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Chapter 5

Surviving the Office: Workplace Design, Activism and the Health of Women Workers in 20th-Century Britain

Amy Thomas

INTRODUCTION

> Look around your office. Do people look well? Or do you all feel tired at the end of the day, exhausted at the end of the week? Do you get headaches, sore throats, upset stomachs, rashes, back-ache? It's probably your job that's doing it [...]. If you work in an office you know it's not the easy life of tea breaks and chats that many people believe. Offices are often tiring and stressful places to work, and have their health hazards – physical, chemical and emotional.[1]

In this opening paragraph to *Office Workers' Survival Handbook: A Guide to Fighting Health Hazards in the Office* (1981), feminist and activist Marianne Craig sought to awaken white-collar workers to an overlooked aspect of their work: it could be dangerous for their health. "Offices on the whole may be cleaner and safer than factories, and occupational accidents and disease perhaps less dramatic", explains Craig, "*but that does not mean they should be taken less seriously*; while the hazards of office work may not kill you on the spot, they do cause serious problems if you have to face them day after day".[2] The guide was written to help office workers identify these hazards in order to have the knowledge to fight for their rights to a safer workplace environment. More specifically, it was addressed to women office workers who occupied the vast majority of lower-paid clerical positions. In an act of political resistance, the book emphasised "how your social class and your sex affect your state of health as much as what job you do... which is itself determined by our social class and sex".[3]

Craig was a member of the Women and Work Hazards Group (WWHG), an affiliate of the British Society for Social Responsibility in

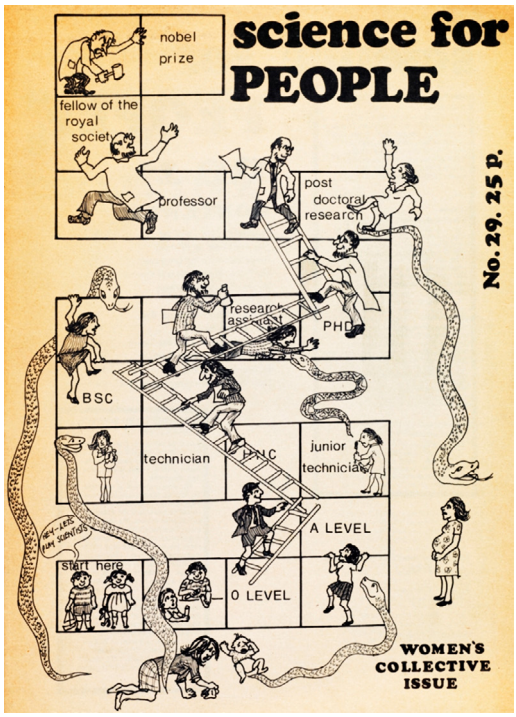


Fig. 5.1. Front cover of *Science for People – Women's collective issue*, published by the British Society for Social Responsibility in Science, 1975. (Wellcome Collection, London, SA/BSR.)

Science (BSSRS). Established in 1977, the WWHG set out to re-centre women's health in the intertwined women's liberation and labour movements, and to show how occupational health was influenced by wider social contexts.[4] In line with a growing awareness of occupational health and safety in Europe, the British Health and Safety at Work Act of 1974 had for the first time enshrined the employer's responsibility for the general welfare of employees in law.[5] With this the work hazards reform movement emerged – comprising grassroots organisations like BSSRS, alongside trade unions and other labour activists – seeking to improve conditions and decrease occupational mortality rates.[6] Yet despite success in implementing regulatory changes to workplace health and safety, women's work and health were largely overlooked in the legislation, primarily because of the devaluation of the work women did in those places.[7] The group argued that very little effort had been made to look at the occupational health risks faced by women, including in domains where they formed the majority of the workforce, such as offices, hospitals and domestic labour (Fig. 5.1.).

The office was uncharted territory in the field of occupational health and safety at the time Craig and her colleagues were working on these issues. While in the post-war decades, health and safety in other industrialised workplaces had been politicised through unions, the comparatively benign character of clerical and managerial work had ensured that office buildings were largely omitted from the discussion. This was despite the fact that clerical work, in its routine and repetitive nature, was posited by some critics, like political economist Harry Braverman in the U.S., as

little better than factory work in terms of worker alienation.[8] The WWHG claimed that women were most exposed to the office's health hazards because of their lower positioning within the organisation. By end of the 1970s, women's position within the labour market had shifted dramatically in Britain due to the erosion of the "marriage bar" convention (the requirement for women to leave their jobs on getting married), the implementation of the Equal Pay Act in 1970, the Sexual Discrimination Act of 1975, and the Employment Protection Act of 1975 (the latter rendering maternity pay and job retention obligatory). Census data reveals that by 1981, 57.7 percent of women were engaged in paid work, compared to 36.3 percent three decades earlier.[9] This in turn reconfigured the demographic landscape of the office, with the same census showing that over a third of working women were in secretarial and administrative positions – substantially more than any other sector.[10] Although the number of women in work had risen dramatically, they continued to occupy the lowest paid positions because of the legacy of their historical absence from the labour market and the ongoing discrimination against women in organisations.

Following in the tradition of feminist workplace reformers of the 19th century, the WWHG sought to reframe the office as a site of women's oppression – and, thus, as a site for their emancipation. Yet unlike previous generations of reformers, achieving health equity was not an end in itself: the 19th-century focus on women's factory working conditions was driven more by a broader biopolitical concern with the neglect and malnourishment of children than by a genuine commitment to women's liberation.[11] The WWHG, on the other hand, were seeking to mobilise office workers to claim agency in the workplace and take part in a wider feminist-socialist campaign. As Craig reflects, "we were trying to radicalise [...]; it was our way of trying to raise awareness and bring about a revolution".[12] Comprising women with backgrounds in trade unions, health and safety law, social and medical sciences and the women's liberation movement, the group saw the office as another representation of the patriarchy in an unjust capitalist society. These highly conditioned and designed environments both symbolised and actualised women's lower status in society; women could only thrive if they could take control over these spaces. The WWHG offer an alternative lens through which to view the history of British office design: first, through their emphasis on user knowledge and (particularly female) experience, and second, through their specific emphasis on an expanded definition of the workplace "environment".

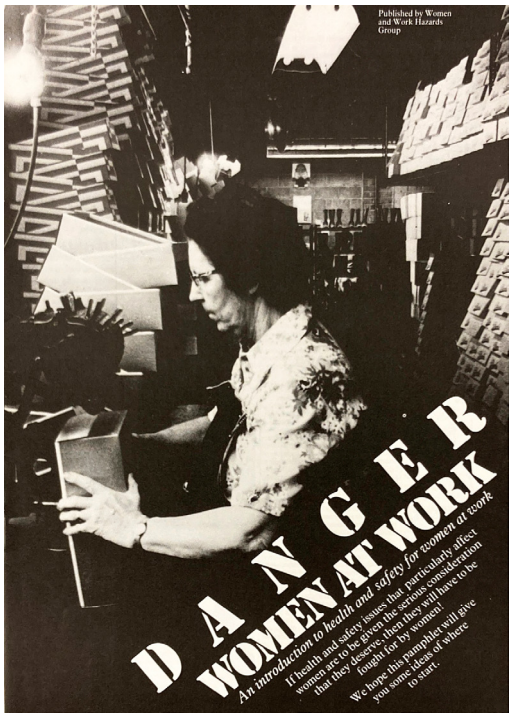
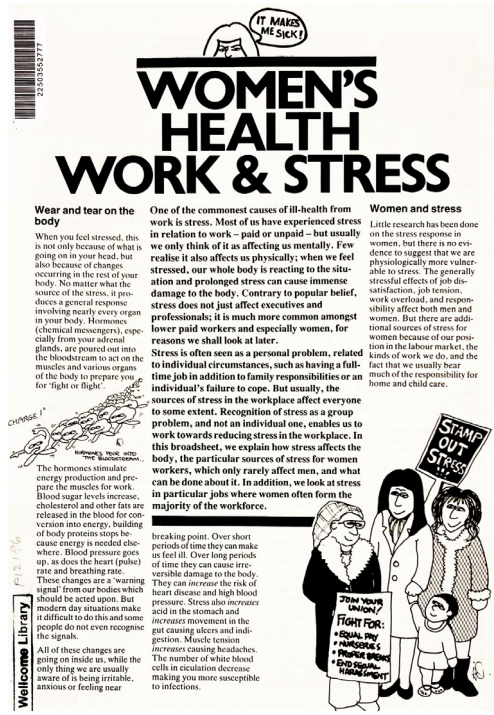


Fig. 5.2. Front cover of the pamphlet *Danger – Women at Work: An Introduction to Health and Safety for Women at Work*, published by the Women and Work Hazards Group, 1980s. (Wellcome Collection, London, SA/BSR/B/14/3.)

For the WWHG, women working in the office were not only subjected to discrimination through the design, organisation and culture of the workplace itself; their experiences were also influenced by their personal and collective experiences beyond the workplace, at home, in the city and in society in general (Fig. 5.2.).

This chapter explores this more generous understanding of the workplace environment as a physical, psychosocial and political space by examining one specific notion that garnered much attention from the WWHG: stress. Despite the fact that ideas about stress had been popularised by key publications emanating from the U.S., in the post-war years, the concept was not commonly used in British workplace settings of the 1970s.[13] Feminist worker movements like the WWHG began to use stress as a term to describe the combined effects of the systemic and personal discrimination faced by women and the tangible and perceived threats posed by the office. They argued that the combination of ongoing care- and house-work responsibilities, the repetitive and unstimulating nature of the work, the exposure to potentially harmful toxins and the unrelenting sexual harassment and discrimination created a hostile environment, which in turn had very real physiological effects. Women's health and status in society was a product of this environment. Consequently, the office became the object of scrutiny in pamphlets and articles (Fig. 5.3.). As Michelle Murphy has written in her compelling study of Sick Building Syndrome in America, the women workers' movements of the 1970s came to view the office as being "composed of an oppressive tide of small


IT MAKES ME SICK!

WOMEN'S HEALTH WORK & STRESS

Wear and tear on the body

When you feel stressed, this is not only because of what is going on in your head, but also because of changes occurring in the rest of your body. No matter what the source of the stress, it produces a general response involving nearly every organ in your body. Hormones (chemical messengers), especially from your adrenal glands, are poured out into the bloodstream to act on the muscles and various organs of the body to prepare you for 'fight or flight'.

CHARGE!

HORMONES RUSH INTO THE BLOODSTREAM...

The hormones stimulate energy production and prepare the muscles for work. Blood sugar levels increase, cholesterol and other fats are released in the blood for conversion into energy, building of body proteins stops because energy is needed elsewhere. Blood pressure goes up, as does the heart (pulse) rate and breathing rate. These changes are a 'warning signal' from our bodies which should be acted upon. But modern day situations make it difficult to do this and some people do not even recognise the signals.

All of these changes are going on inside us, while the only thing we are usually aware of is being irritable, anxious or feeling near breaking point. Over short periods of time they can make us feel ill. Over long periods of time they can cause irreversible damage to the body. They can *increase* the risk of heart disease and high blood pressure. Stress also *increases* acid in the stomach and *increases* movement in the gut causing ulcers and indigestion. Muscle tension *increases* causing headaches. The number of white blood cells in circulation decrease making you more susceptible to infections.

One of the commonest causes of ill-health from work is stress. Most of us have experienced stress in relation to work – paid or unpaid – but usually we only think of it as affecting us mentally. Few realise it also affects us physically; when we feel stressed, our whole body is reacting to the situation and prolonged stress can cause immense damage to the body. Contrary to popular belief, stress does not just affect executives and professionals; it is much more common amongst lower paid workers and especially women, for reasons we shall look at later.

Stress is often seen as a personal problem, related to individual circumstances, such as having a full-time job in addition to family responsibilities or an individual's failure to cope. But usually, the sources of stress in the workplace affect everyone to some extent. Recognition of stress as a group problem, and not an individual one, enables us to work towards reducing stress in the workplace. In this broadsheet, we explain how stress affects the body, the particular sources of stress for women workers, which only rarely affect men, and what can be done about it. In addition, we look at stress in particular jobs where women often form the majority of the workforce.

Women and stress

Little research has been done on the stress response in women, but there is no evidence to suggest that we are physiologically more vulnerable to stress. The generally stressful effects of job dissatisfaction, job tension, work overload, and responsibility affect both men and women. But there are additional sources of stress for women because of our position in the labour market, the kinds of work we do, and the fact that we usually bear much of the responsibility for home and child care.

STAMP OUT STRESS!

JOIN YOUR UNION!

FIGHT FOR:
- EQUAL PAY
- NURSERIES
- PROPER BREAKS
- END SEXUAL HARASSMENT

Wellcome Library

details, what one could call the microphysics of office work", which was not simply holding women back but harming them, both physically and psychologically. Through their activism, as Murphy notes, "the office was rematerialized as a site of oppression and pathology".[14]

From an architectural historian's perspective, the WWHG highlighted a fundamental discord between the ideals underpinning the design and conception of the office and the real lived experiences of those working in it. This would seem an obvious point to make, but such observations remain scant in the literature on the history of the British office. Of the architectural histories that we have (far fewer than in the American context), most emphasise the significant impact of developments in technology, architectural style and real estate processes, as well as the shift from cellular, highly domestic offices to hybrid layouts fusing elements of European office landscaping and American open plans.[15] But very few pay attention to the inherent tensions between design intent and user experience.[16] Even fewer have explored the extent to which changing discourses on occupational health and psychology have influenced discourses on design. Through the work of the feminist WWHG, this chapter explores the changing conceptualisation of health and well-being in office design in the closing decades of the 20th century. Focusing on the United Kingdom, it reinterprets specific historical ideas about British office design; terms like "hierarchy", "open plan" and "flexibility" are interrogated and rearticulated through the experiences of women workers. In doing so, it is users and grassroots organisations supporting users, rather than designers and architects, who become the protagonists.

Fig. 5.3. *Women's Health, Work and Stress* pamphlet, published by the Women and Work Hazards Group, 1979. (Wellcome Collection, London, SA/BSR/B/14/5.)

RADICALISING THE FEMINISED WORKPLACE

The office was not an obvious place to start a radical occupational health movement in the 1970s. Clean, non-life-threatening and full of middle-class employees, British offices were not high on the priority list of trade unions or the newly formed Health and Safety Executive regulatory body, which continued to emphasise industrial health and safety.[17] Office work had a cultural reputation for being safe and unexciting, with male clerks earning the stereotype of being meek and weak because of the sector's highly feminised character.[18] Marianne Craig herself was all too aware of the seeming incompatibility of the office with the radical hazards movement. She recalls:

> My dad was an engine driver […], a Glaswegian working class man. […] And when I said I was going to write a book about women and work hazards in offices, he looked at me with contempt and he said, "What? Don't chew your lead pencil?"[19]

But while the office may not have been the clearest example of a hazardous workplace, it was an ideal sector from which to recruit women to the feminist cause. The combined impact of growth in the service sector and the legacy of women's employment during the Second World War meant that there were more women working in offices than ever before. By 1951, 60 percent of all clerical workers in Britain were female, in comparison to 0.1 percent a century earlier.[20] It was not only the number of female office workers that rendered them ideal targets for the WWHG, but also their profile. Since their entry into the white-collar workforce in the 19th century, women in the office had been, for the most part, young and unmarried. This was not accidental. Marriage bars had been implemented by organisations since women first joined the labour force in the late 19th century, in order to avoid competition with their male counterparts. The lack of prospects for long-term career progression and the idea that women were well-suited to repetitive menial work meant wages could be kept low, with no entitlement to pension provision or other benefits.[21] But the new office workers of the 1970s were quite different. Many were married, with families and other commitments outside work.[22] This group was unlike their single predecessors, since they were dealing with the double burden of paid and unpaid work, the lack of childcare provision from the state and the litany of other pressures experienced by women in two-earner households. The new legislation of the 1970s may have entitled women to equitable employment, but many aspects, like maternity provision and

the right to reinstatement, were minimal and partial, catering to only a tiny subset of the female workforce.[23] These grievances, in tandem with ongoing cultural discrimination against working women, rendered these women ideal candidates for mobilisation by the WWHG. Their activities were part of a broader belief within the Women's Liberation Movement that getting women into paid labour was a way to develop women's collective political consciousness, helping them to build confidence, learn collectively and share problems.[24]

Although a far cry from the hazardous environments faced by miners or chemical plant workers, most British offices in the 1970s were not particularly pleasant spaces. Building controls on commercial buildings emphasised structure and fire protection, neglecting aesthetic and environmental concerns and leading to a fairly conservative office stock.[25] One study by the Building Research Station in the 1960s revealed that many British offices' building services – ventilation, heating and electrical systems – originated from the 1900s, with some government offices still being heated by open coal fires in the 1950s.[26] The rapidity of rebuilding after the Second World War had also catalysed the production of swathes of poor calibre, developer-led office buildings. Here commercial architects were hired to maximise floor space within the given regulations, to the minimum specifications.[27] As one developer of the period noted, they did this by

> limiting floor to ceiling heights to the minimum permitted by building bylaws. Hardly a single building incorporated air-conditioning. Central heating boilers were oil-fired rather than gas-fuelled, and there were generally insufficient electric power outlets.[28]

The implementation of a new Offices, Shops and Railway Premises Act in 1963 somewhat protected workers with safety provisions that included restrictions on workplace density, maintenance and daylighting in offices. Yet these regulations were rather vague, with terms such as "sufficient and suitable lighting", "adequate supplies of fresh or artificially purified air" and, on the matter of seating, the provision of "a seat of a design, construction and dimensions suitable for him".[29] Indeed, whereas the welfare-state-led housing projects of the post-war decades involved sociologists and extensive surveys of use patterns, office buildings were hardly considered in terms of the user experience. The limited number of studies that were carried out focused on the impact of sound, heat, light and air on worker productivity and efficiency, rather than workers' feelings or

perceptions about their work spaces.[30] One early ground-breaking study of boredom and fatigue in female clerical workers (1937) explored personal perceptions of status, identity and physical exhaustion in the workplace, but did not link these issues to the design of the space.[31] In Britain, the precedent for such a study was in factories, rather than offices.[32] In the 19th and early 20th centuries, feminist organisations scrutinised the working conditions of women factory workers in numerous studies, surveys and observations.[33] Vicky Long has shown how this sometimes led to the provision of better facilities for the workers, including women-only rest rooms, better canteens and women's club houses.[34] Yet similar adjustments were very rarely made for female clerical workers. The WWHG in the 1970s were the first to bring the daily activities and struggles of these women into popular debate, in turn catalysing a wider conversation about women's health and well-being in the white-collar workplace.

The WWHG's reframing of health and safety in the office as a political conversation occurred at a moment when the relationships between individuals and their environment were being recast in popular debate. In particular, the idea that the manmade environment was a source of potential danger coincided with the rise of the environmental movement in the 1960s and 1970s. At the core of this conversation was a criticism of the problematic co-dependency of the technologies and materials that drove societal progress and the humanitarian-ecological disasters that occurred because of them, such as the nuclear meltdown at Three Mile Island.[35] Environmental activism during this period sought not only to raise awareness of the damaging effects of chemicals, oil spills and other such contaminants, but also challenge the ways in which the scientific establishment was interconnected with political economic power structures. It is within this context that the WWHG emerged as a subset of a larger radical science group, the British Society for Social Responsibility in Science. Formed in 1969 by scientist-activists, BSSRS promoted community science and grassroots research, working with residents and citizens with the aim of equalising the power to collect evidence. Their aim was to expose the public to the political machinations of science, creating public debate within the scientific community and encouraging public participation in setting the agenda for research and development.[36] They claimed that

> science and technology serve the interests of those who fund them. And in serving these interests, they help perpetuate them. To a considerable extent, therefore, science and technology have become instruments of state and industrial power.[37]

BSSRS aspired to operate as a legal-aid equivalent for the public, and became involved in supplying accessible information and support for environmental issues like pollution and occupational health. Here, the notion of the environment found expression on multiple scales, from the neighbourhood (like the grassroots investigation of the so-called "Battersea Smell" caused by a glucose factory and gin distillery) to the office desk or the body of the worker. Following the introduction of the Health and Safety at Work Act 1974, members of BSSRS became more involved with the labour and work hazards reform movement. They campaigned for Safety Representative Regulations, and publicised a number of industrial hazards such as noise, asbestos and vinyl chloride, partially through their influential and long-standing magazine *Hazards*.[38]

Believing that the trade union movement had failed women, particularly those in non-unionised workplaces (like offices) and those engaged in part-time or casual labour who could not be protected, the WWHG formed to open up the male-dominated work hazards conversation to women.[39] They worked across three spheres: providing free advice to individuals and organisations through letters and calls in the U.K. as well as internationally (as far away as New Zealand and Fiji); making accessible literature such as pamphlets with information about a wide range of hazards women might face at work; and disseminating this information in workshops, meetings, conferences, print media and even a documentary film broadcast on national television, funded by the Greater London Council's Women's Committee. Collaborating with trade unions, women's health centres and many other grassroots organisations, the aim was to inform those responsible for workplace health and safety of the challenges experienced by women at work, but also to implore the women's health community to see working conditions as an important factor. In this context, the group thus saw themselves as "part of the new politics of preventative healthcare" that emerged in the 1970s, which emphasised the social and environmental causes of poor health rather than the symptoms and treatment of individuals, popularised within the feminist movement via magazines like *Spare Rib* and women's centres across the country.[40]

WOMEN AND WORK STRESS

As a consciousness-raising tool, the concept of stress was a prominent and powerful topic for the feminist group, featuring highly in publications and

pamphlets. Its power resided in concision: stress drew attention to the multiplicity of injustices experienced by women at work and legitimised those experiences by grouping them into a single nameable phenomenon. Stress was not the "bosses' disease", as it was understood by lay people, but was prevalent if not more common among lower paid workers – and particularly women.[41] The group argued that women were not more vulnerable than men to stress, but that they were more likely to be exposed to stressful situations because of their position in society. Women were not only doing the double shift of paid labour at work and unpaid labour at home; they also experienced job role segregation because of the long-standing inequalities in the labour market. They were predominantly in lower-paid and often less fulfilling jobs like clerical work and cleaning, or occupying extremely physically demanding jobs in nursing or the service and care sectors.[42] "Stressors" were thus both social and physical, ranging from lower earnings, restricted opportunities for promotion, job precariousness, low sense of job satisfaction, inflexible hours and sexual harassment, to exposure to chemicals, poor ventilation, temperature, repetitive strain injury and bad lighting. In the office, clerical workers could be exposed to unrealistic deadlines, repetitive and boring work, new technologies such as visual display units (VDUs) which might damage eyesight, and poor physical conditions such as unergonomic furniture and exposure to chemicals from photocopiers and carpets. Office cleaners on the other hand had to deal with unsocial hours, shift work, noise, chemicals and the general "frustration of cleaning up other people's mess". Furthermore, given the higher number of migrant women working as cleaners, they might be more exposed to racist discrimination.[43] Through stress, the conceptualisation of the workplace environment was thus expanded from simply a place of physical hazards to a container of socio-political hazards.

Although the causes of stress were environmental, the effects were bodily: the hormonal responses to these stressors could cause a large range of symptoms from colds, indigestion and muscle pain to fatigue, insomnia, anxiety, depression and even heart disease. "Stress has *social* causes and can therefore be prevented", explained Marianne Craig in her *Office Workers' Survival Handbook*:

> All too frequently the early symptoms of stress – nervousness, headaches, irritability and so on – are written off as "female problems", "menopause" or "your imagination". […] [Stress] is the result of pressure on your mind, which can end in health breakdown. Such pressures are numerous and complex.[44]

Rather than simply being "women's problems", stress was an occupational health issue that began in the workplace. As Michelle Murphy argues in reference to the women workers' movement in the U.S., feminist groups refused to accept the "analysis that stress was rooted in gendered psychology", instead explaining stress as a physiological issue: "Stress was a *biological* reaction to *social* conditions."[45]

The WWHG's consciousness-raising campaigns were an extension and continuation of the self-help activities promoted by women's groups like the National Housewives Register and the Pre-school Playgroups Association in the 1960s for housewives suffering with depression and anxiety.[46] While the normal treatment of doctors had been to prescribe tranquillisers or anti-depressants, by the 1960s women were becoming more vocal about the social and environmental causes of their stress, and in turn about the possibility for collective solutions. Railing against popular but under-researched notions like "suburban neurosis" (which claimed that "young suburban housewives were prone to a new type of neurosis that resulted from modern civilization frustrating instinctive desires and from the failure to achieve emotional balance"), feminists instead began to locate the problem in the tension between societal expectations of womanhood, the physical and social isolation this brought, and women's desires for greater independence.[47] Pioneering writers like Hannah Gavron, in her devastating critique *The Captive Wife* (1966), linked stress to the purposelessness felt by women at home, which was agitated by a growing societal impulse towards emancipation; more women wanted to go out to work, but were unable to do so because of cultural beliefs and societal structures (e.g. very limited state provision of childcare facilities). Increasingly, as more women entered into part-time work roles, sociologists like Alva Myrdal and Viola Klein located women's stress in the conflict of the two spheres of work and home.[48] Yet they also noted that women who worked experienced less depression and anxiety that those who did not.[49]

The WWHG were looking at the spatial corollary to women's domestic stress in the wake of women's rapid entry into the workplace in the 1970s. They sought to empower women to take control of their work environment, identifying stress as a syndrome brought about by the patriarchy at work and, in particular, the lack of control women had over their work environment and activities. The group were influenced by new studies that correlated higher levels of stress with lower status and agency within the organisation.[50] A highly significant longitudinal study of over 18,000 British civil servants across 38 departments investigated the social determinants of

health, especially the prevalence of cardiovascular disease and higher mortality numbers. Known as the Whitehall Study, the research began in 1967 and ran over a period of ten years. It revealed that lower grade employees were roughly 30 percent more likely to die than those at higher grades, instigating a large discussion about work stress as a major contributor to cardiological diseases.[51] It also showed that women had higher levels of sickness absences in the workplace compared to their male counterparts, taking 70 percent more time off for predominantly minor complaints. Married women's absences were higher than those of single women, implying that much of the stress was linked to women's "divided loyalties".[52]

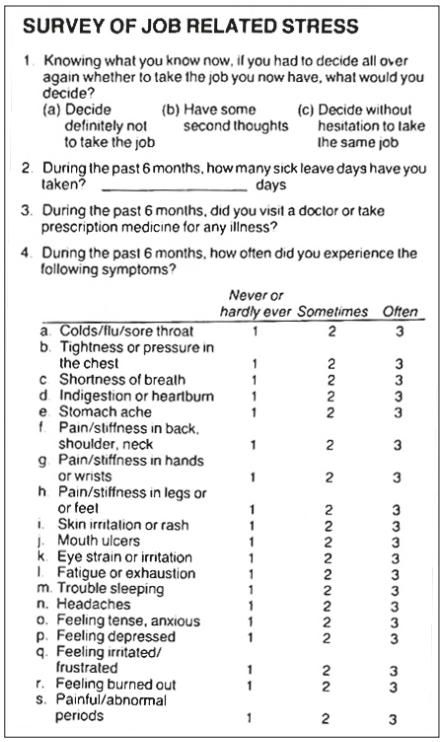
The 1970s represented a shift in the British discourse on work stress. Based on the writing of American stress theorists, early post-war understandings linked stress to the character (or weakness) of the individual. In the U.S., "role stress theorists" emphasised individual perceptions, expectations and the ability to adapt, rather than social structure and other external factors. As Wainwright and Calnan note, "the highly individualized conception of role stress effectively depoliticized the work stress discourse, facilitating its easy passage into corporate human resources management".[53] But by the next decade, financial and energy crises, high unemployment, the uncertainties of new technologies like automation, and the increased feminisation and precariousness of the job market brought about both more heavy-handed approaches to management and increased anxiety in the workplace. Within this context, job stress was reframed as a product of the wider socio-political environment in Britain, becoming grounded in the arena of labour movements, class consciousness and public-sector investigations.[54]

Stress research in Britain had always been tied to the labour movement, with early research starting with the founding of the Industrial Fatigue Research Board after World War I.[55] Much of this early work investigated the causes of sick leave in industrial workplaces, focusing on individual rather than structural causes. Yet by the post-World War II period, the rise of social epidemiological studies under the welfare state placed a greater emphasis on the relationship between social class and health. This research was further influenced by Scandinavian work stress discourses, which argued that stress was a product of one's working environment. Emerging with industrial workers' organisations, the aim of the Scandinavian movement was to improve both the social work environment and the physical workplace instead of mainly promoting productivity.[56] In the mid-1970s, the work of key researchers in this field had a direct impact

on legislation, reformulating the power balance between employee and employer and making clear prescriptions about the physical workplace as a safe space.[57] This research rippled into the British academic discourse on work stress in the fields of applied sociology and occupational health, as researchers emphasised the quality of work life and industrial democracy. They claimed that stress arose as a product of employees' alienation from society and lack of power and resources to manage their situation.[58]

The emphasis on public health, status and welfare was reflected in the writing of the WWHG, which drew attention to both societal causes and collective solutions to the work stress problem. Work stress was politicised as a product of a misogynistic and deeply unjust capitalist society, which was only getting worse with the heady conservativism of the Thatcher years. The group argued that "further public expenditure cuts affect the provision of services which might alleviate some of the stress, [such as] nurseries [and] public transport".[59] The solution, they argued, was to organise internally and to join a trade union. Under the 1974 Health and Safety at Work Act, trade unionists were granted the right to elect safety representatives. These representatives were given a number of rights, including the ability to investigate health complaints, accidents and workplace health issues, conduct regular inspections, and access information on chemicals, machinery and environmental hazards. They also had the authority to call in an external inspector if necessary. Furthermore, stress was recognised as an occupational health issue, making it closely linked to the careful scrutiny of the workplace environment.

The WWHG charged female clerical workers with reclaiming their workplace environment through collective action: "History has shown that we cannot rely on the law or our employers to provide us with a safe, stress-free working environment, so it's down to us – and we are much stronger if we are in a trade union and fighting together."[60] However, the unions, which had grown dramatically in size and influence under the auspices of the welfare state, were contentious within the feminist movement.[61] In addition to almost entirely neglecting women-related occupational health and safety issues and failing to actively recruit women, these male-dominated organisations had refused to support feminist issues like the ban of the marriage bar or equal pay.[62] To overcome this bias, the group also advised women to organise themselves internally, first via the distribution of a survey (Fig. 5.4.). This method aimed to get (presumably non-activist) women to wake up to day-to-day injustices and to think about the way their work environment was affecting them.[63] This



SURVEY OF JOB RELATED STRESS

1. Knowing what you know now, if you had to decide all over again whether to take the job you now have, what would you decide?
   (a) Decide definitely not to take the job (b) Have some second thoughts (c) Decide without hesitation to take the same job
2. During the past 6 months, how many sick leave days have you taken? _____ days
3. During the past 6 months, did you visit a doctor or take prescription medicine for any illness?
4. During the past 6 months, how often did you experience the following symptoms?

	Never or hardly ever	*Sometimes*	*Often*
a. Colds/flu/sore throat	1	2	3
b. Tightness or pressure in the chest	1	2	3
c. Shortness of breath	1	2	3
d. Indigestion or heartburn	1	2	3
e. Stomach ache	1	2	3
f. Pain/stiffness in back, shoulder, neck	1	2	3
g. Pain/stiffness in hands or wrists	1	2	3
h. Pain/stiffness in legs or or feet	1	2	3
i. Skin irritation or rash	1	2	3
j. Mouth ulcers	1	2	3
k. Eye strain or irritation	1	2	3
l. Fatigue or exhaustion	1	2	3
m. Trouble sleeping	1	2	3
n. Headaches	1	2	3
o. Feeling tense, anxious	1	2	3
p. Feeling depressed	1	2	3
q. Feeling irritated/ frustrated	1	2	3
r. Feeling burned out	1	2	3
s. Painful/abnormal periods	1	2	3

Fig. 5.4. Fragment of a survey from the *Women's Health, Work and Stress* pamphlet, 1979. (Wellcome Collection, London, SA/BSR/B/14/5.)

might then lead to larger-scale organising, they claimed, like the 1976 protests by the Department of Health and Social Security workers in Brighton about high temperatures in their office. In this case, their initial attempts to go through the unions failed. In response, they decided to self-organise: 50 office workers walked out, and they were heard. Fans were installed and a winter walk-out in the cold succeeded in getting supplementary heating. "A quick effective communal action can succeed where long negotiations often fail", the WWHG concluded.[64]

THE FEMALE OFFICE WORKER AS THE NON-STANDARD USER

On the surface, the physical changes to the office suggested by the WWHG were not too different from those that women's health and safety organisations had argued for at the beginning of the 20th century.[65] "You may be able to organise proper lunch rooms, or put pressure on management to provide a rest room to relax in", suggested one WWHG pamphlet. Other possibilities included better canteens, more comfortable furniture, and adjustments to temperature, noise levels and ventilation.[66] But the critical difference was the agency that women were given in the process. While the domestic setting – women's so-called "natural place" – had long been the target of design solutions to enable women to manage their environment efficiently and with mastery, in the office women had no such agency because of their low position within the organisation. Historically, design interventions to help female clerks had been top-down; women were considered as manual workers and were the subject of experiments in furniture and lighting to facilitate productivity rather than improve

well-being. As Adrian Forty and Katherine Schonfield have shown, this was in contrast to higher-paid male workers, whose private offices – or "thinking" spaces – were furnished with all the psychological comforts of home.[67] If male managers were offered *furniture*, female clerical workers were given *equipment*, suited to their repetitive, manual labour.

The WWHG drew on literature highlighting how the assumption that women were inherently suited to domestic roles put them at risk in the workplace. This belief led to the failure to collect baseline occupational health data for women and their intentional exclusion from related biomedical research.[68] The group argued that "women's occupational ill-health continues to be an invisible problem", not simply because of their devaluation in the labour market but also because "official government statistics on occupational mortality still classify married women by their husband's and not their own occupation". Similarly, accident records in Britain had only recently begun to cover employment areas where women were more likely to work, such as offices, administration and services.[69] Where women's occupational health was taken into account, it was only in relation to their reproductive capacities: protective legislation in industrial workplaces existed to protect the ability to bear children, removing women (rather than the hazards) from environments where they might be exposed to lead or radiation. This emphasis meant that other serious health problems were overlooked. Consequently, it was male bodies that were used as the standard for testing the effects of shift work, stress and exposure to hazardous substances, overlooking women's lower body weight and hormonal changes.[70] In conclusion, they argued that

> it is important not to wait for "scientific" or other expert evidence before taking action. Not only is such evidence frequently derived from studies of male workers, […] but it gives rise to limits and standards based on averages which can still leave workers at risk.[71]

Though the group members were not actively thinking about design, they were channelling wider concerns about norms and standards in the construction of everyday environments. Within the architectural discipline, there was a growing scepticism of the supposed universality that modernist architecture had propagated, both in the mainstream shift towards postmodernism and on the fringes among activist architects demanding more inclusive environments. In the U.K., feminist architecture practices like the Matrix collective and the Women's Design Service were the most

outspoken on this issue. As Matrix wrote in their manifesto *Making Space: Women and the Man-Made Environment* (1984), "[modern] architects' grandiose theories did not fit the way of life people wanted to follow", pandering to economic forces rather than social needs and resulting in "characterless office blocks and disastrous 'streets in the sky'".[72] They went on: "We believe that the question of what has 'gone wrong' with modern architecture cannot be discussed adequately without an awareness of the invisibility of women's lives to the professionals who plan buildings and cities."[73] Matrix worked actively with women to develop places from their perspective, from childcare facilities and women's centres to housing and professional workshops to get them into male-dominated craft and construction jobs. Like the WWHG, the goal of Matrix was to expose man-made environments as places that "contain ideas about women, about our 'proper place', about what is private and what is public activity, about which things should be kept separate and which put together".[74] Although the WWHG were not thinking explicitly about architecture, they were concerned with the same central paradox that women represented the non-standard user in a largely female-dominated work environment.

SICK BUILDING SYNDROME: THE ARCHITECTURAL MANIFESTATION OF WORK STRESS

By the 1980s, many of the grievances expressed by women about their offices had entered into the mainstream health and architectural discourse through the so-called Sick Building Syndrome (SBS) epidemic. What is remarkable is the similarity with which SBS and work stress were discussed in terms of symptoms and effects. Like stress, SBS was a described as a nebulous syndrome with myriad causes and a wide range of symptoms. Difficult to define, "a sick building is simply one where people who work in it have a higher level of illness than expected".[75] How could one tell if a building was sick? Tiredness, lethargy, stuffy nose, dry throat, itching eyes, chest tightness, difficulty breathing and headache were just some of the immediate indicators. But like stress, SBS might not be immediately obvious and could take time to manifest in more serious ways; longer-term effects could be mental health disorders like depression and absenteeism.[76] While the causes of work stress orbited around the individual and the organisation, SBS initially located the problem in the physical environment. Causes were thought to be poor ventilation and water-based air-conditioning systems, cheaply built (often public-sector) offices, tinted glass windows,

high temperatures, low humidity, high noise levels, carpets, open-plan settings, and the general build-up of air-borne particles in hermetically sealed buildings (including carbon dioxide, water vapour, body odour and a build-up of human-shed micro-organisms in airtight buildings).

Quite quickly, it became clear that women appeared to be worse affected than men. Self-reporting showed that clerical workers experienced symptoms more frequently than managers and that women occupied the majority of clerical positions. It was perhaps unsurprising that the initial response to these self-reported symptoms was to consider SBS a form of mass hysteria (a historically problematic term for women that was often used in discussions about women's stress or "madness", locating women's physical or mental health problems around menstruation and the uterus).[77] While most early studies attributed the symptoms to the kinds of spaces in which clerical workers spent their time, research began to reveal that a key factor was a feeling of lack of control over one's environment. In hermetically sealed buildings, this was largely interpreted as a lack of control of air flow and lighting. The technical interpretation was tackled through "personal environmental systems" that enabled employees to have more control of these immediate environmental factors at their desks.[78] Yet some more progressive SBS publications argued instead that it was the perception of loss of control of one's *wider* environment (i.e. managing to balance home, job design, colleagues and travel, as well as the light and air flow in one's workplace) that was the fundamental stressor causing the physiological reactions associated with SBS. The latter reflected developments in social epidemiological thinking on work stress, a discipline that emphasised the influence of social conditions on the health of populations.[79] Whitehall II, the successor to the first Whitehall study, was particularly significant here. Led by Sir Michael Marmot, the longitudinal study investigated the relationships between work, stress and health among a cohort of 10,308 civil servant office workers.[80] It identified that the cause of the inverse social gradient – why office workers lower down in the organisation were at higher risk of death – was linked to the stress of managing the "work/home interface" and a lack of control in the work environment. The latter was explained using the "demands-control-support" model, which predicted how job strain would be most potent in workplaces where job demands were high, employees had little control and social support was low.[81]

The WWHG had long argued that a prominent source of stress for women was a lack of agency over their working environment and their job,

but through SBS this was conceptualised in spatial and architectural terms. A woman's spatial positioning within an office building was indicative of her position within the organisation. As the sociologist Daphne Spain indicated in her 1992 study of gender, space and power relations in the workplace, the large open-plan spaces in which women worked contributed to a sense of powerlessness and purposelessness in the organisation.[82] Such ideas were supported by the research done into gender and SBS. One study revealed that women who were isolated in single-person secretarial offices or in large open offices (with over 50 workers) were significantly more likely to report symptoms of SBS, implying that factors such as social isolation, extreme surveillance and lack of mobility were at play.[83]

SBS emerged as a topic of interest at a moment when the general quality and composition of British office buildings was changing because of economic and technological developments. There was a general improving of office standards with the internationalisation of businesses, which accelerated the Americanisation of office culture and office architecture, not to mention developments in building technology.[84] The rise of the service economy also shifted the symbolic function of buildings from being simply advertisements of the firm to being attractors of talent, placing the "health" of the building higher on the priority list. Simultaneously the rapid and dramatic uptake of personal computers within office buildings in the 1980s was thought by some researchers to decrease the quality of the workplace environment in many offices: dropped ceilings and raised plenum flooring for wiring and cooling reduced floor-to-ceiling heights, providing employees with less air space per person; the lengthening of the working day for many increased the number of hours employees were spending inside the building; and the use of computer terminals – then called visual display units – introduced screen work to the office for the first time, which had negative health effects.[85]

The mass adoption of IT in offices gained a significant amount of attention among the WWHG and its associates. Letters from concerned women about the possible negative impact of VDU work on pregnancies, fertility and health amounted to the largest amount of correspondence ever received by the group, causing them to write a number of pamphlets and articles on the subject and advice for outsider publications.[86] At the core of their concern was the notion that the VDU had somehow re-industrialised the office; the increased pace of work, its repetitive nature, the sterile mechanical aesthetic, and the fear of unknown levels of electromagnetic radiation were causing significantly higher levels of stress among clerical

workers.[87] The WWHG's emphasis on the risks of using VDUs may have been tactical, since unions had historically had much success pushing through health and safety legislation in industrial environments. Unlike in Norway and Sweden, stress was not recognised as an official danger to work in the 1974 Health and Safety Act, but injury through the use of machinery was.[88] One could argue that this concern was ultimately founded, as in 1987 offices were re-classified in British planning law under the "B1" use class and categorised as light industrial spaces.[89]

In the mid-1990s, the discourse around SBS began to change as more epidemiological research began to challenge the emphasis on architectural and infrastructural causes. A key piece of research came out of the Whitehall II study, which sought to determine "the role and significance of the physical and psychosocial work environment in explaining SBS".[90] The investigation, conducted by architects Alexi Marmot and Joanna Eley in collaboration with the Whitehall II scientists, was notable for revealing that the elevated symptoms linked to SBS were "due less to poor physical conditions than to a working environment characterised by poor psychosocial conditions".[91] Assessing over 4,000 participants across 44 government buildings, the study argued that "control over work, job demands and work overload, job category, social stressors, mental stress at work, and personality traits have all been related to a similar set of symptoms" and that the "physical attributes of buildings have a small influence on symptoms". All of which suggested that "'sick building syndrome' may be wrongly named".[92]

The appointment, in 1996, of psychology professor Gary Raw as the head of the Building Research Establishment's "Healthy Building Centre", dedicated to investigating SBS, might have given the illusion of a general acceptance of this view within the architectural discipline.[93] In reality, SBS discourse became even more focused on technical aspects and was gradually reduced to a focus on indoor air quality. In Britain, unlike in Scandinavia, the psychosocial needs of users only narrowly entered the architectural discourse via workplace strategy firms like DEGW, founded by Francis Duffy and John Worthington.[94] Here, however, the interest in socially healthy buildings was skewed more towards flexibility and productivity rather than employee welfare. Well-being in the office became divided into two disciplinary-distinct conversations: the "hard" science of comfort, involving the technicalities of light, heat, sound and air, which was the domain of architecture and building technology; and the "soft" factors of employees' mental health, which fell to an imprecise and unstable coalition between psychology, self-help and management theory.[95]

CONCLUSION

Paradoxically, as stress in organisations began to be looked at more empirically through social epidemiology, treatment became more focused on the individual. These studies gave stress legitimacy as an occupational disease, but in the process, it was depoliticised; discourse no longer emphasised the Nordic model of social equality and responsibility. In Britain, the decline in trade unions (beginning under Thatcher) caused unions to shift their focus from structural labour relations to individual workers.[96] In turn, employers were encouraged to protect the health of their workers through human resource management, encouraging coping mechanisms like therapy, exercise and relaxation.[97] This was echoed through new human-oriented approaches to management and mirrored through real estate programmes that incorporated more "leisure" spaces, such as bars and gyms, into office complexes.[98] Today the provision of spaces like cry rooms and yoga centres in the office can be seen as the architectural equipment of this self-help approach, but they are no more revelatory than the nicer lunch rooms and rest spaces women campaigned for in the last century.

As women's position in the labour market changed and the flexibilisation of labour in the new global landscape became the norm, the geographies of work and home became blurred. There was a growing awareness that the basis of women's stress might not be located in the office itself, but in the messy and often painful relationship between work and home. "Spillover", "juggling" and "balancing" became key words to describe the experiences of working mothers in the 1990s, implying a hostile encroachment of one sphere into the other. As Dana Becker has written, the proliferation of gender-targeted self-help techniques implied that "women own the work-family conflict", reinstating the spatialised male/female binaries of work and home.[99] Yet, as this chapter has shown, the geographical and architectural separation of the so-called "two spheres" has been at the root of all conversations around women's work stress since the removal of marriage bars after World War II. Women's inability to "do both" in a society that assigned women to the domestic realm only, despite their continued work outside the home, rendered the office a space beyond women's control. The WWHG saw this as the problem but also the route to emancipation: through the language of occupational health and safety, they gave women the consciousness and ability to take control of their work environments.

Like SBS, the vagueness and plurality of the idea of stress rendered it a useful concept for discussing a wide range of grievances related to the white-collar workplace. The rise of social epidemiological studies of work stress, as well as the Scandinavian labour movement, contributed to a rethinking of the office as a hazardous environment. In parallel, the women's movement focused in on work stress as the bodily manifestation of women's inequality in society. For the WWHG it was a term that encapsulated and legitimised the effects of ongoing sexual discrimination, but also reflected the complete absence of the female body and its attendant societal responsibilities in the conception of the physical workplace. Today, in the wake of the Covid-19 pandemic, the health of office workers has come to the fore with workplace strategy firms, architects and governments paying greater attention to the impact of the office environment on physical and mental well-being.[100] Despite women's professional gains in the workplace since the 1970s, they continue to self-report lower levels of mental and physical well-being than their male counterparts, a fact that was seemingly exacerbated with the increase in care responsibilities during the pandemic.[101] Yet even in this context, gender differences are almost never considered in the design of workplaces.

Unlike housing in the 20th century, office design has rarely (if ever) been used as an infrastructure for social change; it has simply moved with the mode of production because of the continued necessity for productivity under capitalism. If the office is arguably the modernist building par excellence, with its emphasis on modularity, standardisation and mass-production of prefabricated elements, it is quite striking that there was no great challenge to its predominance during a period where the universalising tenets of modernism were being questioned and overhauled. While exceptional outliers like Herman Hertzberger's Centraal Beheer offices in Apeldoorn in the Netherlands (1972) attempted something user-focused and reformist, most offices remained a product of the economic logic of standardisation. Within this context, labour groups like the WWHG were design's closest allies. Their legacy was not to change the course of office design, but rather to give women users agency over their workplace and to remove the cultural distinction between the domestic and work spheres. Through the conversation about work stress, the group reintroduced the "user" as a non-standard entity into the discourse of office design, and this was later picked up by SBS. With this activism, the workplace environment was transformed from a contained immediate space of work to a permeable and slippery domain that shifted between the societal and the personal.

ACKNOWLEDGEMENT

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NOTES

1 Marianne Craig, Office Workers' Survival Handbook: A Guide to Fighting Health Hazards in the Office (London, 1981), 6.

2 Ibid., 7 (emphasis in the original).

3 Ibid., 8.

4 'British Society for Social Responsibility in Science (BSSRS) Online Archive' (https://sites.google.com/site/bssrsarchive/home).

5 Diana Gagliardi et al., 'Occupational Safety and Health in Europe: Lessons from the Past, Challenges and Opportunities for the Future', in Industrial Health, 50/1 (2012). On this matter, see also Bernd Holtwick's chapter in the present volume.

6 Wellcome Collection (London), British Society for Social Responsibility in Science Archives, SA/BSR/A/2, BSSRS Constitution (c. 1970).

7 Barbara Harrison, Not Only the Dangerous Trades: Women's Work and Health in Britain, 1880-1914 (London, 2005), 1.

8 Harry Braverman, Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century (New York, 1974).

9 Heather E. Joshi, Richard Layard and Susan J. Owen, 'Why Are More Women Working in Britain?', in Journal of Labor Economics, 3/1 (1985), table 4.

10 Shirley Dex, Kelly Ward and Heather Joshi, 'Changes in Women's Occupations and Occupational Mobility Over 25 Years', in Jacqueline Scott, Shirley Dex and Heather Joshi (eds.), Women and Employment (Cheltenham, 2008).

11 Helen McCarthy, Double Lives: A History of Working Motherhood (London, 2020), 25-26.

12 Interview with Marianne Craig (Women and Work Hazards Group) by the author, Zoom, 28 July 2023.

13 For the American publications, see Richard S. Lazarus, Psychological Stress and the Coping Process (New York, 1966); Hans Selye, The Stress of Life (New York, 1956). For more on the common understandings of stress in post-war Britain, see Jill Kirby, 'Working Too Hard: Experiences of Worry and Stress in Post-War Britain', in Mark Jackson (ed.), Stress in Post-War Britain, 1945-85 (London, 2015).

14 Michelle Murphy, Sick Building Syndrome and the Problem of Uncertainty: Environmental Politics, Technoscience, and Women Workers (Durham, 2006), 58.

15 Rob Harris, London's Global Office Economy: From Clerical Factory to Digital Hub (Oxfordshire, 2021); Murray Fraser, Architecture and the "Special Relationship": The American Influence on Post-War British Architecture (Oxfordshire, 2007); Alan Powers, Britain: Modern Architectures in History (London, 2007); Susan S. Fainstein, The City Builders: Property Development in New York and London, 1980-2000 (Lawrence, 2001); Juriaan van Meel, The European Office: Office Design and National Context (Rotterdam, 2000); Francis Duffy, The Changing Workplace (London, 1992); Francis Duffy, 'Office Buildings and Organisational Change', in Anthony D. King (ed.), Buildings and Society: Essays on the Social Development of the Built Environment (London, 1980).

16 There are three notable exceptions to this: Katherine Shonfield, Walls Have Feelings: Architecture, Film and the City (London, 2000), 75-107; Daphne Spain, Gendered Spaces (London, 1992); Adrian Forty, 'Design in the Office', in idem, Objects of Desire: Design and Society, 1750-1980 (London, 1986). I have also touched on this issue in previous publications, including Amy Thomas, 'Risk in "the Room": Negotiating New Economic Paradigms in the Architecture of Lloyd's of London Insurance Market', in Architectural Theory Review, 26/1 (2022); Amy Thomas, 'The Political Economy of

Flexibility: Deregulation and the Transformation of Corporate Space in the Post-War City of London', in Kenny Cupers, Helena Mattsson and Catharina Gabrielsson (eds.), Neoliberalism: An Architectural Project (Pittsburgh, 2019); Amy Thomas, 'Prejudice and Pragmatism: The Commercial Architect in the Development of Postwar London', in Grey Room, 71 (2018).

17 Arthur McIvor, 'Guardians of Workers' Bodies?: Trade Unions and the History of Occupational Health and Safety', in Labour History, 119/1 (2020). The Health and Safety Executive was formed alongside the new 1974 health and safety legislation.

18 Arthur McIvor, Working Lives: Work in Britain since 1945 (Basingstoke, 2013), 77-90. On this matter, see also Nicola Bishop's chapter in the present volume.

19 Interview with Marianne Craig (Women and Work Hazards Group) by the author, Zoom, 28 July 2023.

20 Anne Bridger, 'A Century of Women's Employment in Clerical Occupations: 1850-1950, with Particular Reference to the Role of the Society for Promoting the Employment of Women', PhD thesis (University of Gloucestershire, 2003), 98.

21 The General Post Office, for example, implemented a marriage bar just six years after female clerks were first appointed in 1870. See McCarthy, Double Lives, 82.

22 Ibid., 324.

23 Ibid., 331-32.

24 Ibid., 351.

25 Francis Duffy, Andrew Laing and Vic Crisp, The Responsible Workplace: The Redesign of Work and Offices (Oxford, 1993), 133.

26 A Qualitative Study of Some Buildings in the London Area (London, 1964).

27 Thomas, Prejudice.

28 Jack Rose, The Dynamics of Urban Property Development (London, 1985), 146.

29 'Offices, Shops and Railway Premises Act 1963' (www.legislation.gov.uk/ukpga/1963/41).

30 See for instance 'A Re-Examination of the Home Office Experimental Office Building, Kew, London; Architects: Ministry of Public Buildings & Works', in Architects' Journal, 151 (1970); Frederick John Langdon et al., Modern Offices: A User Survey (London, 1966); A.W.W. Robinson, 'Working in The City', in Occupational Medicine, 15/1 (1965). On this matter, see also Joeri Bruyninckx' chapter in the present volume.

31 S. Wyatt and J.N. Langdon, Fatigue and Boredom in Repetitive Work (London, 1937).

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33 In the 19th century, female industrial labour became a key area of study, with numerous studies and observations by women reformers, including the 1891 Royal Commission to inquire into workplace conditions, the Women's Industrial Council, the Fabian Women's Group, the Women's Labour League, the Women's Co-operative Guild, and the National Federation of Women Workers. See McCarthy, Double Lives, 24-25.

34 Vicky Long, 'Industrial Homes, Domestic Factories: The Convergence of Public and Private Space in Interwar Britain', in Journal of British Studies, 50/2 (2011).

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36 Despite their radicalism, the group had institutional renown in Britain: their inaugural meeting at the Royal Society (RS) was addressed by Nobel Prize-winning scientist Maurice Wilkins (the then RS president) and acquired the support of a long list of prominent names, including Francis Crick, Julian Huxley, Bertrand Russell, J.D. Bernal and many more. See Alice Bell, 'Beneath the White Coat: The Radical Science Movement', in The Guardian (18 July 2013).

37 BSSRS Constitution.

38 'British Society for Social Responsibility in Science (BSSRS) Online Archive'.

39 Harrison, Not Only the Dangerous Trades, 1.

[40] Ibid.; Zoe Strimpel, 'Spare Rib, The British Women's Health Movement and the Empowerment of Misery', in Social History of Medicine, 35/1 (2022); Sarah Crook, 'The Women's Liberation Movement, Activism and Therapy at the Grassroots, 1968-1985', in Women's History Review, 27/7 (2018); Mathew Thomson, Psychological Subjects: Identity, Culture, and Health in Twentieth-Century Britain (Oxford, 2006).

[41] Stress and VDU Work (London, 1989), 5. The pamphlet refers to a 1977 study by the American National Institute of Safety and Health, which found secretarial work to be the second most stressful job out of the 130 most common occupations for women. See Michael J. Colligan, Michael J. Smith and Joseph J. Hurrell, 'Occupational Incidence Rates of Mental Health Disorders', in Journal of Human Stress, 3/3 (1977).

[42] I draw on the plethora of pamphlets and publications in the Women and Work Hazards archive at the Wellcome Collection in which such issues were repeatedly mentioned and discussed. These include Craig, Office; Women's Health in History (London, 1982); Danger – Women at Work: An Introduction to Health and Safety for Women at Work (London, s.d.); Barbara Harrison and Jennie Popay, 'Women Workers and Health Hazards (Draft)', in Health Struggles and Community Action (unpublished, s.d.); Women's Health, Work & Stress (London, 1979); 'Work Can Be Dangerous to Your Health', in Women's Report (Dec. 1978); 'Photocopier Hazards', in Hazards Bulletin (s.d.).

[43] Bitter Wages: A Film Made for and with the Women and Work Hazards Group (London, 1984); Women's Health, Work & Stress.

[44] Craig, Office, 10.

[45] Murphy, Sick Building Syndrome, 75 (emphasis in the original).

[46] '10-Minute Talks: Women and Mental Health – Talking about Feelings (podcast)' (via www.thebritishacademy.ac.uk).

[47] Debbie Palmer, 'Cultural Change, Stress and Civil Servants' Occupational Health, c. 1967-85', in Mark Jackson (ed.), Stress in Post-War Britain, 1945-85 (London, 2015), 98; Stephen Taylor, 'The Suburban Neurosis', in The Lancet, 231 (1938).

[48] Alva Reimer Myrdal and Viola Klein, Women's Two Roles: Home and Work (London, 1968).

[49] Palmer, Cultural Change, 98.

[50] Craig, Women and Work Hazards Group.

[51] 'Life and Death in 1960's Civil Service: Whitehall Study I Collection Now Available' (via https://blogs.lshtm.ac.uk); M.G. Marmot et al., 'Health Inequalities among British Civil Servants: The Whitehall II Study', in The Lancet, 337 (1991).

[52] Palmer, Cultural Change, 103-104.

[53] David Wainwright and Michael Calnan, Work Stress: The Making of a Modern Epidemic (Buckingham, 2002), 42.

[54] Joseph Melling, 'Labouring Stress: Scientific Research, Trade Unions and Perceptions of Workplace Stress in Mid-Twentieth-Century Britain', in Mark Jackson (ed.), Stress in Post-War Britain, 1945-85 (London, 2015).

[55] Palmer, Cultural Change, 96.

[56] Ari Väänänen et al., 'Formulation of Work Stress in 1960-2000: Analysis of Scientific Works from the Perspective of Historical Sociology', in Social Science & Medicine, 75/5 (2012), 788.

[57] Examples include the Norwegian Work Environment Act (1977) and the Swedish Act of Co-determination (1976).

[58] Influential studies conducted at the Social and Applied Psychology Unit at the University of Sheffield, the Institute of Work, Health and Organizations at the University of Nottingham, and through a significant occupational stress research programme at the Manchester School of Management, sparked a strong interest in the experiences and welfare of workers. See Väänänen et al., Formulation, 790-791.

[59] Women's Health, Work & Stress.

[60] Women and Work Hazards Group.

[61] As McIvor notes: "In the U.K., union membership and density rose from a nadir of less than five million members and a quarter of the workforce in 1930 to a peak of 13 million members and over 50 per cent in the late 1970s." See McIvor, Guardians, 9.

62 Ibid., 5.
63 Harrison and Popay, Women Workers.
64 Ibid., 26.
65 McCarthy, Double Lives; Long, Industrial Homes; Vicky Long and Hilary Marland, 'From Danger and Motherhood to Health and Beauty: Health Advice for the Factory Girl in Early Twentieth-Century Britain', in 20th Century British History, 20/4 (2009).
66 Women's Health, Work & Stress.
67 Forty, Design; Shonfield, Wives.
68 The group were most deeply influenced by the groundbreaking American occupational health scientist Jeanne Stellman, who opened the first "Women's Resource Centre" for Occupational Health in New York in 1979. See Jeanne Mager Stellman, Women's Work, Women's Health (New York, 1988).
69 Harrison and Popay, Women Workers, 8.
70 Ibid., 7-9.
71 Ibid., 22.
72 Making Space: Women and the Man-Made Environment (London, 2022), 5.
73 Ibid., 6.
74 Ibid., 10.
75 Helen Donoghue, 'Is Your Workplace Sick?', in Everywoman (May 1990).
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77 Cecilia Tasca et al., 'Women and Hysteria in the History of Mental Health', in Clinical Practice and Epidemiology in Mental Health, 8/1 (2012); Dana Becker, 'Women's Work and the Societal Discourse of Stress', in Feminism & Psychology, 20/1 (2010); L. Soine, 'Sick Building Syndrome and Gender Bias: Imperilling Women's Health', in Social Work in Health Care, 20/3 (1995).
78 Jack Rostron, Sick Building Syndrome: Concepts, Issues, and Practice (London, 1997), 20-21.
79 Sick Building Syndrome: Causes, Effects and Control (London, s.d.), 64.
80 Marmot et al., Health Inequalities.
81 Palmer, Cultural Change, 108.
82 Spain, Gendered Spaces.
83 S. Brasche et al., 'Why Do Women Suffer from Sick Building Syndrome More Often than Men? Subjective Higher Sensitivity versus Objective Causes', in Indoor Air, 11/4 (2001), 219.
84 Amy Thomas, The City in the City: Architecture and Change in London's Financial District (Cambridge, MA, 2023); Fraser, Architecture.
85 'Interview with Pat O'Sullivan', Building (28 April 1989). On VDUs, see also Bernd Holtwick's chapter in the present volume.
86 Wellcome Collection (London), British Society for Social Responsibility in Science Archives, SA/BSR/B/14/1, Women and Work Hazards Group, Correspondence 1979-1989 and 'Stress and VDU Work'. 'Stress and VDU Work' was published by City Centre, an information, advice and resource centre for London's office workers, set up in September 1984 and funded by the (soon defunct) Greater London Council and later by the London Borough Grants Scheme. They provided information to trade unionists, women's groups, black worker groups and individual office workers regarding employment rights, technology, harassment, etc. The group launched a major study and campaign on the stressful effects of VDU work, showing how women as well as black and ethnic minority groups were worse affected.
87 This fed into longer-standing anxieties about the effects of automation on women workers, which had triggered developments in stress research in Britain on issues such as job loss, deskilling, increased monotony and psycho-physical strain, as well as physical isolation in suburban back-office environments. See Sarah Hayes, 'Industrial Automation and Stress, c. 1945-79', in Mark Jackson (ed.), Stress in Post-War Britain, 1945-85 (London, 2015), 75-80.
88 Stress and VDU Work, 1.
89 Duffy, Laing and Crisp, The Responsible Workplace, 129; Robert Home, 'The Evolution of the Use Classes Order', in The Town Planning Review, 63/2 (1992).

[90] A.F. Marmot et al., 'Building Health: An Epidemiological Study of Sick Building Syndrome in the Whitehall II Study', in Occupational and Environmental Medicine, 63/4 (2006), 283.
[91] Marmot et al., Building Health, 287.
[92] Ibid.
[93] Ruth Slavin, 'Building for Health', in Architects' Journal, 10 Oct. 1996, 46.
[94] For a more detailed appraisal of the impact of DEGW on British office design and theory, see Amy Thomas, 'Architectural Consulting in the Knowledge Economy: DEGW and the ORBIT Report', in The Journal of Architecture, 24/7 (2019); Thomas, The Political.
[95] For an example of this technical approach, see Sabah A. Abdul-Wahab, Sick Building Syndrome in Public Buildings and Workplaces (Berlin, 2011).
[96] Wainwright and Calnan, Work Stress, 44.
[97] Ibid., 43.
[98] Väänänen et al., Formulation, 792.
[99] Becker, Women's Work, 45 and 48.
[100] See for instance Jeremy Myerson and Philip Ross, Unworking: The Reinvention of the Modern Office (London, 2022); Is Hybrid Working Here to Stay? Office for National Statistics' (23 May 2022) (via https://www.ons.gov.uk); Charlie Warzel and Anne Helen Petersen, Out of Office: The Big Problem and Bigger Promise of Working from Home (Knopf, 2021); Monica Sharma, 'Female Staff Report Lower Happiness and Motivation than Men When Remote Working', HR Review (16 Nov. 2020) (via https://www.hrreview.co.uk).
[101] See for instance Jessica Wilson, Evangelia Demou and Theocharis Kromydas, 'Covid-19 Lockdowns and Working Women's Mental Health: Does Motherhood and Size of Workplace Matter? A Comparative Analysis Using Understanding Society', in Social Science & Medicine, 340 (2023); Abbi Hobbs, 'The Impact of Remote and Flexible Working Arrangements' (29 April 2021) (via https://post.parliament.uk); 'Working from Home: From Invisibility to Decent Work' (ILO report, 13 Jan. 2021) (via www.ilo.org); Sarah Marsh, 'Women Bear Brunt of Covid-Related Work Stress, UK Study Finds', in The Guardian, 9 Oct. 2020; Sharma, Female Staff.

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