial obstacles had to be overcome to achieve this. These included conservative political objections to women being coerced into joining the male world of manufacturing potentially at the expense of their domestic responsibilities, objections from male workers and managers and complex practical problems. The First World War offered an ambivalent precedent. Then, women were employed in arms industries by breaking down skilled men's complex tasks into their constituent parts ('dilution') but this encountered significant industrial resistance (Hinton, 1973). Skilled trade unionism as embodied in the industry's main union, the Amalgamated Society of Engineers² had long had as its central principle the exclusion of non-apprenticed workers, particularly women, from skilled employment. The first national shop stewards' movement of 1914-1918 led numerous strikes on the issue (Hinton, 1973). Ernest Bevin, ex- General Secretary of the Transport and General Workers' Union and Minister of Labour in the coalition government formed in 1940, was sensitive to this history. The government therefore encouraged employers and the AEU to reach the Extended Employment of Women Agreement 1940, to balance the risks of dilution with organised labour's cooperation. It specified that women's employment would be increased provided that they leave the industry at the end of the war (Summerfield, 1989).

At formal, national and institutional levels, the issue of skilled men's opposition was therefore 'settled', even if many negative attitudes persisted. Chapman (2011, p. 201-15) correctly suggests that men's reservations as workers (would their terms and conditions be undermined?), family members (would current domestic divisions of labour be maintained?), and industrial managers (would customary industrial arrangements and settlements be disrupted?) remained to be confronted by propaganda.

The primary issue was women's attitudes. Coercion could be used at the margins on women reluctant to comply, but propaganda was key to inspiring and motivating the mass of women while addressing their questions and reservations. Factory work was often viewed unfavourably by women (Summerfield, 1989, p. 37-43; p. 55-7). Some regarded certain workplaces such as shipyards as exclusively male provinces³. Women also had substantive questions on pay, nurseries, transport, their domestic roles and their capacity to cope with skilled work. Consequently, a voluntary recruitment campaign conducted in 1941 failed to yield sufficient recruits (Croucher, 1982, p. 253). From early 1942, women aged 19-30 were progressively called up to work in factories. Women were divided into two categories: 'mobile' - without domestic responsibilities - and 'immobile' (with domestic responsibilities). The direction of female labour was gradually extended, becoming comprehensive: from January 1943, women aged 18-40 could be directed to work full or part-time (Summerfield, 1989, p. 35-6).

Filmic propaganda at the beginning of the war was coordinated by the new Ministry of Information (MOI) through its films division but was unsuccessful (Murphy, 2000, p. 5). Initial cinematic attempts to recruit women volunteers were criticised for failing to engage audiences (Chapman, 2011, p. 204-6; Woolley, 2017). Improvement was clearly necessary.

What follows begins with a brief examination of the propaganda and film literature, followed by an analysis of four short films and their depictions of war work. The next major section focuses on women's real factory experiences. The paper concludes by arguing that the propaganda-lived experience gap was large, since the films deliberately avoided important issues.

Previous Discussion of Cinematic Propaganda

Chapman (2011, p. 4) notes that early studies on film and propaganda dealt with Nazi Germany or the Soviet Union, but recognition grew that propaganda was not confined to 'totalitarian' states and interest developed in other national contexts. With the partial exception of better-known films such as *Night Shift* (Jack Chambers, 1942) and the feature *Millions Like Us* (Sidney Gilliat, Frank Launder, 1943), which it influenced⁴, very little has been written on British films about industrial work, although wide recognition exists that World War Two was a war of production (Harrison, 1988). Short films specifically have been declared largely irrelevant by some, partly on the argument that they had little effect on audiences (Pronay & Croft, 1983). Yet at the time, Mass Observation (MO) reported a 'higher degree of response' (Chapman, 2011, p. 106) to documentary shorts, especially those which provided information, than to the alternative 'story' approach. Others challenged Pronay and Croft's (1983) influential negative view of shorts, suggesting that they influenced popular opinion and subsequent feature films (Chapman, 2011, p. 87, p. 106, p. 112; Fox, 2006, p. 821). They could be produced rapidly. When the celebrated *Millions Like Us* appeared in November 1943, women's mobilisation had already been achieved. Feature films might have influenced attitudes more effectively, but provided information slowly, indirectly and in fictive contexts. They were therefore unsuitable for mobilising women rapidly. Thus, film researchers' low levels of interest in women's mobilisation may be related to their attitudes to the shorts that were so important to it.

Discussion among the researchers cited above also concentrated on matters of filmic form and tone rather than on the concrete information films conveyed. It has also been interested in how closely audiences identified with cinematic representations of working life, a subject on which only very limited evidence exists. In terms of broad approach, the MOI – based on the observation that the British public responded badly to exhortation – argued that propaganda should be based on reason, education and information (Chapman, 2011, p. 44-6). However, identification also depended on how convincingly reality was represented, creating a debate concerning filmic forms and methods underpinned by ideological differences between important groups. The mainstream ‘trade’ argued that professional actors should be used, as non-professionals reacted unnaturally to filming. Fox (2006, p. 830) shows that these views were supported by the MOI’s committee on home propaganda. The committee approved of the ‘ordinary’ in films, but recommended that shorts be made in studios featuring ‘popular artists’, giving them ‘greater propaganda value’. The documentarists argued on the other hand that realism could be increased by attending to existing ‘natural’ rather than staged stories, filmed in industrial workplaces using actual workers and not seeking to iron out manifestations of diversity among them.

Paul Rotha was a leading practitioner of the industrial documentary. He did not shy away from using pronounced working class and regional accents (Fox, 2006). Critical of the MOI’s philosophy, he emphasised the need to ‘educate’ all film sponsors to his views’ utility (Petrie & Kruger, 1999, p. 40). The sponsors became ‘educated,’ but slowly. Initially, the documentarists faced being marginalised or excluded from MOI films (Chapman, 2011, p. 58-85). In time, however, the MOI’s films division decided that they should incorporate and consult different types of filmmaker; this view was gaining ground when the recruitment films were produced (Chapman, 2011, p. 77-8).

The MOI's central role in commissioning, influencing and structuring filmic propaganda, even to the extent of over-riding censors, has been stressed (Aldgate & Richards, 2007, p. 4-21; Woolley, 2017) and the MOI clearly wielded considerable influence. Yet numerous other ministries played a significant role in negotiating the films' content and distribution. Non-MOI departments, as co-authors and guardians of official labour policies, were far from passive recipients of what they regarded as potentially problematic MOI approaches and products. They were most concerned with distributing concrete information and monitoring what was shown (Sussex, 1975, p. 151). They had been critical of the MOI's approach to industrial issues such as earnings, and regularly communicated their concerns at the inter-departmental Industrial Publicity Committee, chaired during the women's recruitment campaign by a senior Ministry of Labour and National Service official, Mr Frere. Thus, scholars' almost exclusive focus on the MOI and its relations with filmmakers is too narrow fully to explain the background to recruitment films' factual content.

The government's propaganda aims and how to achieve them posed fundamental questions. The MOI believed that wartime propaganda's purpose was 'to get people to do things' (Fox, 2013, p. 25). In this case, the immediate task was to get women into factories while avoiding substantial resistance. However, achieving it was merely the precondition of achieving women's commitment: obtaining access to women's labour power was not equivalent to making full use of it. Thus, the government had to plot a route between two sets of considerations. Factory work and mobilisation could be portrayed positively, but this had to be balanced with government policy to respect employers' wish not to make concessions, such as higher pay for women that might need to be carried over into peace time (Wightman, 1999, p. 136). This suggested an appeal to women weighted towards political exhortation and equality of sacrifice, rather than on responding factually to the potentially explosive substantive questions which government knew were being asked.

The films

Introduction

The films selected for analysis are all of the shorts about women's industrial conscription publicly currently available. They were made and appeared between late 1941 and September 1942, that is, between the point at which it had become clear that women were to be conscripted, and when the process was well under way. The Ministry of Information sponsored all of the works; the Ministries of Labour and National Service and Supply co-sponsored two and one of them respectively. The films were produced by filmmakers representing the different approaches mentioned above. Two were made by Paul Rotha and his company; the others were made by Spectator Films and Verity Films. The personnel involved were exclusively male, but experienced; each film involved different specialists. With the sole exception of the sound specialist W.G. Bland, there was no overlap in production personnel between the films.

The first, *Night Shift*, is a documentary in which Rotha built on the worker-centred approach he initiated in his important *Shipyard* (Paul Rotha, 1935). *Night Shift* shows workers in the Royal Ordnance Factory, Newport, Wales. With the exception of the newsreel referred to below, the other films are similar to more traditional 'informationals' as the MOI called shorts primarily designed to give important practical information; in these cases they were also clearly designed to motivate and reassure. Two of the films show more 'trade' approaches, including that of using professional actors and actresses, as in *Jane Brown Changes Her Job* (Harold Cooper, 1941). This film shows Jane (the well-known actress Anne Firth) leaving her typing job in response to appeals to volunteer. She is trained as a skilled worker and goes to work as an aero detail fitter in a factory making Spitfires (Vickers

Supermarine, Castle Bromwich). It was made by a team led by the experienced producer Sydney Box. It was an early production of Verity Films, a well-established general propaganda film production company which later became a large-scale MOI contractor. *Women Away From Home* (Gilbert Gunn, 1943) represents something of a hybrid between the 'trade' and documentarist approaches. It was directed by Gilbert Gunn, a Scottish trade film-maker who made many wartime documentaries. It is the story of three young women (apparently played by actresses) conscripted to travel to munitions factories, focusing on the support and accommodation provided. Finally, we analyse a rather different work by Paul Rotha's company: '*Food Front. Shopping Plan Helps Women Workers*', (Paul Rotha Productions, 1942) the first part of a newsreel series (*Worker and War Front Magazine*) shown in cinemas along with feature films. Although the newsreel is not directly aimed at women's recruitment, it tackles a major issue for women recruits and both illustrates and advocates a way of dealing with it. The series in which it appeared ran from 1942 to 1945, consisting of eighteen newsreels each in three parts, of which this is the first item in Magazine no.1. The Magazine was described by the government's inter-departmental Industrial Publicity Committee as aiming to increase production and provide information⁵. It is a hybrid between a newsreel and a 'cinemagazine', combining explicit broader messages with news reportage. In this film, women workers are shown experiencing problems with shopping, which are solved by employers and unions cooperating. Uniquely among the films, the film highlights the fact that women's work had to be combined with their customary domestic duties.

Night Shift and the very different *Jane Brown Changes Her Job* have been discussed by researchers, primarily as influences on and antecedents of the acclaimed wartime feature film *Millions Like Us* (Aldgate & Richards, 2007, p. 300-301; Chapman, 2011, p. 296). Higson, (2003, p. 25-6) remarks on the 'realistic effects' achieved in *Millions Like Us*, derived by

‘appropriating’ documentary strategies. These authors offer useful if limited insight into the documentaries in question. *Jane Brown Changes Her Job* receives brief mentions, for its emphases on job satisfaction, skills acquisition, friendship and contribution to the Royal Air Force (Aldgate & Richards, 2007, p. 302). It has also been criticised (Chapman, 2011, p. 207) for side-stepping the conscription issue by featuring a volunteer, though this might be thought a very suitable approach for motivating women about to be conscripted. *Night Shift* is the film most discussed by scholars. Aldgate and Richards (2007, p. 301-2) correctly state that it seeks to make war work more attractive by emphasising cheerfulness and comradeship. Chapman (2011, p. 206) further suggests – without empirical evidence – that it provides ‘an authentic picture of factory work’. While arguably ‘authentic’, it is also atypical, since it depicts a Royal Ordnance Factory (ROF). Unlike most arms factories ROFs were directly managed by the Ministry of Supply, who modelled good employment practice to private employers in all areas including pay, resisting Treasury requests to change their policy (Inman, 1957, p. 57; p. 63; p. 355). Industrial relations in the ROFs were often better than those in private companies (Inman, 1957, p. 406). The factory’s social climate is likely to have reflected this. Edgerton (2012, p. 206), an acute researcher focused on production matters, credits it with painting ‘a particularly vivid picture of productive processes’. Chapman (2011, p. 206) argues that *Night Shift* ‘does not address the resentment which many women felt about being conscripted into factory labour’, a reflection similar to one by Aldgate and Richards (2007, p. 300-301). As we show below, the films had strongly positive approaches which do arguably address this resentment, albeit indirectly. These authors’ brief evaluations therefore raise issues without resolving them, underlining the need for closer engagement with these films and how they related to industrial life.

Film Analysis

The films collectively and consistently contain certain positive messages, now illustrated in turn: a stress on the over-riding need for women to contribute to the industrial war effort, women's capacity to perform different jobs, the support system in place, employment's immediate compensations, the need to recognise and accept certain minor difficulties and finally the necessity for a cooperative spirit. Informational omissions are also significant.

The first theme, the over-riding need for women's work, draws powerful analogies between the military and home fronts. *Night Shift* ensures that the link between the women's work and the forces is organically integrated by depicting a factory producing tank guns. It begins with an establishing shot of a factory floor. The general bustle of the workshop is visible as the superimposed caption appears: 'Send us more arms! From every war front comes this call to British workers. Night and day our factory front replies...' Similarly, in *Women Away from Home*, vivid opening sequences show uniformed men departing in trains, creating a close analogy with the movement required of 'mobile' women. At *Jane Brown Changes Her Job*'s conclusion, Jane and her workmate see a Spitfire they worked on ferried to the Royal Air Force. The film also portrays the women as interpreting the identity passes they need to enter the factory to symbolise their own importance to the war effort.

Women's capacity to do various industrial jobs is the second theme. The films all exhibit a departure from earlier productions which treated the subject as worthy of debate, although a sizeable proportion of those to be conscripted had worked in industry before 1939 (Wightman, 1999, p. 8-28). The skill theme addressed a common concern. In 1942, an MOI recruitment expert reported that middle-aged women were 'shy of accepting any job other than labouring', feeling that 'at their age, they were unable to 'take in' the training' for higher skilled work⁶. In all the films we consider, their capacity is assumed; they are shown working at non-labouring jobs and their skills are often strongly asserted. In *Night Shift*, one woman's ('Blondie') abilities as a machine operator after six months on the job are celebrated

both visually (her effective coordination is shown as she adjusts her lathe using both hands simultaneously but in different directions to bring tools to bear on the work) and verbally. ‘She’s as good as any man’, the female voice-over underlines (women’s voices are used in all three of the non- newsreel films). The theme is also strongly pursued in *Jane Brown Changes Her Job*. The voice-over tells us that Jane was slightly ‘discouraged’ by initial failures but gradually improved; she is repeatedly shown using her fitting skills. Yet audiences may have felt that the eponymous Jane was young enough to learn; at this point, using a famous actress exuding confidence may not have conveyed the desired point to the Sheffield women whose concerns were recorded by the MOI officer mentioned above.

Support systems constitute a third theme, looming large in *Jane Brown Changes Her Job* and *Women Away from Home*. Jane is taught how to use factory equipment by men; ‘My instructor was very patient,’ she says of the smiling man guiding her. Jane and Mary become close during their training and ask to be sent to the same factory, a request with which a male official at Croydon Employment Centre happily assists them. In *Women Away from Home*, potentially helpful officials are introduced at the film’s opening as a train bringing two of the three female protagonists arrives in Birmingham station: the area Welfare Officer, the Women’s Voluntary Service Canteen and several Ministry of Labour and National Service guides. The women are driven to their lodgings by a man who offers further information in case the landlady cannot answer particular questions. The women’s relationship with the landlady is depicted as one of mutual support, the latter being glad of their company; she is lonely with her son in the army and her husband on night work. The landlady offers her guests tea and tells them to help themselves to sugar, an offer they eagerly accept. Food and drink feature prominently in all four films, undoubtedly to allay women’s fears about their nutrition to help sustain them through long shifts.

The compensations – even attractions – of factory life constitute the fourth theme. The most apparent is a profound sense of community, *Gemeinschaft*, friendship and human solidarity. The strongest emphasis is on inter-women solidarities but men are sometimes included. In all four films, manual working women are shown as sharing a similar ‘uniform’ (trousers, overalls, hair tied back with scarves) underlining the workplace community theme. Uniformity exists in the women’s clothing even outside the factory, clearly illustrated in the clothes of the three women central to *Women Away From Home*. Yet standardised women’s ‘utility’ wear only became common later in the war. Though overalls were one of the few items which became completely standard by late wartime, they were more varied in design and material at this earlier point (Calder, 1971, p. 323). Later, we see some women wearing small items of jewellery on their overalls in *Millions Like Us*. Such personal decoration is absent in these earlier films.

Community is also expressed through music, especially song and dance. Well-attended classical concerts as well as more popular singing and dancing are shown. Typically, smiling women sing, smile and sway together over machine noise. In *Women Away From Home*, women in a factory hostel organise their own musical shows. *Night Shift* is replete with music, ending with men and women singing loudly together. All of the films show friendships and other affective relationships as the micro foundation of community. In *Jane Brown Changes Her Job*, Jane reports that she got on well with everyone in her factory and that breaks were opportunities to chat and ‘have a laugh’ with others. In *Night Shift*, the factory camaraderie is conveyed via a shot of two women drinking tea by their machines. The visual contrast between the demanding factory environment and the cheerful, determined women who work in it creates an optimistic prospect. In the same film, a new young woman recruit is warmly welcomed to the shop floor. The night workers enjoy the comradeship of common purpose and adversity. One worker says ‘You feel you are really pulling your

weight because you're working while people are asleep in bed'. Male-female romantic possibilities are evoked. During a long dance scene set in the dinner break in the canteen, the blues song 'Some of These Days,' in which a woman demands better treatment from her man, is sung by a woman worker as a man and woman in overalls covertly share a cigarette in an ambiguous open-ended tryst scene. In another shot in this scene, a man has his arm around a seated woman. Similarly, *Women Away from Home* emphasises new and rewarding relationships; as the voice-over puts it, 'a whole new social life' can emerge.

A fifth theme is the need to bear minor problems. In *Jane Brown Changes Her Job*, Jane cuts herself with a saw but claims that she learned how to avoid such accidents. Her co-worker admits that she initially found constant standing at her machine difficult. It is acknowledged that the strenuous work can easily make people 'irritable.' 'It's hard work standing on your feet all day,' Jane tells us, 'or crouching in positions that make you feel your back is breaking.' This is the frankest acknowledgement of the ergonomic issues common in many factories, one qualified by Jane via the typical industrial workers' reflection that 'you get used to it'. *Night Shift* uses machine noise as a background motif, at levels likely potentially to cause hearing loss and stress. Inter-worker sympathy for others working under taxing conditions is shown when, late in the shift, an older woman labourer looks at a young machine operator sympathetically and asks 'tired, kid?' The break brings relief as she is brought tea by co-workers. Workers' empathy and human solidarity thus contrasts with the quite different message from those in authority. At the conclusion of *Women Away From Home*, a middle-class factory Welfare Supervisor tells one young woman, Celia, that she needs to throw herself into work and factory social life to overcome her sense of loss at travelling and abandoning her ambitions for a career as a dancer. Celia is told things are not 'all roses' but sacrifices to match those being made by the men are needed: 'We must have munitions.'

The sixth and final theme is cooperation to deal with problems affecting production. In the newsreel excerpt, '*Food Front. Shopping Plan Helps Women Workers*', this is the principal argument although it also appears in other films. The issues faced by 'immobile' women are acknowledged head-on and dealt with cooperatively. The opening shot features a tired woman at her machine, pushing her goggles back and puffing her cheeks. The newscaster tells us, with supporting visual illustration, that 'immobile' women employed on shift work spend their early mornings in long queues, risking being late for work. Three women workers irritably leave a queue without being served, knowing that they will be late for work if they wait. A meeting of the St Pancras (London) Chamber of Commerce discuss a possible solution; the all-male Chamber members sit with others, representatives of the local trade unions, including a woman shop steward wearing a head scarf, and the local cooperative society. They collectively refine the system whereby essential women war workers can apply for a priority card, counter-signed by their managers for use at shops. The women's orders are shown being prepared for them. 'Now,' the voice-over asserts, 'things are much better.' In an acute visual association, one of the workers' representatives is shown when the Ministry of Labour and National Service is mentioned. The representative strongly resembles the widely-respected Ernest Bevin, tangentially evoking Bevin's approval and even his participation. The voice-over concludes that problems may be solved in different ways, 'But this is the right way of going about it, people on the spot getting together, seeing what has to be done and then doing it'.

The films' omissions are important. The question almost invariably first asked by women concerned pay; the Ministry of Labour and National Service internally acknowledged a 'lack of clarity' in the information provided⁷. Compared to the social rewards, pay is dealt with only minimally and tangentially. In the relatively grounded *Night Shift*, earnings are only mentioned through the prism of solidarity and co-operation: four women working a group of

machines together on days and nights pooled their piece work earnings, distributing them equally. In *Jane Brown Changes Her Job*, we hear that Jane is paid while training and that her pay increases from an initial 43 shillings, with her skills. However, this is the sole mention of specific amounts in any of the films. Both allusions are positive for women without committing employers and unions to anything concrete. Further income-related questions from women were reported by the MOI official quoted above. These included the possibility of part-time work (favoured by many), childcare ('the nursery problem raised a good deal of concern') and transport⁸. Yet the first two matters are not broached in the films. The third, transport, is only addressed in *Women Away from Home*, in which context it was probably deemed unavoidable. The voice-over explains that a new work party arrives at Birmingham station today: When the women arrive, 'the next step is to take them to their billets. For this purpose, there are coaches, and in some cases... the factories send cars.' The implication throughout is that the matter is comprehensively dealt with, at least in the initial induction context.

Despite significant informational gaps, the three non-newsreel films are complementary in identifying various advantages in industrial war work. They address different social groups through casting and narrative, a breadth of appeal appropriate to government's aim of comprehensively mobilising women of all backgrounds (Lant, 1991, p. 6). *Jane Brown Changes Her Job*'s heroines are middle-class Southern English women, as signified by their speech, dress and comportment. *Food Front. Shopping Plan Helps Women Workers*' includes striking visual images of a London working class woman shop steward with head scarf and cigarette. In *Night Shift*, Welsh working class regional accents dominate, while *Women Working Away From Home* also features women from different regions. The message is that British women are united, regardless of their origins or previous work experience and that there truly is, to quote Jane Brown, 'a job to suit every woman.'

Women's Experience in Industry

The issues encountered by women entering industry dwarfed the recruitment films' tangential references to minor irritations. Indeed, women's reactions to them threatened the war effort itself; the incidence and seriousness of collective action among women grew to considerable proportions in 1943-4 (Croucher, 1982, p. 293). The forms of action incorporated all those available, including go-slows (some involved large numbers of workers and lasted months)⁹. They included overtime bans, sit-ins and 'go home' strikes. The causes were industrial; strikers were not motivated by political opposition to the war, and lost production was frequently made up later¹⁰.

Women's discontent was expressed through absenteeism and collective industrial action¹¹. The former was approximately twice as high among women as among men, and higher among married than among single women. It persisted at about 12-15 per cent throughout the war (Inman, 1957, p. 277-8). Organised labour, especially the Communists prominent in many arms factories and in the national shop stewards' movement, officially opposed both absenteeism and strikes after the invasion of the USSR (Croucher, 1982, p. 251-306). Yet in the first nine months of 1943, internal government figures show that twenty six firms experienced strikes and go-slows (predominantly involving women) in the aircraft industry alone. In these months, seventy-five aircraft were lost to industrial action compared to the number programmed by the Ministry of Aircraft Production¹². Ernest Bevin admitted feeling that he was 'living on an industrial volcano'¹³.

Four central issues underlay this wave of industrial action, strongly reflected in extensive governmental archives and in historical work based on them: the nature of work, material conditions inside and outside of the factories, social relations with other workers and managers and finally the crystallising and overarching pay issue. The first matter, the nature

of women's work in the arms industries, constituted the essential existential backdrop. Much war work was boring, monotonous and, once initial materials shortages which could hold up production were overcome, intense (Croucher, 1982; Little & Grieco, 2011; Summerfield, 1989, p. 53-4; Wightman, 1999). Government production ministries constantly strove to reduce production times. *Inter alia*, this entailed making maximum use of the women workers who worked on 'diluted' tasks, usually paid by the piece. Some of these were rated - through negotiation - as skilled or semi-skilled, but only a very small proportion of new entrant women were trained to perform highly skilled work such as tool-making and tool-setting, usually paid on flat time rates (Inman, 1957, p. 80). Therefore, many women and low-skilled men increasingly worked on tasks typical of intense mass production internationally. In mid-1943, American manufacturing expert Ed Walton toured British aircraft factories, comparing their production methods with those in the USA. His verdicts on different factories varied, but the majority resembled his judgement of A.V. Roe's North-Western factories: 'the tempo of work...seemed very good and the proportion of unskilled and female labour very high—72% at Ashton, 75% at Wythenshawe. In the Ashton plant all machine tools run by un- and semi-skilled operators with very few skilled workers to set up machine tools¹⁴. Such de-skilled production processes were exhausting. Margaret Amosu, who worked in a London aircraft factory, said when interviewed post-war, 'Most of the time you were standing and working physically very hard. So when the afternoon team came on, you sort of collapsed onto your stool, you were really exhausted. And when you think that for much of the year – half the year, certainly – we were going home *and* arriving at the factory in the blackout, and some of these women were coming from as far as Croydon. Why, I don't know, but I suppose because most of them, of course, were conscripted'¹⁵. As another woman employed in a factory observed by Mass Observation (MO) and regarded by them as representative complained: 'the work is so monotonous...boredom is our worst enemy'

(Mass Observation, 1943, p. 26-7). These individual experiences were typical. MO published a survey of women war workers' work experience in 1942, reporting just over a half as either 'satisfied without being very enthusiastic', 'unenthusiastic' or 'condemned their jobs emphatically' (Mass Observation, 1942, p. 117). Even these figures probably minimised the issue. 'Social desirability' effects tending to encourage them to exaggerate their satisfaction are evident in women's responses, and the survey was conducted soon after conscription began. Revealingly, as one Ministry of Labour and National Service expert reported, strikes often started on Monday morning¹⁶. The brief shots of women's work shown in the films could not possibly convey the tedium of this type of repetition work performed across many hours.

Material conditions for women workers outside workplaces could also be poor, because of the arms industries' very rapid expansion (Croucher, 1982). New factories were hastily built, often in rural areas where transport was difficult and an official support network assisting the many thousands of women being transferred had to be created almost from scratch. Key issues, including accommodation for 'mobile' women, childcare and shopping (central for 'immobile' women) were never fully solved. Nurseries were only gradually introduced after women's conscription and were never available to all children. They amounted to 'a makeshift measure to facilitate the labour supply in a number of key areas' (Croucher, 1982, p. 264). Shopping required a wide range of *ad hoc* solutions co-ordinated by the Ministry of Labour and National Service's Welfare Department which relied on local employers and agencies such as those depicted collaborating in *'Food Front. Shopping Plan Helps Women Workers'*. Yet in some areas, such as Coventry, the situation remained especially poor (Croucher, 1982, p. 265). Factory canteens sometimes provided a partial solution since not all landladies practised the generous hospitality shown in *Women Away From Home*. An employer seeking government assistance in establishing a canteen wrote in late 1941: 'a

proportion of our employees are not in a high grade physically (*sic*) and we have had three cases of TB in the last six months. A large percentage of our workers are in lodgings and there is a distinct possibility that they are not receiving sufficient or good quality food...'¹⁷

Inside factories, welfare arrangements – especially in 1942-3- were frequently weak, with inadequate sanitary facilities and unpopular canteens (Inman, 1957, p. 232-242). Conditions were often viewed by women as inappropriate. One Scottish woman shop steward, complaining about numerous welfare and health issues, told MO: 'We don't mind doing men's work but we don't want to be treated like animals....'¹⁸ As Doris Wilkinson, employed in a Sunderland dry dock (1942-5) later recalled, many women had fleas because of the need to be comprehensively covered in a dirty workplace where rats were common¹⁹. Working hours were long at around sixty-eight per week. The Chief Inspector of Factories expressed concern about long hours in 1940 and 1941 and the almost 400% increase in the accident rate among women in those years²⁰. Publicly stoical reactions were the norm, and as the Chief Inspector noted, went hand-in-hand with under-reporting of serious accidents.

Women's and indeed men's relations with management were often less cooperative than the films depictions. The general quality of top management in the vital aircraft industry caused Stafford Cripps concern when he was Minister of Aircraft Production in 1942²¹. An idea of the authoritarian approach practised by some and objected to by Cripps can be obtained from a letter from a senior manager at the major aircraft manufacturer A.V. Roe to a top official at the Ministry of Aircraft Production in early 1942. Referring to new workers whom he described as 'of the greenest' he wrote: 'My main trouble as far as labour is concerned at Yeadon is the refusal of the workpeople to be properly disciplined, we consequently have in the last couple of months been embroiled in the difficult task of ...forcing discipline down their throats and trying to educate them to workshop conditions....'²² Cripps hoped to address such attitudes by encouraging the nascent idea of

Joint Production Committees (JPCs) bringing managers and workers' representatives together, but it foundered on the managerial attitudes themselves and the worker reactions they stimulated. Most JPCs met only once; many of the remainder failed to induce any real cooperation (Croucher, 1982, p. 159-60). JPCs' failure represented a major missed opportunity to democratise British industry, a victory for the very forces whose attitudes government policy sought to mitigate (Hinton, 1994).

Senior managers set the tone for their subordinates, with whom women had most frequent contact. Many foremen and women enforced the generally harsh discipline of inter-war industry and personnel management was widely neglected. As the official historian of labour in wartime noted, 'the industry was without a personnel or welfare tradition' (Inman, 1957, p. 262). This hindered dealing with sexual harassment, which had been in evidence before conscription began, and had already underlain some industrial action in early wartime (Croucher, 1982 p. 100-4). The middle-class women non-production 'welfare' managers theoretically more sympathetic to women workers' concerns could be regarded scornfully by women entrants. Women Welfare Officers were tasked with oiling the wheels of women's deployment and, as we saw, were depicted in the films as potential actors in solving women's problems. A Mass Observation draft report in February 1942 judged them scathingly, asserting that those in one factory 'were ridiculed, especially by the younger women, as merely 'narks'... put there to keep an eye on them... not really concerned with their welfare. Many workers do not seem to know what the welfare is supposed to consist of or what the Welfare Officer's job is unless it is concerned with his or her own welfare and that of the management and employers.'²³

Male workers' attitudes to the new recruits varied considerably. Isabel Lumsden, who worked in Vickers-Armstrong's Tyneside naval shipyard, 1940-45, summarised many women's response when she suggested unevenness:

IR (interviewer): How did you get on with the men in the war?

IL: Oh, they were good. I mean, they wouldn't let you do anything heavy. I mean, 'I'll pick that up, I'll put that up.' They were great, the men in the yards.

IR: They didn't resent you coming in?

IL: Oh, some did, mind. There were some like that, 'bloody women,' some were gainsayers, but the mates I had were alright.²⁴

J. T. Murphy, the theoretician of the First World War's shop stewards' movement, reported that the women volunteers who came into his war factory experienced reluctance from craftsmen to share their skills, an ultimately unsustainable stance because of 'the sex factor' (J. T. Murphy, 1942, p. 52). Murphy's account demonstrates the persistence of craft union attitudes, and is confirmed by some small-scale strikes conducted by skilled men against dilution despite the 1940 agreement (Inman, 1957, p. 398). It has been argued that the 1940 agreement reflected a clear manifestation of patriarchal policies by unions and employers (Summerfield, 1989, p. 159-60 and *passim*). However, this argument should not obscure manifestations of cross-gender solidarity at workplace level. The agreement's other central dimension reflected the skilled men's wish not to have their pay undercut, specifying that the skilled rate should be paid where appropriate. This encouraged women to demand it, and provided a rationale for those often semi-skilled men who supported them. Many men had jobs and conditions close to and sometimes identical to those of the new entrant women and among them, conceptions of the duty of workplace solidarity persisted. Mixed-gender strikes, usually led by women concerned with piece-work earnings, became increasingly common - with a much higher incidence than stoppages on dilution- as the war progressed (Croucher, 1982, p. 251-306). Women taking industrial action, many of them not union members, often resisted efforts by union officials to persuade them to resume work²⁵.

The final issue concerning women, one which crystallised all the others, was pay. The national engineering wages structure specified women's basic rates below those of unskilled labourers, meaning that many were structurally underpaid in relation to men. It therefore bears repeating that the 1940 Agreement specified that women were to be paid the skilled rate where they could be shown to be doing fully skilled work. Even for the minority of women trained to this level, this could mean a ritual ordeal to obtain the rate. In factories under the Air Ministry's jurisdiction, establishing fully skilled status required women to perform a full range of skilled tasks in front of male assessors. The ordeal meant that hardly any women were paid the full rate in these factories.²⁶ More widely, for women working on 'diluted' jobs, how their work related to that of the craftsmen they replaced was highly debateable. Piece work earnings over and above the basic rates could be improved by effective union representation, but the majority of women were not unionised. Consequently, by 1943 women's earnings in the engineering industry remained only 58.1% of men's²⁷. The massive inequality was resented by many conscripted women, even if different age groups experienced it in different ways. Young women working away from home could be badly affected by low wages, especially when facing expensive lodgings and/or high transport costs²⁸. Even later in the war, the Ministry of Labour and National Service informed some employers that the need to maintain labour's cooperation meant that they would not direct young women to them unless their pay improved²⁹. In this case, an element of 'moral hazard' was involved, but older women's discontent also had specific origins, partly reflecting childcare costs. Both groups of women's discontent were certainly magnified by the complexity of the engineering pay structure, which they considered deliberately obscure. As a Mass Observation study of a Birmingham arms factory showed, women took to returning their pay slips and asking for explanations. One woman expressed herself very clearly: 'I'm going to ask them about it.....I've sweated my inside out this week, and get under £4 for it. I

can't work for this. I could stay at home and take it easy. I'm out of pocket working for this—I've got to pay out to have the babs (children: authors) minded. I'll ask for my bleeding cards back, and be glad to have them.³⁰

The strike wave reached its culmination in November 1943, when some sixteen thousand women and men at Rolls Royce's huge, modern Hillington factory in Scotland struck to improve women's pay. The dispute threatened to spread to other plants and caused the government some anxiety. The strike was the first major industrial mobilisation for equal pay for women in British labour history. Although the strike was only partially successful, the women's pay issue achieved prominence politically and a Royal Commission on Equal Pay conducted an inquiry which (after a long period so that it reported well after many women had been demobilised) delivered a majority verdict against the idea (Croucher, 1982, p. 295-6). Women's demobilisation began soon afterwards and women's attention shifted towards their futures in peacetime, but many thousands had experienced industrial action to obtain equal pay.

Conclusion

This article aimed to uncover how films presented the information women required prior to entering factories, and what motivational rationale for and vision of war work they advanced. It also attempted to determine the scale of the propaganda-lived experience gap.

Regarding the first question, the films provided little on informational issues of major importance to women. Pay was scarcely touched on, though positive impressions were encouraged. In other areas such as food, information was more concrete, possibly because landlords and ladies shared some responsibility, together with government, for it. Problems arising from working conditions were handled by acknowledging small potential difficulties while referring to the welfare apparatus and ultimately by using the argument that some

hardships needed to be borne. Throughout, women's capacity to do skilled work was asserted, even stressed. Overall, then, important matters to women were either mentioned only in passing or ignored altogether. The motivating approach made explicit reference to the need to support the armed services, one which was widely accepted.

There was little discernible difference in the levels of specificity with which issues important to women were treated by the 'trade' and documentarist filmmakers. The context was relevant in this connection. Both types of filmmaker were constrained by the production ministries' sponsorship, their vetting of the information given, and, behind them, the private employers and their associations considered essential to the war effort. Other government departments were nervous about MOI competence to deal with industrial matters, especially pay, and the potential they had for creating industrial relations problems. Differences in style and tone between the films produced by the trade and documentary filmmakers were certainly apparent. So, too, were differences in depictions as Rotha and his company's films prominently showed workers and their organisations as active agents. The other films did not, preferring to depict officials as dealing with workers' problems and exercising control over them. At the same time, Rotha's films employed a didactic variety of exhortation. Overall, the films' non-factual elements, exhortation, reassurance about skills, and evocation of the workplace community, may have been successful. Yet they could only mask the dearth of concrete information.

Regarding the second, central question, the gap between the picture painted and the lived reality was large. War work for many women was repetitious, boring and sometimes intense, and interacted negatively with extra difficulties in domestic work. Very long hours, and frequently inadequate welfare went hand in hand with considerable health and safety issues, especially early in the war. In social relations terms, managers were positively depicted, as were male workers; romantic possibilities were even evoked. Management was depicted as

friendly and cooperative, and this was possibly true in a day to day sense in some workplaces. Nevertheless, many managers sought to discipline and subordinate the new 'green' workers to their visions of appropriate behaviour. Middle-class women welfare officers, shown as offering both minimal support and exhortation, were often not well regarded by the women conscripts. At a more institutional level, the history of Joint Production Committees was one of widespread failure partly because the over-riding issue was inequality, especially in relation to pay.

Certainly in the short term and possibly beyond, these films may be argued to have been successful in achieving an immediate aim: bringing women into the war factories in greater numbers than in World War One. Conscripted women were relatively well absorbed into the workforce, with few disputes on 'dilution' compared to 1914-18, indicating that men's reservations had reduced in the interim, and may have been at least minimised by propaganda. The films helped extract major efforts from many conscripted women, and the more positive dimensions of the wartime industrial experience were later underlined by many as some women offered 'heroic' industrial efforts accounts post-war (Summerfield, 1998). These stressed women's sacrifice. Yet, as Harrison (1976) convincingly demonstrated, post-war accounts are very untrustworthy guides to individuals' wartime attitudes and actions. Thus, women's wartime reactions encompassed both much sustained hard work and sacrifice but also high and rising levels of absenteeism, strikes and other forms of industrial action. An increasing number of women took action, focusing on pay inequality, often with support from male workers. Obviously, recruitment films could not tackle this issue. Nor could they counteract the material immediacy of workplace realities. Indeed, they had to avoid potentially contested issues and government was in a sense prescient in that the wave of women's industrial action that they feared did in fact ensue.

This analysis provokes a further question that might become approachable if more sources become available to allow more insight into women's wartime subjectivity than is at present possible. The films emphasised women's capacities and the depth of their workplace solidarities. These propaganda strands may have had unintended effects in the longer term since such official representations could be re-interpreted and used by workers in ways far from those intended by the filmmakers and their state sponsors. Wartime propaganda representations were certainly often radically adapted by those who they were aimed at, moulded to fit in with and justify individual and collective actions (Hinton, 2010). Thus, further work may be able to test the proposition that cinematic affirmations of women's capacities and workplace solidarity were successful in the short run but may conceivably have been counter-productive in the longer term by encouraging them to collective assertiveness.

References

- Aitken, I. (1998). Basil Wright. Interview with Ian Aitken. In I. Aitken (Ed.), *The Documentary Film Movement: An Anthology* (pp. 244-252). Edinburgh: Edinburgh University Press.
- Aldgate, A., & Richards, J. (2007). *Britain Can Take It: British Cinema in the Second World War*. London: I.B. Tauris.
- Box, S, Carr, J. (Producers), & Cooper, H. (Director). (1941). *Jane Brown Changes Her Job* [Motion Picture]. United Kingdom: Verity Films.
- Hurst, B. D. (Producer and Director). *A Call For Arms* [Motion Picture]. United Kingdom: D&P Productions.

- Calder, A. (1971). *The People's War*. London: Panther.
- Chapman, J. (2011). *The British At War: Cinema, State and Propaganda, 1939-1945*. London: IB Tauris.
- Croucher, R. (1982). *Engineers at War: 1939-45*. London: Merlin Press.
- Edgerton, D. (2012). *Britain's War Machine*. London: Penguin.
- Fox, J. (2005). John Grierson, his 'documentary boys' and the British Ministry of Information, 1939-1942. *Historical Journal of Film, Radio and Television*, 25, 345-369. doi:10.1080/01439680500236151
- Fox, J. (2006). Millions like us? Accented language and the 'ordinary' in British films of the Second World War. *Journal of British Studies*, 45, 819-845. doi:10.1086/505959
- Fox, J. (2013). *Film Propaganda in Britain and Nazi Germany*. London: Bloomsbury.
- Hankinson, M. (Producer), & Gilbert, G. (Director). (1942). *Women Away From Home* [Motion picture]. United Kingdom: Ministry of Information.
- Harrison, M. (1988). Resource mobilisation for World War Two: the USA, UK, USSR and Germany, 1938-1945. *Economic History Review*, 41, 171-192. doi:10.1111/j.1468-0289.1988.tb00461.x
- Harrisson, T. (1976). *Living through the Blitz*. London: Collins.
- Higson, A. (2003). Five Films. In G. Hurd, (Ed.), *World War Two in British Films and Television*. London: BFI Books 22-26.
- Hinton, J.S. (1973). *The First Shop Stewards' Movement*. London: George Allen and Unwin.
- Hinton, J.S. (1994). *Shop Floor Citizens: engineering democracy in 1940s Britain*. London: Edward Elgar.

Hinton, J.S. (2010). *Nine Wartime Lives. Mass Observation and the Making of the Modern Self*. Oxford: Oxford University Press.

Inman, P. (1957). *Labour in the Munitions Industries*. London: HMSO.

Lant, A.C. (1991). *Blackout. Reinventing women for wartime British cinema*. Princeton: Princeton University Press.

Box, S., Carr, J. (Producers), & Cooper, H. (Director). (1941). *Jane Brown Changes Her Job* [Motion Picture]. United Kingdom: Verity Films/Ministry of Information/Ministry of Labour.

Black, E. (Producer), Gilliat, S., Launder, F. (Directors.) (1943). *Millions Like Us* [Motion Picture]. United Kingdom: Gainsborough Pictures.

Hankinson, M. (producer), Gunn, G. (Director.) (1943). *Women Away From Home* [Motion Picture]. United Kingdom: Spectator Films.

Little, S.E., & Grieco, M. (2011). Shadow factories, shallow skills? An analysis of work organisation in the aircraft industry in the Second World War. *Labour History*, 22, 193-216. doi:10.1080/0023656x.2011.571476

Mass Observation. (1942). *People in Production*. London: MO.

Mass Observation. (1943). *War Factory*. London: MO.

Murphy, J.T. (1942). *Victory Production!* London: John Lane the Bodley Head.

Murphy, R. (2000). *British Cinema and the Second World War*. London: Continuum.

Newport local history society. (2017). *Wartime Newport*

http://www.wartimenewport.virtuallyhere.co.uk/story.php?story_id=107. Accessed 1

February 2017. This site underwent reconstruction in summer 2017.

Petrie, D., & Kruger, R. (Eds.), (1999). *A Paul Rotha Reader*. Exeter: Exeter University Press.

Plantinga, E. (2005). What a documentary is, after all. *The Journal of Aesthetics and Art Criticism*, 63, 105-117.

Pronay, N., & Croft, T. (1983). British film censorship and propaganda policy during World War Two. In J. Curran, & V. Porter (Eds). *British Cinema History* London: Weidenfeld and Nicolson pp. 144-163.

Richards, J. (1994). Cinemagoing in Worktown. Regional film audiences in 1930s Britain. *Historical Journal of Film, Radio and Television*, 14, 147-166.

doi:10.1080/01439689400260131

Rotha, P. (Producer), (Director Unknown). (1942). *Worker and War-Front Magazine. Food Front. Shopping Plan Helps Women Workers* [Motion Picture]. United Kingdom: Paul Rotha Productions.

Rotha, P. (Producer), & Chambers, J. (Director). (1942). *Night Shift* [Motion Picture]. United Kingdom: Verity Films.

Rotha, P. (1958). *Rotha on the Film. A selection of writings about the cinema*. London: Faber and Faber.

Summerfield, P. (1989). *Women Workers in the Second World War. Production and Patriarchy in Conflict*. London: Routledge.

Summerfield, P. (1998). *Reconstructing women's wartime lives. Discourse and subjectivity in oral histories of the Second World War*. Manchester: Manchester University Press.

Sussex, E. (1975). *The Rise and Fall of British Documentary. The Story of the Film Movement Founded by John Grierson*. Berkeley and London: University of California Press.

Welch, D. (Ed.). (2014). *Propaganda, Power and Persuasion: From World War 1 to WikiLeaks*. London: IB Tauris.

Welch, D. (2016). *Persuading The People*. London: British Library.

Wightman, C. (1999). *More Than Munitions. Women, Work and the Engineering Industries 1900-1950*. London: Longman.

Woolley, S. (2017). Behind the lines: Women and WWII British film. *Sight and Sound*, May.

ENDNOTES

¹ A young war worker, interviewed in 1984, asked why the women in her factory made great efforts replied: ‘Maybe the propaganda they used in the cinema or whatever. You did take it in, you weren’t aware of it.’ Interview with Catherine Niblock by Conrad Wood, September 1984, Recording 830, Imperial War Museum, London.

² From 1920, the Amalgamated Engineering Union: AEU.

³ Mrs Thorne, who worked in Palmer’s Jarrow yard 1940-1944, was incredulous when the Labour Exchange first suggested working there; ‘that’s where the men work...’ Interview with D. Thorne by Ian Roberts, March 1984, Recording 20185, Imperial War Museum, London.

⁴ See Rotha’s comments on the relationship between the films in Sussex, 1975, p. 140.

⁵ Industrial Publicity Committee Minutes, Ministry of Production. 16 November, 1942. INF 1/328. NA.

⁶ ‘Special Comments. Industry’. n.d, but mid-1942. INF1/328. NA.

⁷ ‘Note: 22 September, 1941’. LAB 8/107. NA

⁸ ‘Special Comments. Industry’. n.d. but mid-1942. INF1/328. NA.

⁹ ‘Note: Chief Executive: Effect of Strikes’. 15 October 1943. AVIA 15/2548. NA.

¹⁰ ‘Note: Chief Executive: Effects of Strikes’. 15 October 1943. AVIA 15/2548. NA.

¹¹ Forms of industrial action included overtime bans, sit-ins and ‘go home’ strikes. The causes were industrial; those involved were not motivated by political opposition to the war, and there was a tendency for lost production to be made up later. ‘Note: Chief Executive: Effects of strikes’ 15 October 1943. AVIA 15/2548. NA.

¹² ‘Note: Chief Executive: Effect of strikes’ 15 October, 1943. AVIA 15/2548. NA.

¹³ *News Chronicle* 3 November 1943.

¹⁴ Ed C. Walton: ‘Lancaster and York production and Development’ 24 July 1943. AVIA 10/108. NA.

¹⁵ Interview with Margaret Amosu by Lyn E. Smith, June 1996, Recording 16704, Imperial War Museum, London.

¹⁶ Northern Region Chief Conciliation Officer Report 26 November, 1943. LAB 10/394. NA.

¹⁷ Letter from Grice and Young to HR Chapman, Director of Labour at the Ministry of Aircraft Production. 21 November, 1941. AVIA 15/2566. NA.

¹⁸ AK Diary, 25 January 1942, p.114. Industry Raw Materials, MO Archive.

¹⁹ Interview with Doris Wilkinson by Ian Roberts, October 1983, Recording 20188, Imperial War Museum, London.

²⁰ Annual Report of the Chief Inspector of Factories, 1940. (Cmnd 6316): p. 5 and 1941 (Cmnd 6397): p. 19.

²¹ ‘Secret. Extract from MPC (43) first meeting 30 December 1942.’ AVIA 15/3780. NA.

²² Letter from Dobson (A. V. Roe) to Sir Archibald Reynolds (MAP) 10 April 1942. AVIA 15/2539. NA.

²³ ‘Welfare in industry’ 13 February 1942 Industry Raw Materials. MO Archive, University of Sussex.

²⁴ Interview with Isabel Lumsden by Ian Roberts, 25 August 1984, Recording 20173, Imperial War Museum, London.

²⁵ Northern Conciliation Officer’s Report, 3 April 1943. LAB 10/380. NA.

²⁶ ‘Skilled engineering women’. Memo by Air Ministry, 8 February 1944. LAB 10/475. NA.

²⁷ *The Economist*, May 1945.

²⁸ *Labour Research* 30: 93; *Factory News* (A. V. Roe) 24 January 1944.

²⁹ Regional Controller to H.R. Chapman at Ministry of Aircraft Production, Millbank 4 March 1944. AVIA 15/2549. NA.

³⁰ Tubes Report, Industry raw materials: 43 and *passim*. MO Archive, University of Sussex.