Risk, Responsibility and Robens: The Transformation of the British System of Occupational Health and Safety Regulation, 1961–1974

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Over the last twenty years, three short words have come to dominate many discussions about the control of risks: 'health and safety'. In colloquial use, the term embodies a multitude of concerns about the impact of everyday actions on the bodies and minds of individuals; it also commonly conflates what are often separate areas of statutory regulation, particularly road safety, food safety and environmental regulations. Together with two other words often uttered in the same sentence, 'gone mad', 'health and safety' is often used as a kind of shorthand for bureaucracy, and the whole gamut of rules and regulations that have evolved in response to the risks of everyday life.[1]

The equation of 'health and safety' with protective rules and regulations in general may not be (for want of a better word) accidental, since over the last fifty years in Britain and other industrialized countries, regulatory systems addressing the 'health and safety' of workers and other key groups, such as the public, have undergone a period of unprecedented expansion. Universal legislative protection has been extended to employees against the risks of work, whilst occupational safety legislation has become decentred from its historic focus, the workplace, to address the impact of work on the wider public and environment. New regulatory agencies, such as Britain's Health and Safety Executive (HSE), have been established with the dedicated aim of protecting people from risk, while the health and safety of workers has been given explicit recognition in the legislation underpinning the European Union. As the legal and administrative arrangements surrounding 'health and safety' have become more sophisticated, a health and safety 'industry' has also emerged, providing advice and services to companies attempting to fulfil their legal obligations. New chartered bodies representing health and safety professionals, such as the Institution of Occupational Safety and Health (IOSH), have formed alongside voluntary organizations that have long campaigned for improvements in safety, such as the Royal Society for the Prevention of Accidents (RoSPA). This expansion in scope of 'occupational' legislation has blurred the boundaries between what were, historically, separate areas of labour, industrial and environmental legislation. The scale and speed of these changes not only give the impression that 'health and safety' is a monolithic entity, but also a comparatively recent phenomenon, when its roots stretch back over two centuries.

What allowed 'health and safety' to be spoken about in such an all-encompassing manner? Focusing on the period 1961–74, this chapter analyses a pivotal transformation in the law, which established the basis for the modern, integrated system of 'health and safety' regulation in Britain. Enshrined in the landmark Health and Safety at Work etc. Act 1974 (HSW Act), this transformation marked a movement from a reactive, fragmented and piecemeal system, one which left some 5–8 million workers outside its remit, to a system thought to be more comprehensive, flexible and proactive, premised on the notion of 'self-regulation' by employers and employees. Analysing existing arrangements for worker protection, the chapter highlights how the establishment of the modern regulatory system was intimately bound with the changing political discourse on risk in the 1960s, and wider concerns about the economy and industrial relations. Over the decade, several circumstances converged, calling into question long-established ways of thinking about and regulating workplace hazards.

These circumstances transformed what was, by the mid-1960s, an administrative desire to revise and consolidate the law, into a far more fundamental re-examination of the role of the State.[2]

Much of the chapter is devoted to the role of the Committee on Safety and Health at Work (henceforth CSHW or Robens Committee), an independent inquiry set up under the chairmanship of Lord Robens in the early 1970s that recommended many of the significant changes underpinning the modern system noted above.[3] While the work of the Robens Committee is widely recognised among academics and health and safety professionals (and also widely criticized), this chapter offers a new perspective on its work by examining its conclusions in light of debates surrounding health and safety in the 1960s.[4] Such an analysis reveals the important historical contingencies and continuities of the Committee's key ideas as they informed the modern system. It demonstrates that, although the Committee's logic continues to shape the way we think about health and safety in Britain to this day, its 'philosophy' was very much a construct of its time.

A fragmented and piecemeal system

In Britain, occupational health and safety has been an important area of statutory regulation for over two hundred years, although the shape, scope and objectives of this regulation have evolved only gradually. It initially emerged in the early nineteenth century out of attempts to control the working hours and conditions of children. 'Safety' was an early concern of British labour legislation, with the 1844 Factory Act including provisions for the fencing of dangerous machinery. However, it was not until later in the nineteenth century that the health of workers in the so-called 'dangerous trades' was legislated, and the bias of British legislation towards safety over health continued into the twentieth century, with a senior official in the Ministry of Labour (MOL) commenting as late as 1960 that 'In practice we classify the work as "safety, health and welfare", which is a more realistic appraisal of its balance, both from the official and industrial point of view.'[5]

Protective legislation gradually expanded across British industry, developing reactively in response to social and political concerns and sudden events, such as disasters.[6] In the process, the law became more complex and detailed, focusing on the problems of particular industries, such as manufacturing, agriculture and mining. Although the British government made several attempts to consolidate the law and make it more flexible, most notably in the Factory and Workshop Act 1901, there was no attempt at a broad solution that encompassed these various industries. Effectively, there was not one 'system' of health and safety regulation, but several. According to one early-twentieth-century commentator, the economist Sidney Webb, 'We seem always to have been incapable even of taking a general view of the subject we were legislating upon. Each successive statute aimed at remedying a single ascertained evil.'[7]

It was not until 1963 that this legislation expanded to encompass workers in certain non-industrial settings, such as offices. However, by this point, British health and safety legislation had developed into a labyrinthine and fragmented mass of law, much of which was obsolete. Five separate Acts governed the health and safety of workers in particular industries, while other Acts extended control over specific hazards, such as radiation. These Acts were accompanied by almost five hundred

detailed regulations, covering everything from lead to lighting.[8] Despite the quantity of law, 8 million workers, almost one third of Britain's working population, received no statutory protection from occupational hazards (see Fig. 1).[9] These included workers in premises such as schools and hospitals, deemed to fall outside the ambit of existing laws. In addition, ordinary members of the British public received only incidental protection from industrial harms, a distinction that became fraught with difficulty over the 1960s, as risks increasingly intruded into the public space, and consciousness, with dramatic and deadly effect.

[Insert Fig. 1 here]

Fig. 1: Proportion of workers covered by principal health and safety laws in 1972 (millions of workers). Robens, *Safety and Health at Work: Report of the Committee. 1970–2* (2 vols., London, 1972), I, p. 5.

Before the HSW Act in July 1974, much of British health and safety legislation was prescriptive, laying down detailed minimum standards for physical conditions in the workplace, such as temperature, ventilation and the design of dangerous machinery.[10] Far less a priority was social and organizational arrangements, such as safety committees, which could raise awareness of hazards and promote safety in general.[11] By the early 1960s, however, inspectors and officials in the British government, and many trade unions and safety charities, were increasingly vocal about the need for such arrangements. Factory inspectors highlighted the lack of safety arrangements in many firms, and the need for employers to accept their legal responsibilities.[12] Between 1958 and 1961, the reported number of accidents under the Factories Acts increased by almost 13 per cent.[13] The rising tide of industrial accidents and the perceived reluctance of many employers to adopt safety measures cast doubt on the ability of prescriptive legislation to promote health and safety. Alongside other developments, the effectiveness of the existing approach came into question.

Inculcating safety consciousness in industry

By the early 1960s, therefore, British regulatory attention increasingly focused on the social conditions of work, which were seen to underpin general safety performance in firms.[14] While legislation remained fixated on physical conditions, industry was urged to bear greater responsibility for its own actions, as opposed to relying on statutory intervention in the form of legislation, inspection or prosecution. This development was not new. It formed part of a much longer trend over the twentieth century in which voluntary organizations, in conjunction with government, attempted to educate workers about safety and foster a more positive attitude. Since 1917 safety posters, produced by institutions such as RoSPA were one of the principal ways this was achieved.[15] Films, exhibitions and promotional campaigns were also used to publicise safety efforts and raise awareness of protective controls, such as eye protection. The need to educate workers about safety was supported by prevailing 'human factor' models of accident causation, which emphasized the individual and psychological dimensions of accidents. Developed in the early twentieth century by psychologists and safety engineers, such as H.W. Heinrich, these models entrenched the assumption that the worker was principally

to blame for industrial accidents, as opposed to negligent managements or deficient regulation.[16] By the 1960s, however, these models widened beyond a concern with the individual to address managerial or organisational factors behind accidents. Not only did statistics reveal stark discrepancies between the accident records of firms in the same industry, but insurers and politicians increasingly used accidents as a gateway into wider industrial problems. Frank E. Bird's 'total loss control' model, for example, drew attention to the financial costs of workplace accidents in terms of damage to plant, property and equipment as well as injury.[17]

Connected to wider perceived problems in British industry (see below), in the 1960s this movement in regulatory attention gained further momentum. In the 'industrial self-help campaign', the British government, alongside trade unions, employers and safety charities, embarked on a broad educative mission of promoting health and safety as part of efficient management. Drawing upon a range of methods including conferences, speeches, posters and exhibitions, the government attempted to foster the active participation of employers and workers in health and safety, including the uptake of joint safety committees (bringing representatives of management and employees together to discuss safety matters), training schemes, industrial health services and professional safety officers.[18] This drive did not stem from any fundamental desire to legislate. Instead, it was motivated by a paternalistic concern with helping industry help itself, and avoiding legislation: a process described as inculcating 'safety consciousness'. This was summed up by one former Chief Inspector, T. W. McCullough, in 1963 when he wrote, 'Safety consciousness ... is a form of foresight or alertness, a quality of mind which has to be developed and nurtured.'[19] The industrial self-help campaign was primarily an exercise in governance: finding means to establish within industry a positive disposition towards safety, which enabled the State to moderate its own role regulating the work environment.

This exercise was founded on a deep-seated belief: inspectors believed that the law was a blunt instrument to secure improvements. Firstly, inspectors thought—despite the proliferation of legal requirements—that the law could be counter-constructive if over-rigorously applied or enforced. For instance, Bryan Harvey, the Chief Inspector of Factories, remarked in 1970 that

> It is no more thinkable that there should be so many Inspectors that one could be permanently stationed in every works than that, say, every fifth motor car should be a police car to enforce the Road Traffic Acts … If a situation ever arose in which the Inspectorate were to attempt rigid enforcement of everything that could be driven through the Courts, so that industry ceased to turn to it for advice and guidance, the standards of safety, health and welfare set over the years in the great majority of workplaces would indeed suffer.[20]

Thus, inspectors considered that persuasion, advice and education were the most important 'weapons' in their arsenal, and they prized themselves on developing an amicable, 'conciliatory' relationship with industry, an idea that, as Peter Bartrip and W. Carson have shown, extends back to the early nineteenth century.[21]

Secondly, drawing on dominant ideas about accident causation, inspectors believed that the most common accidents included an intrinsically 'human' element that defied legislative control. Referred to as the 'Big Five', these included accidents

resulting from manual handling, falls, the use of hand tools, strikes against objects, and strikes from falling objects. In 1962, they accounted for almost two thirds of all reported accidents under the Factories Act. As the Chief Inspector R. K. Christy remarked, 'Passing a law does not prevent a man from dropping something on another man's head'.[22]

While these beliefs were therefore part of inspectors' historical 'DNA', they were reinforced over the 1960s. Statistical trends, for example, revealed that despite the growing mass of law, safety continued to be neglected in many workplaces. From 1959, the number of reported accidents under the Factories Acts increased, with a further, more worrying spike recorded in 1964. The total of 268,648 accidents that year represented the highest reported figure since the Second World War.[23] While the causes of this increase were unknown, inspectors thought that improved reporting, increased industrial production and the harsh winter of 1962–3 were important factors.[24] Despite a fall in fatal workplace accidents, however, the scale of the increase generated significant political attention. At a parliamentary debate on accident causation in 1965, the Parliamentary Secretary to the MOL, Ernest Thornton, argued that 'a new spirit of determination' and more 'active safety consciousness' was required to combat the problem.[25]

The rising number of accidents compounded concerns among officials that certain parts of industry were flouting their responsibilities. A 1962 survey by the MOL highlighted that less than 60 per cent of all notifiable accidents were being correctly reported by industry.[26] A follow-up survey in 1964 revealed the damning verdict that industry was incorrectly reporting two out of every five notifiable accidents, including 70 per cent of all accidents to young persons in construction.[27] Other studies also painted a grim picture of industry's willingness to engage with safety. Since 1956, the National Joint Advisory Council, a tripartite body advising the MOL on industrial relations, had called for joint safety committees to prevent accidents.[28] A 1964 paper prepared by its Industrial Safety Sub-Committee showed that, despite efforts by the Ministry, Trades Union Congress (TUC) and some progressive employers, the number of safety committees in the largest and supposedly better equipped workplaces had actually decreased since 1956, rather than increased.[29] Consequently, the TUC, which previously adopted a voluntarist position to industrial relations, threatened legislation as a means to compel the appointment of safety committees, and the 1964–70 Labour government followed suit.[30]

By the end of the 1960s, therefore, factory inspectors and other officials were increasingly sceptical about the power of prescriptive legislation to prevent accidents. Additionally, inspectors increasingly believed that most accidents preventable by longstanding engineering means, such as machinery guards, had already been prevented: they were suffering from diminishing returns.[31] As the Chief Inspector of Factories, John Plumbe explained in 1969,

> In a large proportion—perhaps 50 per cent—of accidents no reasonably practicable precautions, at least of a physical kind, could have been taken to prevent them … a very considerable number of the remainder result from poor industrial housekeeping of a kind which is susceptible to improvement by efficient management, so that well-run firms are very much tidier and safer in every way than far too many others.[32]

This implied that progress in accident prevention lay less in prosecution, enforcement or new regulations, but the promotion of 'better attitudes' in industry. Harvey was unequivocal: 'Some of the traditional hazards of the physical environment have been brought under control over the past years. What we must now increasingly tackle is the social or management environment which may underlie poor safety performance.'[33]

The productive workplace

Historians have revealed how concerns about productivity fuelled government interest in health and safety during the First World War and inter-war period, when the needs of the worker and the militaristic needs of the British state came into alignment.[34] A similar phenomenon occurred in the 1960s, although the background this time was the perceived inefficiency of British industry against its major international rivals. In the late 1950s and early 1960s, Britain's share of world trade declined, from approximately 20 per cent in 1955 to just 13 per cent in 1970.[35] By 1965, comparative levels of real output per worker were 32 per cent higher in West Germany, and a remarkable 84 per cent higher in the US.[36] Britain's diminishing productivity resulted in a growing trade deficit, culminating in Prime Minister Harold Wilson's decision in November 1967 to devalue sterling.[37] Within this context, the economic cost of absenteeism, sickness and injury resulting from occupational accidents and disease was an increasingly contentious issue. In the 1965 Parliamentary debate, Thornton highlighted the 'the human suffering and waste of our scarce manpower resources' which the deteriorating accident figures represented.[38] By 1967, these costs were quantified at 23 million lost working days: ten times greater than the comparable figure lost to industrial disputes.[39]

The British government increasingly thought that poorly organized and inefficient management lay at the root of these problems. In an era of full employment, amid rising concern about inflation and the need for unions to exercise wage restraint, the key to improved productivity was increasingly seen to be improving the everyday efficiency of the firm, of which health and safety was a core component. The drive to promote 'safety consciousness' was thus deeply enmeshed within these concerns. The Government identified industrial training as one particular area where economic and safety needs converged, and they spent significant effort in the 1960s trying to improve the quantity and calibre of industrial training schemes.[40]

The relationship between health and safety and efficiency was also evident in industrial relations. Between 1956 and 1966, the annual number of strikes in industries other than mining increased by 142 per cent.[41] The growing problem of strikes motivated the 1964–70 Labour government to appoint the Royal Commission on Trade Unions and Employers' Associations (Donovan Commission) in 1965. Its 1968 report recommended statutory intervention in British industrial relations, including an Industrial Relations Act, to shore up and formalize workplace-level industrial relations, which it thought undermined collective bargaining at a wider industry and national level. The report included workplace safety as a central objective, ensuring 'regular joint discussion of measures to promote safety at work.'[42] The British government's movement to legislate for joint safety committees after 1966 was thus intimately bound with its changing industrial relations policy. Barbara Castle's infamous 1969 white paper, *In Place of Strife*, proposed giving union members the right to take part in management decisions, for instance by sitting on company boards.[43] Her subsequent

Employed Persons (Health and Safety) Bill advanced on this policy by proposing that recognized trade unions have the exclusive right to appoint workplace safety representatives, a proposal enshrined in the HSW Act and Safety Representatives and Safety Committees Regulations 1977.[44]

The changing dimensions of occupational risk

While these developments highlighted the need for industry to take greater responsibility for safety, they left intact the established structure of the existing system, namely the vast and fragmented corpus of law that left up to 8 million British workers without statutory protection. A convergence of pressures in the latter half of the 1960s, however, demanded a fundamental rethink of the way the system worked, including the contribution of the British state. The changing nature of British industry and technology, and associated changes in occupational risk, in particular, conferred a new sense of urgency and immediacy to reform.

While the focus of trade unions during the 1960s was not merely the extension of worker protection, but their desire to extend political control over the workplace (for example via safety committees), factory inspectors were keenly aware of changes in the industrial environment that were transforming the risks confronted by workers.[45] As early as 1967, the Chief Inspector of Factories expressed concern about the growing scale of industrial processes. Chemical plants, for example, were storing dangerous substances (such as liquid oxygen) in ever-growing quantities, and increasingly jeopardized the safety of surrounding communities.[46] As the Chief Inspector wrote in 1970:

> We now face a new technology. The Inspectorate is now concerned with an industrial system where virtually anything is possible. Not only can natural materials be handled and worked in totally new ways, but we can manipulate molecular structures to make new materials with virtually any property or characteristic which we desire. Above all, we can now do this on a scale which only a few years ago would have been regarded as wholly unbelievable.[47]

He expanded in 1972, 'It is clear that we can no longer afford to take a chance in many plants. In these circumstances a very detailed calculation of the sorts of problems which are likely to arise will be necessary.'[48]

Such anxieties were dramatically vindicated in June 1974, just as the HSW Act was being finalized: the Nypro chemical plant in Flixborough, Humberside, exploded, killing 28 workers and injuring 36 others. The explosion, equivalent to 15-45 tons of TNT, was described by the official inquiry set up afterwards as one of 'warlike dimensions', and until recently it was one of the largest Britain has ever seen. The explosion caused significant to properties in the local area, including homes and factories.[49]

Health risks were also rapidly changing. While the British government had been historically concerned with acute occupational diseases, such as asbestosis, pneumoconiosis and lead poisoning, by the late 1960s chronic occupational diseases were increasingly intruding on the regulatory consciousness. Industry was producing

toxic chemicals at an accelerating speed, and risks associated with these substances, such as cancer, were being identified which eluded the direct perception of workers and employers. These risks were the object of increasing political and public concern in the 1960s, and garnered considerable media exposure: in 1968 alone, the press reported adeno-carcinoma of the nose among furniture workers, scrotal cancer among workers handling mineral oil, and mesothelioma among asbestos workers.[50] The controversies surrounding these risks revealed how, unlike 'traditional' physical hazards such as dangerous machinery, these substances often asserted their effects invisibly, with a long delay between exposure and the onset of symptoms. This complicated risk perception, reinforcing the focus on industrial self-help. For example, in the absence of immediately visible dangers that could be corrected ad hoc, it became necessary for many employers to proactively measure, evaluate and control risks through routine environmental monitoring.[51]

The increasing profile of risks such as cancer was intimately linked to their growing detectability. Technical improvements in toxicology and industrial hygiene rendered risks visible by providing tools to identify, measure and control them. While industrial hygiene has a long history – Sellers points to its origins in the early-twentieth-century USA – it was only in the late 1960s that the science began to play a prominent role in setting the policy agenda in Britain, for example in setting quantitative 'threshold limit values' for exposure to workplace chemicals.[52] The 1969 Asbestos Regulations explicitly recognized this new quantitative approach, although at the time the British government continued to rely on values prepared by the American Conference of Governmental Industrial Hygienists, as opposed to its own scientists.[53] The rising prominence of industrial hygiene in British health and safety regulation was reflected in the decision to establish a dedicated Industrial Hygiene Unit in 1966. From 1967, field inspectors were equipped with portable instruments, enabling them to more precisely measure contamination without relying on laboratories in Central London.[54] Between 1966 and 1973, tests of toxic substances in the new unit increased by 836 per cent.[55] These changes in the risk environment added impetus to warnings by officials such as Harvey that existing arrangements could not keep up with technological change. However, the period was marked by a more dramatic development that implied urgent change was needed: the industrial disaster. Alongside Flixborough, one disaster above all indicated the urgent need to rethink British health and safety regulation.

On 21 October 1966, 144 people, including 116 schoolchildren, died when a spoil heap from a mine collapsed over the Welsh mining village of Aberfan, burying a school and 18 houses (see Fig. 2).[56] At the tribunal appointed to examine the causes of the disaster, evidence pointed to a basic failure in regulation, and deficiencies in regulatory risk perception. Giving evidence, a representative of HM Mines and Quarries Inspectorate suggested that spoil heaps had never been considered dangerous before. While frequent, recorded inspections were a legal requirement underground, no such requirement extended to the surface. Nor was there a legal requirement for colliery owners to report accidents and dangerous occurrences affecting the public, only mine employees. Hence, since no miner was injured or killed that day, Aberfan's colliery manager was not obliged to report a single casualty.[57]

[Insert Fig. 2 here]

Fig. 2: The 1966 Aberfan Disaster. *Welsh Office: A Selection of Technical reports Submitted to the Aberfan Tribunal* (2 vols., London: HMSO, 1969), I, p. 33.

Alongside an earlier incident in 1964, when a construction crane in North London collapsed on a passing coach, Aberfan and Flixborough highlighted the 'delocalized' effects of many modern risks, and how regulation could no longer end at the factory gates. Industrial accidents could kill members of the public and devastate entire communities.[58] With the enactment of remedial legislation in 1969, the reactivity of the existing regulatory system was once again demonstrated.[59]

The failure of reform, 1967–70

Although disasters such as Aberfan conferred new urgency to reform, by the late 1960s purely administrative concerns had raised the issue. By 1967, the Minister of Labour, Ray Gunter and his colleagues believed that the Factories Act was overly long, detailed and confusing, both for those who administered the law and for those it protected. Much of its wording was inconsistent or vague, and many of its provisions antiquated—some dating back to the nineteenth century. Further, with two Acts administered by the Ministry in force side by side, the Factories Act 1961 and Offices, Shops and Railway Premises Act 1963, demarcation problems arose where it was difficult to tell which Act applied. If one Act and its subordinate regulations had to be revised, so did the other.[60] By December 1967, therefore, plans were afoot to revise and consolidate these Acts into a single statute. Proposals were circulated, seeking to 'meet the needs of a rapidly developing industrial society' by advancing a new comprehensive statute of a more widely applicable character.[61] While the proposals envisaged covering all work premises, however, and certain defined 'work operations' such as window cleaning wherever they were performed, the 1967 proposals contained significant exceptions: premises subject to statutes administered by other government departments, such as mines, were excluded, as were provisions concerning the self-employed, homeworkers, and critically, the public.[62] Effectively, the 1967 proposals left intact the existing fragmented arrangements.

Although consultations with trade unions, employers' associations and other interested parties continued throughout 1968, they were not fruitful. By 1969, Barbara Castle and her colleagues at the Department of Employment and Productivity (DEP), which inherited the proposals, were dissatisfied at the lack of progress. The wider government shared this view: in January 1969, the Home Affairs Committee ruled out comprehensive health and safety legislation in the 1969–70 Parliamentary session.[63] Castle's interim Employed Persons (Health and Safety) Bill, lost upon the dissolution of Parliament in 1970, consequently focused on just two policy issues requiring immediate attention: joint consultation, and proposals for a new Employment Medical Advisory Service.

By 1969, therefore, the DEP accepted that a more radical solution was necessary if contemporary needs were to be met. That year, it mooted the prospect of a National Authority for Safety and Health at Work, as well a wide-ranging inquiry into health and safety regulation, among other government departments. Although they raised concerns about the scope of this inquiry, however, and potential costs associated with the expansion of legislation, Castle was convinced of its necessity. In a revealing memo to her Cabinet colleagues, Castle argued that an 'independent' committee would give the

government significant leverage if it recommended a significant break with the old system. The 1967 proposals had in any case 'virtually committed' the government to reform, and alternative approaches—such as commissioning research—would suggest that the government was kicking the issue into the long grass. What was necessary, Castle argued, was a fresh start, and a small committee, composed of just a few members, would be more likely to get results.[64] In a letter to Victor Feather, the General Secretary of the TUC, Castle explained:

> The conclusion I have come to is that the matter can be satisfactorily dealt with only by having a high-level outside enquiry. I have in mind a small body – perhaps a chairman and 3 or 4 members – who could, without going into the detail of the existing legislation, take a general look at the way the present system works right across the field.[65]

At Feather's suggestion, on 29 May 1970 Castle appointed Lord Alfred Robens to head this enquiry.

The industrial philosophy of Lord Alfred Robens

Alfred Robens was an interesting choice of Chair for the Committee on Safety and Health at Work. As a former trade union official, Labour MP for the Northern England constituency of Blyth, and briefly Minister of Labour, Robens was a close associate of the trade unions and a passionate advocate of industrial safety. In the mid-1950s, Robens had lobbied the then Conservative government to expand industrial health and safety legislation to non-industrial premises.[66] Later in the decade, the Prime Minister, Harold Macmillan, invited Robens to chair the organization running the nationalized coal industry in Britain, the National Coal Board (NCB). There, Robens became closely acquainted with health and safety in a major and still very hazardous industry, albeit one in serious decline.[67]

Following Aberfan however, however, as NCB Chair the media lambasted Robens for his mishandling of the relief effort. Notoriously, rather than attend the scene of the disaster immediately, he preferred to honour his instatement as Chancellor of the University of Surrey.[68] At the Aberfan tribunal, Robens was criticized for his inconsistent evidence. It demonstrated that while Robens had suggested to a TV reporter that 'it was impossible to know that there was a spring in the heart of this tip which was turning the centre of the mountain into sludge', the NCB actually had technology at its disposal that could have detected its presence.[69]

Despite the reputational damage Robens incurred, the fact that it was Victor Feather who proposed his name to Castle suggests Robens retained credibility among the trade union movement.[70] Indeed, having been appointed to the NCB by a Conservative Prime Minister, Robens had a degree of political acceptability across 'both sides of industry', and was well versed in arbitrating between employers and trade unions, seen by the DEP as key to reducing accidents. In the 1960s, Robens was a member of the Donovan Commission, and became familiar with the link between safety and productivity. Then, in 1970, before he was appointed chair of the CSHW, Robens published an insightful book called *Human Engineering* that demonstrates the influence of these considerations on his thinking.[71] In the book, Robens cited inefficient

management as the overriding explanation for Britain's economic and industrial decline. The primary reason Britain was uncompetitive, he argued, was because it could not properly utilize labour, unlike the US, which set the example to follow.[72] Industrial accidents were symptomatic of a poorly managed workplace, where workers had little stake in the management decisions affecting their work. Arrangements that encouraged worker participation, and health and safety as a matter of good practice, should thus be promoted, and used in preference to prescriptive legislation, which in his view encouraged the notion it was government, not employers and employees, who had primary responsibility for health and safety. 'Not until wise managements recognise the importance of safety at the place of employment as an integral part of efficiency will the requirement for inspectors and enforcement virtually disappear.'[73] In *Human Engineering*, Robens devised a redistribution of responsibility that he later elaborated on the CSHW.

The Committee on Safety and Health at Work

The members of the CSHW were assembled from across the political spectrum. Besides Robens, the seven members of Committee included a legal professor (John Wood), Conservative MP (Mervyn Pike), radiologist (Sir Brian Windeyer), trade unionist (Sydney Robinson), chairman of a major standard-making body (George Beeby) and management consultant (Anne Shaw). Shaw's place on the Committee is particularly insightful, highlighting the importance of 'management' to the Committee's thinking when industrial efficiency was a top political priority.[74]

The CSHW was the first ever 'across the board' enquiry into British health and safety legislation, and its terms of reference were vast: to examine both the statutory and voluntary arrangements for occupational health and safety in Britain, and (following Brent Cross and Aberfan) consider whether any further action was necessary to protect the public from hazards arising from work activity.[75] These terms were diligently drafted to avoid contention with issues considered to be outside the domain of 'health and safety' at this time, such as environmental pollution. However, the fact that hazards were increasingly delocalized, and had effects beyond the workplace, meant that the Committee found it difficult to confine itself. 'Safety and health at work', Robens conceded, 'is not a subject that is easily delimited.'[76]

The CSHW's first meeting was held on 23 June 1970.[77] In addition to its main members, the Committee was assisted by a Secretariat composed of seconded civil servants, led by Matthew Wake of the Department of Employment (DE). The Secretariat and DE played an essential role administering the Committee's work, scheduling meetings and visits, processing evidence, and preparing background documents that helped the Committee get underway. These documents, as well as notes of informal meetings, provide a unique insight into the Committee's developing ideas. What becomes apparent is how closely exposed the Committee was to the agenda of its sponsoring department, the DE, and thus how its recommendations closely followed the template of existing priorities. For example, an early background paper painted a picture of the regulatory landscape that was unquestioningly adopted by the Committee, highlighting 'the multiplicity of enforcing agencies, the multiplicity and overlap of statutes, the distinction between safety and health of employed persons and safety and health of members of the public, [and] gaps in the coverage of the legislation'.[78]

Further, an early review of evidence just six months into the inquiry emphasized the Factory Inspectorate's belief that 'the existence of a mass of detailed restrictive legislation may inhibit the natural development of self-help and continuous self-regulation by industry itself'.[79] This was uncannily similar to the Committee's eventual conclusion that 'the existence of such a mass of law has an unfortunate and all-pervading psychological effect. People are heavily conditioned to think of safety and health at work as in the first and most important instance a matter of detailed rules imposed by external agencies.'[80]

The similarity of these arguments suggests that the Committee was cognitively 'captured' by the prevailing ideas of the DE and Factory Inspectorate. Such an interpretation is further supported by examining the Committee's evidence gathering. Over the course of its inquiry, the Committee collected evidence from over two hundred individuals and organizations with an interest in health and safety, including government departments and inspectorates, local authorities, trade unions, employers' associations, insurers, medical and voluntary organizations. It also embarked on a series of overseas visits, to West Germany, Sweden and the US. Before the Committee invited formal written evidence, informal talks were held with senior figures of some of these organizations, helping the Committee form a preliminary impression of the state of the system. Many of these officials' comments, particularly 'expert' members of the Factory Inspectorate, found their way directly into the Committee's Report—for example, Plumbe's assertion that the Factory Inspectorate's enforcement work suffered from diminishing returns.[81] These beliefs were accepted by the Committee without question, and indeed were closely in line with Robens' own ethos (as articulated in *Human Engineering*). In contrast, the strongly held beliefs of other parties were largely dismissed out of hand, and relatively early in the Committee's life. The Committee did not share the trade unions' view, for instance, that the answer to accidents was more detailed regulation or more inspectors. It also discounted the views of other government departments and inspectorates, who emphasized the benefits of independence, such as specialism. By January 1971, the Committee had already largely determined that there should be a new single Act applying to all employees, and that there should be greater emphasis on better attitudes, organization and responsibility in the workplace; there was a limit to what legislation alone could achieve.[82]

The Robens Report

Accompanied by a widespread publicity campaign, the Robens Report was published on 19 July 1972. Its primary conclusion was that the existing regulatory system no longer served the needs of people in the 1970s. Fragmented, overly complex and confusing, while failing to protect some 5 million workers, the system suffered from diminishing returns and discouraged voluntary effort. The continuing humanitarian and economic costs of accidents and ill health revealed the failure of existing approaches, estimated at 1000 fatalities per year, half a million injuries and 23 million lost working days.[83] Statutory effort, the Committee argued, should be refocused on encouraging voluntary compliance with the law: '*There are severe practical limits on the extent to which progressively better standards of safety and health at work can be brought about through negative regulation by external agencies. We need a more effectively self-regulating system.*'[84]

This conclusion followed logically from the Report's central premise, which was that 'apathy', rather than weak regulation or enforcement, was primarily to blame for workplace accidents.[85] While controversial to this day, this belief made sense in terms of Robens' industrial philosophy and the experiences of inspectors and administrators in the British government, to whose expertise the Committee deferred. These actors genuinely believed that the law was deleterious if over-applied or enforced, even if other actors (namely trade unions) passionately disagreed. In Robens' view, the maze of rules on the statute book was counter-productive, since it obscured the actual responsibilities of employers and employees. The primary responsibility for securing safe and hygienic working conditions lay not with the State, but those who generated risk; and the role of the State was to support industry in fulfilling its obligations.[86] Moreover, rapid changes in industry and technology rendered the existing system obsolete. As disasters such as Flixborough demonstrated, prescriptive legislation could not keep pace with changes in the risk environment. A more flexible and forward-looking system was needed.

Robens' approach to workplace safety drew on his industrial philosophy and experience in the NCB, and was closely inspired by the Factory Inspectorate's paternalism. Just as he advocated in *Human Engineering*, Robens emphasized that health and safety was an essential feature of good management and needed to be treated in the same way as other business activities, such as industrial relations and personnel management.[87] Safety performance could only be improved, he asserted, if everyone pulled their weight: from the chairman to shop floor, accidents could only be reduced if everyone was clear about their responsibilities. Integral to this shared effort was his recommendation that companies produce written safety policies, detailing safety arrangements in the workplace.[88] Robens was also acutely aware of the power of joint consultation in stimulating this effort. On the question of safety committees, Robens ultimately stopped short of calling for their statutory compulsion, as demanded by the TUC, believing that industrial conditions varied so widely it was unwise to impose particular arrangements. Nevertheless, he advised that employers should consult their employees about health and safety issues.[89]

Robens' most far-reaching recommendations focused on the British state's contribution. Robens recommended that the various Acts and regulations littering the statute book should be scaled back, simplified and reorganized under the umbrella of a single 'enabling' Act, administered by a new quasi-independent National Authority for Safety and Health at Work.[90] By 'enabling', Robens envisaged a central Act detailing the general principles of health and safety, applying to all workers and workplaces. Specific matters, such as precautions applying to particular industries, would be detailed in an organized framework of subordinate regulations, codes of practice and standards. Concordant with his ideas about 'self-regulation', Robens argued that codes of practice and voluntary standards should be used in preference to detailed statutory regulation, unless the scale of risk rendered this necessary. In general, the quantity of regulations should be reduced.[91]

The Committee thought that this new approach had multiple benefits: it was more flexible and amendable with technical progress, allowing the system to keep pace with change; it was comprehensive, bringing under protection all workers, regardless of workplace or industry; it was also more comprehensible, outlining the fundamental responsibilities of employers, employees and other groups, such as manufacturers. The use of subordinate regulations and codes would permit the gradual replacement of

existing rules, while by emphasizing the primacy of voluntary standards and (quasi-legal) codes, this approach supported a wholesale redistribution of effort onto industry. Robens' use of the term 'self-regulation' to express this idea, however, was problematic, since he did not envisage the complete abandonment of regulations to control hazards, merely their rebalancing. Robens asserted that his proposals did not weaken workers' legal protection, but rather permitted the more 'discriminating' use of legislation.[92] Indeed, for some areas of potentially catastrophic risk, such as major hazards, Robens advocated even stronger legal requirements. The idea of a single 'enabling' Act was strongly influenced by the DE's previous proposals, and in this way Robens' proposals can be seen as a logical extension of Ray Gunther's reform programme, started in 1967. Seen against this background, the originality of the Robens Committee has been much exaggerated.

Conclusion

It is beyond this chapter to describe the events that resulted in the HSW Act. Briefly, while 'both sides of industry' and the main political parties broadly supported the Robens Report, they disagreed on matters on detail, which still needed to be worked out on an administrative level. Some government departments with existing responsibilities, such as the Department of the Environment, were resistant to Robens' recommendation that their functions should be hived off to a new National Authority—what ultimately became two new institutions, the Health and Safety Commission (HSC) and Health and Safety Executive (HSE). Ministers feared that loss of their inspectorates to a new Authority would undermine the links with industry and technical expertise they relied upon for policy making. Consequently, the Robens Report generated what was euphemistically termed by the Labour Employment Secretary, Michael Foot, as 'a prolonged and intensive period of interdepartmental consultation'.[93]

Despite the significant administrative problems that resulted from the Report, the cross-party political support that greeted its publication became central to the on-going development of the regulatory system. The political consensus around occupational health and safety, seen in other areas of British public policy in the 1960s and 1970s, became embodied in the constitution of the HSC, which became the primary vehicle for making new standards, codes and regulations after 1974. Following the lead of other quasi-independent authorities at this time, such as the Manpower Services Commission, the HSC adopted a tripartite structure, bringing together representatives of employers, trade unions and the public to secure agreement on health and safety matters. The consensual nature of their decision-making, according to the socio-legal scholar Graham K. Wilson, has contributed to widespread political acceptance of British health and safety policy, in contrast to occupational health and safety in the US, by ensuring that a wide range of interests are taken into account when making regulatory decisions.[94] It has certainly contributed to the longevity of the HSE as a regulator in Britain, although the HSC was merged into HSE's management structure in 2008.
In this and other respects, the regulatory approach laid down by Robens continues to shape the way health and safety risks are confronted in Britain to this day, forty years after the HSW Act was passed. One of the most important outcomes of the reform process was a system that put voluntary effort, or 'self-regulation', at the heart of the control of risk. Events over the 1960s exposed the need for employers to evaluate work

that could potentially endanger workers and others affected by their activity, and implement controls accordingly. While the events described here predate the use of the phrase 'risk assessment' in health and safety policy, it is pertinent to note that later moves in the 1980s and 1990s to formalize 'risk assessment' as part of the everyday control of risk were conditional on these earlier moves to prioritize self-regulation. The qualification 'so far as is reasonably practicable', spread throughout the HSW Act, implied a form of risk assessment in the control of risk—the idea that controls should be proportionate to risk, taking into account time, trouble and expense.[95] By emphasizing how excessive legal requirements could damage safety by standing in the way of employers understanding their legal responsibilities, these developments paved the way for extensive deregulation of health and safety law in the 1980s, although it is important to note that Robens did not entirely condone this.[96]

Significantly, efforts to inculcate safety as part of efficient management in the 1960s and early 1970s demonstrate that risk regulation 'may proceed by means other than by the application or promulgation of rules.'[97] Formal regulations have been just one instrument at the disposal of regulators to promote safety, and have generally been discouraged in favour of softer approaches such as codes of practice, education and consultation. While this chapter has focused on statutory efforts, it is important to recognize that regulation can encompass a diverse field of actors: not just trade unions and employer's associations, but charities, insurers, professional and trade bodies and other organizations.

Perhaps the most significant outcome of Robens' vision, however, was a wider and more all-embracing conceptualization of 'health and safety' itself, one that continues to define how we think about and regulate occupational risks—and contest and critique this regulation, as the next chapter suggests. As a consequence of his recommendations, 'occupational' health and safety legislation expanded to encompass virtually all workers, as well as 'third persons' such as members of the public who could be injured or made ill by work activity. Only domestic servants in private households, covered under civil law, were ultimately excluded. Robens realized that since risks crossed the factory or work gates, and did not merely affect employees, it was inefficient to deal with them under separate laws, administered by separate government departments and inspectorates. The implication of this idea, as enacted in the HSW Act, was staggering: prisons had responsibility for the health and safety of prisoners, schools their pupils, and factory owners the people who live in the communities around their factories.[98] The Robens Report established the conditions for a truly universal system of health and safety, reflected in the fact that much of the work of the twenty-first century HSE is devoted to issues of 'public', as opposed to worker health and safety. Paradoxically therefore, while the Robens Report streamlined health and safety law, it greatly increased its scope, power and reach of health and safety over our work and everyday lives. Ironically, current ideas in Britain of the over-zealous application and extent of health and safety law were made possible, implicitly, by these historic changes. While Robens and inspectors in the early 1970s saw the public as an enthusiastic recipient of reform, the modern-day belligerence and even 'apathy' of the British public towards health and safety is not something they, surely, anticipated.

Notes

[1] For an analysis of which, see P. Almond and M. Esbester, this volume. Oxford Dictionaries defines 'health and safety' as 'Regulations and procedures intended to prevent accident or injury in workplaces or public environments'. See http://www.oxforddictionaries.com/definition/english/health-and-safety, date accessed 24 Oct. 2014.

[2] The National Archives, Kew Surrey, UK [hereafter TNA]. LAB 96/465, RCP18, 'Background paper by DEP on preparation of comprehensive safety, health and welfare legislation'.

[3] Robens, *Safety and Health at Work: Report of the Committee. 1970–72*, 2 vols. (London, 1972).

[4] A notable exception is M. Beck and C. Woolfson, 'The Regulation of Health and Safety in Britain: From Old Labour to New Labour', *Industrial Relations Journal* 31 (2000), pp. 35–49.

[5] P. Bartrip and S. Burman, *The Wounded Soldiers of Industry: Industrial Compensation Policy, 1833-1897* (Oxford, 1983), p. 15; P. Bartrip, *The Home Office and the Dangerous Trades: Regulating Occupational Disease in Victorian and Edwardian Britain*, Clio Medica (Amsterdam, 2002), p. 9; TNA LAB 14/934, K. Kenney, memo, 15 September 1960.

[6] In the twentieth century, for example, fire precautions were tightened up in the 1959 Factory Act following a devastating mill fire in Keighley, West Yorkshire which killed eight people, and new regulations on tips were introduced following the catastrophe at Aberfan in 1966. See Robens, *Safety and Health at Work*, p. 4.

[7] B. L. Hutchins and A. Harrison, *A History of Factory Legislation*, 2nd edn (London, 1911), p. ix; Department of Employment and Productivity, *Annual Report of HM Chief*

Inspector of Factories 1968 (London, 1969), p. 2; Robens, *Safety and Health at Work*, pp. 4–5.

[8] Robens, *Safety and Health at Work*, pp. 6–7.

[9] Robens, *Safety and Health at Work*, p. 10; HSC, *Report 1974-76* (London, 1977), pp. 2–3.

[10] For example, section 3(1) of the Factories Act 1961 specified that 'Effective provision shall be made for securing and maintaining a reasonable temperature in each workroom, but no method shall be employed which results in the escape into the air of any workroom of any fume of such a character and to such extent as to be likely to injurious or offensive to persons employed therein.'

[11] Robens, *Safety and Health at Work*, p. 8.

[12] Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1961* (London, 1962), p. 8.

[13] Ibid., p. 7.

[14] This concern manifested itself also in increased scientific attention on the underlying causes of accidents, as evidenced by a four-year comparative study undertaken by the National Institute of Industrial Psychology, *2000 Accidents: A Shop-Floor Study of Their Causes Based on 42 Months' Continuous Observation* (London, 1971).

[15] M. Esbester, 'The Discipline of Safety: Preventing Accidents in Britain after 1913'. Presented at Accidents and Emergencies conference, Oxford Brookes University, September 2013.

[16] See in particular J. C. Burnham, *Accident Proneness: A History of Technology, Psychology and Misfits f the Machine Age* (Chicago and London, 2009).

[17] See S. Mannan, ed., *Lees' Loss Prevention in the Process Industries: Hazard Assessment, Identification and Control* (Oxford, 2005), section 1, 10.

[18] An example of a conference on the theme of 'industrial self-help' was the BEC conference on 'Safety and Health in Industry' held in Brighton in February 1962. See TNA LAB 14/1197.

[19] Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1962* (London, 1963), p. 56.

[20] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1969* (London, 1970), p. xii.

[21] Bartrip, *The Home Office and the Dangerous Trades*, p. 38; W. Carson, 'The Conventionalization of Early Factory Crime', *International Journal of the Sociology of Law*, 7 (1979), pp. 41–60.

[22] Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1966* (London, 1967), p. 8.

[23] Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1964* (London, 1965), p. 7, 44.

[24] Ibid., 13; TUC archive MSS.292B/146.17/1, report of ISSC meeting 2 June 1964.

[25] *Hansard*, HC Deb 25 February 1965, vol. 707, col. 781.

[26] Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1963* (London, 1964), p. 20. TUC archive, Modern Records Centre, University of Warwick, UK (hereafter TUC archive). MSS.292B/146.17/1, 'Failure to Report Accidents', memo prepared for ISSC.

[27] TUC archive MSS.292B/146.17/1, Note for ISSC meeting 17 November 1964 prepared by National Union of Dyers, Bleachers and Textile Workers. Comments on

'Non-reporting of accidents' (paper 58) prepared by Safety, Health and Welfare Department of MOL; Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1964*, p. 24.

[28] Ministry of Labour and National Service, *Industrial Accident Prevention: A Report of the Industrial Safety Sub-Committee of the National Joint Advisory Council* (London, 1956); Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1965* (London, 1966), p. 19; V. Long, *The Rise and Fall of the Healthy Factory: The Politics of Industrial Health in Britain, 1914–60* (Basingstoke, 2011), p. 169.

[29] TUC archive MSS.292B/146.17/1, comments on paper 59 by National Union of Dyers, Bleachers and Textile Workers.

[30] TUC archive MSS.292B/146.17/1, comments on paper 60; *Hansard*, HC Deb 11 July 1966 vol. 731 cols. 954-5.

[31] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1968*, p. xiv; Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1969*, p. xiv.

[32] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1968*, p. xiv.

[33] Department of Employment, *Annual Report of HM Chief Inspector of Factories 1970* (London, 1971), p. xiv.

[34] See in particular Long, *The Rise and Fall of the Healthy Factory*; H. Jones, *Health and Society in Twentieth-Century Britain* (London, 1994).

[35] Robens, *Human Engineering* (London, 1970), p. 8.

[36] Donovan, *Royal Commission on Trade Unions and Employers' Associations; 1965-1968* (London, 1968), p. 74.

[37] Robens, *Human Engineering*, p. 8.

[38] *Hansard*, HC Deb 25 February 1965, vol. 707, col. 781.

[39] This figure was later used by the Robens Committee. Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1967* (London, 1968), p. xi; Donovan, *Royal Commission*, p. 97; Office for National Statistics, *Social Trends 30* (London, 2000), p. 78.

[40] See Ministry of Labour, *Industrial Training: Government Proposals* (London, 1962), p. 3; Ministry of Labour, *Annual Report of HM Chief Inspector of Factories 1965*, p. 16.

[41] Donovan, *Royal Commission*, pp. 19, 98–9.

[42] Donovan, *Royal Commission*, p. 45.

[43] *In Place of Strife. A Policy for Industrial Relations* (London, 1969), pp. 16–7.

[44] The incoming Labour government in 1974 legislated for safety committees as a 'quid pro quo' for union support of the 'Social Contract'. See Arthur McIvor, *Working Lives: Work in Britain since 1945* (Basingstoke, 2013), p. 182.

[45] See for instance, TNA LAB 96/483, RCP 70, 'Oral evidence—Trades Union Congress' (August 1971); Robens, *Safety and Health at Work. Report of the Committee*, vol. 2, 'Selected Written Evidence', p. 670.

[46] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1967*, pp. xii–xiii.

[47] Department of Employment, *Annual Report of HM Chief Inspector of Factories 1970*, p. xii.

[48] Department of Employment, *Annual Report of HM Chief Inspector of Factories 1971* (London, 1972), p. xvi.

[49] *The Flixborough Disaster: Report of the Court of Inquiry* (London, 1975), pp. 1–14.

[50] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1968*, pp. xvi–xvi.

[51] Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1967*, p. xiii.

[52] C. Sellers, *Hazards of the Job: From Industrial Disease to Environmental Health Science* (Chapel Hill, 1997). See also T. Carter, 'British Occupational Hygiene Practice 1720-1920', *Annals of Occupational Hygiene*, 48 (2004), pp. 299–307.

[53] Department of Employment, *Annual Report of HM Chief Inspector of Factories 1970*, p. xvi; Department of Employment and Productivity, *Annual Report of HM Chief Inspector of Factories 1969*, pp. 14–5; Department of Employment, *Annual Report of HM Chief Inspector of Factories 1973* (London, 1974), p. 62.

[54] TUC archive, MSS.292B/145.85/2, Copy of letter from Secretary of State for Employment and Productivity to TUC, 26 March 1969, p. 2.

[55] Department of Employment, *Annual Report of HM Chief Inspector of Factories 1973*, pp. viii, 62. The number of tests made of toxic substances increased from 1373 in 1966 to 12,850 in 1973.

[56] *Report of the Tribunal Appointed to Inquire into the Disaster at Aberfan on October 21st, 1966* (London, 1967), p. 26.

[57] Ibid., pp. 35–6.

[58] *Report of the Investigation of the Crane Accident at Brent Cross, Hendon, on 20th June 1964* (London, 1965). The idea of risk delocalization, of course, underpins Ulrich Beck's notion of the 'risk society'—that in recent decades the risks of industrial society

have become delocalized and global in their effects. See Ulrich Beck, *Risk Society: Towards a New Modernity* (London, 1992).

[59] The Mines and Quarries (Tips) Act 1969. See Robens, *Safety and Health at Work*, pp. 4, 90.

[60] TNA LAB 96/332, CSHW: DEP Background Paper, p. 1.

[61] TUC archive MSS.292B/145.85/1, First Consultative Document, covering letter, 1 December 1967, par. 3.

[62] TUC archive MSS.292B/145.85/1, First Consultative Document, December 1967.

[63] TNA LAB 96/447, Memorandum by the First Secretary of State and Secretary of State for Employment and Productivity; TNA CAB 134/2862, H(69), 2nd Meeting (24 January 1969), p. 7.

[64] TNA LAB 96/447, Memorandum by the First Secretary of State; Doc 1, summary of replies to Sir Derek Barnes' letter of 5 September 1969.

[65] TUC archive MSS.292B/145.85/2, Castle to Feather, 24 February 1970.

[66] *Hansard*, HC Deb 1 April 1955 vol. 539 col. 757

[67] Output contracted from 194 million tons per year in 1960 to 142 million by the 1970s. Tweedale, 'Robens, Alfred, Baron Robens of Woldingham (1910-1999)'; Robens, *Ten Year Stint* (London, 1972).

[68] *Report of the Tribunal*, pp. 92–3; Tweedale, 'Robens, Alfred, Baron Robens of Woldingham (1910-1999)'.

[69] *Report of the Tribunal*, pp. 89–92.

[70] TNA LAB 96/447, Safety and health inquiry: membership. Brief for the First Secretary's meeting with Mr Feather on 20 April, p. 1.

[71] Robens, *Human Engineering*.

[72] Ibid., p. 10.

[73] Ibid., p. 123–4.

[74] H. Williams, 'Roots: The Pioneers - Anne Shaw, CBE 1904-1982', *Management Services*, 35/8 (1991), pp. 26–28.

[75] Robens, *Safety and Health at Work*, p. 5.

[76] Ibid., p. xv.

[77] TNA LAB 96/481, minutes, RCM1, 23 June 1970.

[78] TNA LAB 96/465, Document 4.

[79] TNA LAB 96/465, RCP37, November 1970.

[80] Robens, *Safety and Health at Work*, p. 7.

[81] TNA LAB 96/481, 'Note of Committee's informal discussion with W. J. C. Plumbe, 21 July 1970'.

[82] TNA LAB 96/481, Minutes of 18th meeting, 19 January 1971.

[83] Robens, *Safety and Health at Work*, p. 1.

[84] Ibid., p. 12, italics in original.

[85] Ibid., p. 1.

[86] Ibid., p. 2.

[87] Ibid., pp. 15–6; Robens, *Human Engineering*, p. 10.

[88] Robens, *Safety and Health at Work*, pp. 23–4.

[89] Ibid., pp. 21–2.

[90] A critical feature of this new body was that it would be managed by a board composed of representatives of trade unions and employers' associations, thus institutionalizing the philosophy of self-regulation. By 'quasi-independent', it was meant that the Authority would ultimately be responsible to Parliament although it

would have autonomy in its day-to-day operations. The Health and Safety Commission, founded in October 1974, would ultimately realize this goal, extending representation also to local authorities as representatives of the public. See Robens, *Safety and Health at Work*, pp. 31–9.

[91] Ibid., p. 45.

[92] Ibid., p. 46.

[93] *Hansard*, HC Deb 03 April 1974 vol. 871 col. 1287.

[94] G. Wilson, *The Politics of Safety and Health: Occupational Safety and Health in the United States and Britain* (Oxford, 1985), pp. 151–2.

[95] 'So far as is reasonably practicable' was given legal definition in the 1949 case *Edwards v. National Coal Board* (1 All ER 743).

[96] See S. Tombs and D. Whyte, 'A Deadly Consensus: Worker Safety and Regulatory Degradation under New Labour', *British Journal of Criminology*, 50 (2009), pp. 46–65.

[97] R. Baldwin, *Rules and Government* (Oxford, 1995), 3.

[98] J. Locke, 'The Politics of Health and Safety: Text of the Alexander Redgrave Memorial Lecture', 1981, p. 10.