Work Life, Work Environment and Work Safety in Transition

Historical and Sociological Perspectives on the Development in Sweden during the 20th Century

Annette Thörnquist (Ed)

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Annette Thörnquist Editor

Abstract

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The articles in this anthology deal with the development of the work environment, health hazards and work safety in Sweden from a historical, sociological and multidisciplinary point of departure. The over all aim is to introduce Swedish historical research on this topic to an international readership, to integrate this research in the international discourse and to stimulate new research within the field. The nine articles have been written within various disciplines and from different theoretical points of departure. A common denominator is the treatment of the work environment and work safety as a multifaceted and complex social issue. The focus is on how problems in the work environment have developed over time and how the state and the parties in the labour market on the central and local levels have dealt with this issue. The articles also reflect the development of gender relations in working life, labour legislation, handicapped workers' situation in the labour market, the public discourse on work environmental problems and the meaning of the concept "work environment".

Key words: Work life, work environment, work organisation, occupational accidents, occupational diseases, occupational health and safety, handicapped workers, gender relations, labour legislation, the Swedish Model.

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Introduction

In recent years, the need for historical research on work environmental and work safety issues has been emphasised in the international scholarly debate. In the Australian journal Labour History: a Journal of Labour and Social History (no 73, 1997), Michael Quinlan maintains that occupational health and safety has been neglected by historians in most countries. Despite an increasing interest in social history and labour history since the 1960s, problems concerning working conditions and work safety have not been acknowledged as an independent field of research. The subject has been treated sporadically, and the studies undertaken have often been limited and descriptive, lacking theoretical perspective. Although there is a developed occupational health and safety research in contemporary social science, historical studies have seldom made use of this research, its theoretical points of departure, methods and results. Nor have problems concerning working conditions, in contrast to gender and ethnicity aspects, been integrated into the mainstream of historical research. According to Quinlan, however, several interesting studies have in fact been done, not least in North America, but not much has been published or reviewed in international historical journals.

As in other countries, Swedish research in this field is a recent phenomenon and as yet not very extensive. Swedish historians have primarily dealt with occupational and environmental safety problems in the industrial society, and they have mainly studied Swedish conditions. There are, however, also some studies on the dramatic development during the latest decades; some of them done by sociologists and psychologists working with a historical perspective. Generally speaking, the Swedish studies have a theoretical point of departure, but an international perspective is less common. Swedish studies have also rarely been integrated into the international scientific discourse concerning occupational health and safety. With a few exceptions, the results have been published only in Swedish. Hence, Swedish research should be made more internationally visible. This is also the main reason for this anthology's coming into being.

In Sweden, labour history and industrial history have a long tradition. For a long time, however, labour history concerned mainly the organisational development, and the authors were often part of the labour movement. Several large companies, on the other hand, have had their histories written by professional economic-historians. As these studies, however, mainly focused on technical and economic development, the problems concerning work and working conditions were rendered invisible. Notwithstanding, it was primarily the economic historians who started to carry out research on industrial work and working conditions. In the 1970s, *the history of working life* developed as an independent and

multidisciplinary research field, and during the following decade this research had its breakthrough. Now, economic historians, historians, sociologists and ethnologists began to study the history of working life, sometimes in cooperation with each other. Several interdisciplinary research projects and networks were begun, mainly on a Swedish or Nordic basis. The long-term development of work, work processes, the social organisation of work and labour market relations, as well as labour culture and class consciousness, were studied from local examples and analysed, generally from a theoretical power-relation perspective focusing on the conflicting interests between the actors in production, in the labour market and in society as the whole. New perspectives, from beneath, were also applied on the development of labour legislation and public policy concerning working life issues. The professionalisation and bureaucratisation processes in working life have developed into an important field of historical research as well. In the 1980s and 1990s, working life issues have increasingly been studied from a gender perspective, and many Swedish scholars are today part of international networks for research in this area.

The general background to this widening of historical research and the change of perspective was the international political radicalisation that saw the light of day in the late 1960s. As is well known, it emerged as a reaction to the rapid rationalisation and structural transformation in industry and the ensuing social consequences, such as new work environmental risks and increased physical and mental stress. Thus, studies on the development of industrial safety became a natural part of historical research on working life. Several important themes have been dealt with within this occupational health and safety research, which this anthology also shows.

The results of this research have generated great interest also outside the scientific community. Much research has also been supported by Swedish authorities, a fact partly due to the Swedish government's strong commitment to the improvement of the work environment during the 1970s and 1980s. In the early 1970s, the Occupational Health and Safety Fund (*Arbetarskyddsfonden*), later the Work Environment Fund (*Arbetsmiljöfonden*), was established by the Swedish government. This agency has, among other things, provided the means for and financed research on historical working life issues, not least the study the long-term development of working conditions and work safety. In addition, the Swedish labour market organisations and voluntary occupational health and safety organisations have initiated historical studies in this field. Consequently, most books and articles have been aimed at a wider audience and thus have been published in Swedish. What has been lacking is therefore an anthology in English.

The purpose of this book is to present Swedish research on the development of the work environment and work safety in Sweden from a historical, sociological and multidisciplinary point of departure. The aim is thus to introduce Swedish historical research on this topic to an international readership and try to integrate Swedish research in the international discourse. Furthermore, the purpose is to stimulate new research within the field. The articles have been written within various disciplines and from different theoretical points of departure. A common denominator is the treatment of the work environment and work safety as a multifaceted and complex social issue. The focus is on how the state and the parties in the labour market on the national and local levels have dealt with this issue. The articles also reflect the development of gender relations in working life, the disabled in the labour market, the public discourse on work environmental problems and the meaning of the concept "work environment".

Taken together, the articles cover a long historical period ranging from the pre-industrial society up till today. The emphasis is however on the period following World War II. From the early 1940s, work safety was of major interest for the organised co-operation between the main parties in the Swedish labour market. During the latest decades of growing internationalisation and the dramatic changes in working life connected with this, the centralised Swedish model for negotiation and co-operation has been replaced by a decentralised and deregulated labour market with individualised labour market relations. Flexible production concepts, lean organisations, new management strategies and company cultures, in their turn followed by a weakening of the trade unions, have significantly altered the conditions for dealing with work environment issues. Parallel to this, the social costs for work injuries, above all stress related occupational illness, have increased substantially. Against this background, there is a need for a historical perspective on today's development. In this respect as well, this anthology may hopefully be of use.

The Content

In the first article in this book, *Proletarian Writers, the Working Environment and the Struggle for Hegemony*, Bill Sund applies an unusual but most fruitful perspective on the development of the work environment issue. He deals with the Swedish proletarian writers' criticism of the development of industrial working conditions and working life in general during the period 1930–1975, which was the height of the industrial era in Sweden. Their opponents in the debate were intellectuals, who were often affiliated to the actors in the leading historical power bloc – among them men acting in the service of the trade union movement. How did they respond to these critics, who in fictional form portrayed the shifting faces of power in working life? What effects did the proletarian writers have on the development of occupational safety? According to the proletarian writers, factory work was soulless and degrading. The Taylorist work organisation symbolised this lack of well-being and was therefore strongly attacked by such authors as Folke Fridell and Stig Sjödin. These writers initiated an extensive debate concerning problems of working life that took place both within and out-

side the trade unions around 1950. This debate in turn increased the general awareness of how people experienced their workplaces. However, no decisive changes were made until the 1970s, when the industrial society began to fade away. Even if the will to change existed within the labour movement, for a long time the leading forces felt that it would be unwise to jeopardise the survival of the bloc by entering into fundamental discussions on how to change labour legislation and work organisation.

A traditionally strong theme within historical research on working life has been the development of production, work and work processes, and their social implications. Maths Isacson and Annette Thörnquist both link up with this tradition. In his article, *The Work Environment in the Swedish Iron and Steel Industry during the 20th Century* Isacson gives an overview of the work environment, the health problems and the improvements within this trade over the last hundred years. Throughout the ages, iron and steel has been produced under unhealthy conditions. Despite better equipment, new production processes and active safety measures, today's iron and steelworkers are still exposed to considerable health and accident risks. With the help of available statistics, reports and life histories, Isacson both paints a picture of the ever-changing working conditions and health risks faced by those who worked in the iron and steel industry and suggests some plausible explanations for these conditions and changes.

Annette Thörnquist deals with The Silicosis Problem in the Swedish Iron and Steel Industry during the 20th Century. The silicosis crisis that appeared in the international iron and steel industry during the 1930s was part of the mechanisation, rationalisation and social segregation processes that had begun in the foundries and steel works around the turn of the 20th century. The purpose of this article is to discuss how the state and the parties in the Swedish labour market dealt with this problem. How did the problem arise and how was it handled over time? How did it affect the social relations at the plants? Which were the determinant factors and driving forces behind the development of worker's protection against silicosis? From the 1930s and up to the early 1960s, when silicosis was most prevalent in the iron and steel industry, the state's control of the dust situation in the plants was still comparatively weak. Therefore, the problem had to be handled mainly at the company level. The silicosis problem was, however, not only a subject of labour-management conflict. It also caused tension between different groups of workers, who due to their position in the production process had different possibilities to shelter themselves from the dangerous dust. In addition, as efforts to solve the silicosis problem often did not benefit all workers, it could create new work environmental risks and increased tension between workers. Among other things the author discusses the role of the unions in the development of industrial safety. She also discusses why it took so long before the silicosis problem could be successfully dealt with within the framework of the Swedish Model.

Several of the authors in this anthology apply a gender perspective on the historical development of the work environment and work safety. In this way, we are better able to understand the segregated division of labour and its development. In his article, Changing Sex, Changing Gender, Bo Persson treats one interesting attempt in the inter-war years by the Swedish Forest Labour Inspectorate to change the construction of gender in order to promote occupational safety and workers' health and well-being. The forest work was exclusively male and the working conditions among those who worked as cutters, sleigh-haulers and log drivers in Swedish forestry were rather miserable: bad housing conditions, poor nutrition and a high level of accidents, including those with a fatal end. The Labour Inspectorate found it hard to improve the working conditions since the work was seasonal and organised in subcontracting systems, the unions were weak and the employers hostile to collective bargaining. The Inspectorate therefore tried to convince the workers to join together and hire a female cook who would live with them in the cabin through the working season and prepare their food. Such an arrangement, the Inspectorate thought, would result in warm and clean cabins, warm and nutritious food, and more time for rest and mending clothes, equipment and tools for the workers. This would further their working capacity, as well as give them more self-esteem, carefulness and orderliness, qualities which would make them work more safely and properly and pay more attention to the dangers in the work. This attempt was successful. The diffusion of joint housekeeping with hired female cooks was great and the condition of the cabins and food became better. The introduction of women in forestry changed the old gender order in the forest region. A more modern one took form, with a female professional housekeeper and a new conscientious male worker.

The special treatment and subjugation of women in working life has been thoroughly dealt with in historical working life research. That the basis for this special treatment partly was due to the safety legislation is shown in Lynn Karlsson's and Annika Åkerblom's respective articles. In the article, *Perspec*tives on Gendered Labour Legislation in Sweden during the 20th Century, Lynn Karlsson shows that historically, occupational and environmental safety issues have been the subjects of legislation that has been gendered. Since the beginnings of industrialism, where women can work and what kind of work they can do has been regulated in many different ways. In her article, she deals with two aspects of this problem. First how protective legislation has helped to define women and men as "different" types of workers. The foremost argument for protective legislation for women is that women are "family" – which then men by default are not. Men are breadwinners, women secondary wage earners. This has implications for both sexes. Women's position in the labour market is weakened. At the same time, the awareness of men's working conditions and family responsibilities remains low. Lynn Karlsson explores these issues further by looking specifically at the controversial special night work prohibition for women

workers that was in effect between 1911 and 1962. This is the major piece of legislation regulating women's work in Sweden, and it was an issue of controversy throughout its fifty-year history. To some extent, she contrasts this to attempts to introduce a general night work prohibition that would also protect men.

Annika Åkerblom shows in her article, Female Factory Inspectorate – Protection for Women in Swedish Working Life 1913–1948, that the Inspectorate was to improve the social conditions of female employees in general, including women workers as mothers and housekeepers. This meant that in reality the more traditional questions regarding the work environment were linked with the women workers' unpaid reproductive work, such as their responsibilities for housekeeping. The author focuses mainly on the activity directly related to the workplace. She also shows that the Female Factory Inspectorate was a paradoxical institution, which on the one hand aimed at decreasing women's subordination in their working life, but on the other hand reproduced this subordination. The work of the Female Factory Inspectorate is still very topical for women as well as men. In many respects, the Inspectorate was ahead of its time and could predict the problems to come. One concrete example of this is what we today denote as musculo-skeletal disorders, which was then called writer's cramp, the importance of which the female factory inspectors clearly realised.

Few Swedish studies within working life history have dealt with the development of work and working conditions for handicapped workers. In *The Outer* Boundaries of Wage Work, Martha Blomqvist shows that the concept work handicap is a social construction, meaning of which is decided by demands within working life and which changes as the working life changes. For persons with a reduced working capacity, the industrial organisation of work was excluding and meant that their possibilities to earn their own livings gradually diminished. Increased demands for timely adaptation and regularity, increased control and discipline and a standardisation of the work process made it difficult for them to establish an employment relationship. Minimum wages negotiated by the trade unions and agreements on rationalisations reached between employers and trade unions further contributed to their exclusion from work. Since the 1940's, the state has intervened increasingly with subsidised employment for "those of reduced working capacity", and gradually a labour market of its own developed, financed by the state. In the post-industrial society, some of the former regulations in time and space are loosening up. New technology is being introduced. For some disability groups, this means that work conditions become less excluding. Nevertheless, today's reorganisation of work and work organisations runs the risk of contributing again to a harsh exclusion from work in Sweden. This exclusion will, however, to a large extent follow newly created boundaries. New criteria for exclusion can be expected to be shortcomings as regards communicative skills and the capacity for abstract thought, creating demands that the current system of employment subsidies seems unable to meet.

During the 1990s, the increasing workload for employees within the health care sector, most of them women, has been much discussed in the public debate. Gerd Lindgren deals with the changing work organisation within health care and its consequences for the work environment in her article *Alone in the Team?* Today employees have to face new demands and working conditions as a result of the market-oriented and downsized public health care sector in Sweden. New forms of effective co-workership have been enforced, and the earlier organisation based on spontaneously developed level-differentiated cultures, such as the collective cultures among assistant nurses, are withering away. The article presents a sociological analysis of the difference between the old group-oriented work and the new multi-professional team organisation, with a view to how the employees can cope with work overload and unlimited demands. During the 1990s, the work organisation has been transformed from being based on concrete groups to abstract teams. The co-workership and its uniform organisation culture have conquered the work cultures built on shared conditions and qualifications. In the teams, the members solely have artificial role affiliations, and their sociality becomes abstract; thus, a process of burn out, together with feelings of guilt, may develop. What is needed is the support of concrete relations with people who share the daily conditions at work, support of those who are familiar with the problems and with whose help the individual can set the necessary limits in relation to management, colleagues and patients.

In the last article in this book, *The Future of Work Environment Reforms*, Michael Allvin and Gunnar Aronsson argue that "work environment", as a conceptual framework for reforming working life, may not be readily transferred from the tangible conditions of the industrial context in which it was conceived to the more flexible conditions of modern labour. Since the flexible conditions of work generally presuppose an increased responsibility and some sort of personal commitment on behalf of the worker, isolating the environmental conditions from the personal abilities of the worker is becoming more difficult. As a consequence, the problems of modern labour will only to a limited extent be interpreted as work environment issues and subjected to work environment measures. With the propagation of flexible working conditions, the work environment institutions and their reformatory ambition will be passed by. And, rather than being a practical task of co-ordinating the different protective measures at the workplaces, the work environment reforms will be reduced to an argument within the ideologically motivated rejection of an increasingly polarised labour market.

Uppsala, August 2001 Annette Thörnquist

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Vardagens ekonomi. Arbete och försörjning i en mellansvensk kommun under 1900-talet (The Everyday Economy. Work and Maintenance in a Swedish Community during the 20th Century) (1994), Alla dessa arbetsdagar. Svensk arbetsmiljö under 500 år (All those Workdays. Swedish Work-environment During 500 years) (with S Söderlund) (1995), Industriarvet i samtiden (The Industrial Heritage in our Age) (with E Silvén) (1999). maths.isacson@ekhist.uu.se

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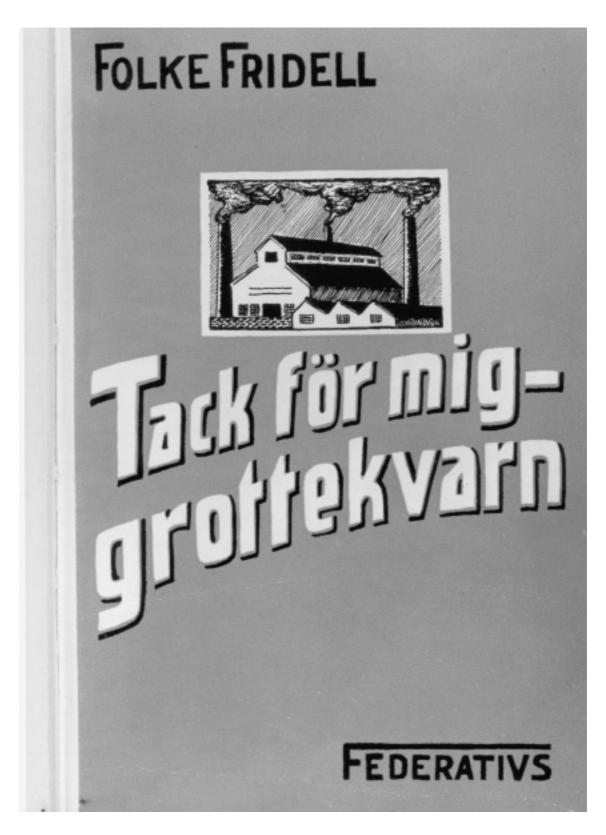
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"Fare well – treadmill" (*Tack för mig – grottekvarn*) was Folke Fridell's first book, published in 1945. Source. Arbetarrörelsens Arkiv, Stockholm.

Proletarian Writers, the Working Environment and the Struggle for Hegemony

Bill Sund

The Swedish labour market is distinguished by the circumstance that both employers and employees are exceedingly well organised. The predominant organisations are the Swedish Employers' Confederation (SAF), the Swedish Trade Union Confederation (LO), the Swedish Confederation of Professional Employees (TCO), and the Swedish Confederation of Professional Associations (SACO). The SAF and the LO, founded around the turn of the last century, have continuously dominated Swedish labour market relations. Distinctive as well has been the preponderant position of the Social Democratic Party. But a further feature, if one compares with other industrialised countries, has been the emergence of the many working-class writers who sharply criticised the working conditions of the proletariat.

In this article, I will discuss these writers' criticisms of working conditions with regard to occupational safety, the working environment and working life developments in general during the height of the industrial era in Sweden, i e from 1930 to 1975. This huge task has here been circumscribed in various ways. I intend to look at how the intellectuals of the time – but even some trade union representatives – responded to these critics, who in fictional form portrayed the shifting faces of power in working life. A vital discussion was provoked between the intellectuals and these proletarian authors, concerning fundamental values of the industrial society. Some of these writers, and especially one, Folke Fridell (1904-1985), focused on the very basis of working life organisation and its leading ideas of power. The choice of Fridell is thereby motivated. This allows us also to discuss the importance of these writers, above all through their concentration on the individual and the relationships between individual women and men, thereby breaking with the technocratic dualism of working life versus family life and leisure time.¹

In the first instance, I will present the textile worker Folke Fridell's writings, and the debate he stirred up through the issues he raised and championed, in relation to the prevailing views of the industrial society on management, workplace organisation and psychosocial issues. Factory work, according to Folke Fridell, was degrading, a labour without human dignity. The factory worker lacked the courage, however, to look his own situation in the eye. He is too proud to admit

¹ Sund (1999) and Josefson (1989).

his discomfort, said Folke Fridell,² who was also a sharp critic of the advanced specialisation of factory labour. He had long experience of traditional factory work and also criticised the anti-democratic tendencies in working life. He wanted more power for the workers.³ The actors in the industrial society – the major political and labour market organisations – had access to and could mobilise powerful resources in their efforts to push forward industry and the society according to their own logic. The power base of the industrial society was a historical, political and economic bloc consisting of two opposing forces, who nevertheless had shared interests regarding the major issues.

One of these forces consisted of leading circles in private enterprise, mainly grouped around the large banks and export firms. The other power centre was the labour movement with its various political branches – the Swedish Social Democratic Party (SAP), the Social Democratic Youth of Sweden (SSU) and the trade union confederation (LO). The farmers' movement also formed a part of the bloc from the beginning of the 1930s to the mid-1950s. This bloc had hegemony and therefore a decisive influence over the societal agenda.⁴ Other organised forces and persons who attempted to raise and promote dissident views, such as Folke Fridell, were met either with silence or with powerful opposition.

Along with the Italian power theoretician Antonio Gramsci (1897-1937), I would say that the intellectuals played a major role in the struggle for survival of this historical bloc.⁵ And it is mainly against these intellectuals that Fridell waged his ideological war. His concerns were with attitudes to work, as well as the military organisation of working life. But Folke Fridell was not alone in raising criticism of factory conditions and their consequences in terms of occupational injuries and poor psychosocial environment. Also other proletarian authors, such as Maria Sandel (1870-1927), Moa Martinsson (1904-1978), Elsa Appelquist (1909 -) and Stig Sjödin (1917-1993), addressed working environment issues in their poetry and prose.⁶ I have chosen this particular group of authors because together they stand for an important and forward-looking criticism of the industrial society's working conditions.

However, before placing Fridell in his political, economic and literary context and confronting him with his critics, let me first present some background information on the transformation of the Swedish industrial society up to the 1980s, when the contours of the information and service society began to become increasingly visible. The development of occupational safety and the working environment.

² Lagercrantz (1978) p 61.

³ See Sund (1999) and Blom (1978).

⁴ SOU 1990:44 chapter 9.

⁵ Among the great mass of literature on Antonio Gramsci, see e g Adamson (1980), Hobsbawm (1974), Jackson Lears (1985).

⁶ For overviews and articles on these authors, see footnotes 1 and 2, and Runnquist (1952), Lönnroth and Delblanc (1993), Olls et al (1989).

ronment will also be described, along with the leading actors and institutions involved. After this follows a theoretical section in which the Gramsci model of power and hegemony is presented, and the creation and maintenance of hegemony through the building of historical blocs or alliances between different forces in society is discussed. In this context, the role of the intellectuals is also addressed. In the final section of the article the results arrived at are evaluated in a power structure perspective.

Background

The Transformation of the Industrial Society

At the turn of the last century, Sweden was still a relatively poor country with limited possibilities for the greater part of the Swedish population living in the rural countryside. The periodically falling prices of export products weakened earnings and stiffened job competition. In this situation, many chose to leave Sweden and emigrate to North America in search of a new life. Especially during the crisis-ridden years of the 1880s, a heavy stream of Swedish emigrants crossed over the Atlantic to the United States.

The upheaval taking place around 1900 was radical in other ways as well. From the 1890s, the electronics industry, the machine industry and the new consumption industry, e g textiles and ready-to-wear clothing, all grew at a steady pace – a development directly related to institutional changes in the society. This is also when the industrial society's major interest groups were formed, i e the trade unions and employers' organisations that became pivotal in the development of the Swedish welfare state that grew up within the framework of the industrial society. During this period, the party structure also found its modern form. The labour movement grew and stabilised, and the right to vote became a major battle cry until at the beginning of the 1920s, when a solution was found in that all women and men were given equal rights to vote.

Electrification, industrial development and the continued extension of the infrastructure in the form of telecommunications and urban expansion increased the demand for capital credit, leading to an expansion of the banking sector. This, in turn, led to a renewed increase in the import of capital to Sweden, and there was some economic speculation involved in the expansion of electrical power resources. New forms of credit developed and the stock market took off with the breakthrough of the Stockholm Stock Exchange at the turn of the century. Had this industrial logic been allowed to continue, a phase of integration and great investment would have followed. What happened instead was the outbreak of the First World War.

After the war and the shortening of the working day (the Act regulating the eight-hour day was passed in 1919), there was a crisis in industry. Particularly

vulnerable branches were steelworks and sawmills, but even the engineering industry was made to feel the pinch. The pressure to rationalise was considerable. In spite of all this, however, the Swedish situation was generally good. Firms were soon able to resume their export production. The heavy rationalisations led to increased productivity and higher incomes, and a good supply of capital meant that new products could meet with a ready market. But changes in demand and the rationalisations following on the shortened working day led to a wave of unemployment that remained relatively high during the 1920s. And it was partly during this time that Folke Fridell worked in a textile factory in Lagan in southern Sweden.

In Sweden, where dominant influences had earlier come from Germany, the many new impulses now came from the USA. The American mass production industry began spreading its goods and ideas to Sweden. From there were taken new management principles; various rationalisation techniques, such as the conveyor belt and the electrical motor-driven machine; as well as new ideas for the organisation and application of occupational safety rules through "the safety movement" and "safety first" campaigns. The Swedish firms were quick to catch on and soon began to follow American patterns. Office machinery, indispensable to the growing service sector, became increasingly widespread. The problem was that the trade unions were considerably stronger in Sweden than in the USA and could neither be ignored nor subdued. This meant that Swedish management was forced to seek co-operation with the labour movement, with or without the involvement of the third party, the State.9

During the transition to the developed industrial society, the popular movements, above all the trade union organisations, gained an extremely important role. Through their policies and actions, the extensive and growing labour movement, beginning in the early 1930s, became the bearers of the new, emerging industrial society as well as of the Swedish welfare state. The Swedish labour movement became the foundation of the state and joined political forces with the farmers' movement.

Electrification and the advancement of the motorcar became increasingly important factors during the 1930s. The result was an extension of the infrastructure with the help of the electrical and the petrol-powered motor, creating further new opportunities for enterprises and organisations. This transformation was part of a greater process taking place in the country right up to the 1960s with the active participation of the state, its task being to contribute to planning and financing. Gradually, these changes came to affect all sectors of the society, and one decisive shift that emerged was that women began to find their way into the labour

⁷ For this section unless otherwise indicated see Schön (2000) chapter 4-5.

⁸ Sund (1993).

⁹ Elvander (2000).

market – the female employment rate increasing appreciably in the post-war years of the 1950s. The further development of health care, care of the old and disabled, and of the educational system created the basis for an expansion of the public sector, where public authorities and the state came to have an even more marked influence on society.

The period leading up to the 1960s was something of a golden age in Sweden, with steady growth and a rapidly expanding economy. The driving force behind this development was heavy industry (iron ore and steel, etc), but also firms in the engineering industry (SKF, Atlas Copco, ASEA, LM Ericsson, etc) that sold their products on the world market. In the shoe, textile and clothing industries, however, there was stagnation, in spite of modern production methods. Textiles and clothing were much cheaper to produce in other countries with weaker trade unions and lower wages, and many firms were driven out of business.¹⁰

Towards the end of the 1960s, the pinch of international competition increasingly began to be felt in the previously so successful export industries. The need again arose for rationalisations to reduce production costs. Automation and largescale production with a high degree of specialisation became necessary measures if firms were to retain their market shares. Within industrial enterprises, a rapid development took place in electronics applications, above all with regard to powering systems and equipment for the processing industries. At the beginning of the 1970s, it was thought that this expansion would only continue, and huge investments were made in shipyards and in heavy industry. The oil producing countries, also counting on an increased consumption of oil, raised their prices. But these world market actors had judged the situation wrongly. A severe crisis arose. The "oil price shock" led to a widespread structural crisis. However, at this point, new ideas and innovations began to well up through the cracks, and new branches and regions took the fore in international competition and growth. The Japanese model of cooperation within the enterprise and quality integration within the work organisation began to receive attention.¹¹

The 1970s crisis showed clear parallels with the structural crises of 1890 and 1930, in that mainly branches of heavy industry and shipyards were subjected to severe competition and new demands. But there were also important differences. This time, Sweden found itself on the debit side, experiencing great difficulties in reshaping the economy to the new conditions. The now ailing mines, the steel works, the pulp and paper mills, the shipyards had all been in a mode of post-war expansion. When at last the work of reconstruction got under way, however, adaptation to the new demands of the economy was relatively quick.

The problem-solving logic of the Swedish model contributed to this, still functioning in spite of the industrial society's two main forces beginning to go their

¹⁰ Thörnquist (1991).

¹¹ Sandkull & Johansson (2000) chapter 10-12.

separate ways at the beginning of the 1970s. This was when leading persons in the private sector began to feel that the labour movement was out of contact with reality. They put forward hostile propositions in the parliament and drove through negative laws. 12 The symbolic divisive issue separating the two main forces became the Wage-earners Investment Funds. 13 Fundamentally, however, the disagreement concerned what road to take in the development away from the industrial society, and this lack of agreement soon made itself felt on every level. During the 1980s, the manufacturing industry gradually abandoned the system of central wage negotiations, and the Taylorist approach to work organisation was discarded. Both centralism and Taylorism had been basic elements of the Swedish model, which now began to dissolve. 14

On a structural level, the industrial society was now fundamentally transformed. The Act on Co-Determination at Work had been introduced and the Taylorist management and job splitting methods were replaced with "flatter" organisations that demanded competence of all personnel – precisely the types of changes and reforms that Folke Fridell had discussed already in the 1940s. But certain jobs became more impoverished, especially in administration and similar areas of work. In social service and health care occupations, organisational changes often led to further deterioration in the working environment.

The Development of Occupational Safety

In examining the statistics on Swedish occupational injuries (accidental or task-related) and attempting to use them for descriptive purposes, one must remember what these statistics essentially represent. They are certainly no true reflection of reality in the sense of tallying the actual number of persons who had suffered injuries or become ill through their work. Instead, what the statistics tell us are the numbers who have *reported* injury or illness, or who at a later stage had their conditions accepted as occupational injuries (the latter are a special branch of statistics). One complication – if small – is that a person might also have a condition approved as an occupational injury that had perhaps been incurred in quite another context than working life. The major complication, however, was that many injuries were not accepted as occupational injuries and that many therefore, quite likely the major part, were never reported.¹⁵

Around 1930, on the verge of the mature and developed industrial society, about 100,000 accidents were reported each year. Twenty years later the corresponding figure was about 300,000. This figure included task-related illnesses, but as few illnesses at that time were classified as occupational, reporting was

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¹² Lundqvist (2000) p 97.

¹³ Stråth (1998).

¹⁴ Sund (publication pending) SEKO, politiken och marknaden.

¹⁵ Åmark (2000).

little and that proportion of the total was low. This great increase in the number of accidents can have several explanations. One that is certain is the increase in employment as a result of the intensified industrialisation. But other conceivable explanations – since even the relative rate of accidents (number of incidents per employee) increased – were:

- that the occurrence of reporting increased, above all because even minor injuries were included in the statistics from the 1930s on,
- that better protective measures were introduced and established through an
 agreement between the SAF and the LO in 1942 concerning the setting up
 of safety organisations in every workplace, leading to more safety engineers and safety ombudsmen to monitor the workplace and make sure that
 accidents were reported,
- that the working environment *de facto* became more dangerous because of rationalisations and stress in the production process due to piecework. In 1940, the head of *Scania Vabis* in Södertälje noted that rationalisations had caused a deterioration in the working environment. The statistically reliable working-environment indicator, the mortality rate, was relatively constant at about 500 per year in the period 1920-1955, barring a redoubling during the war due to torpedoed trading vessels and inexperienced labour. The statistically reliable to the period 1920-1955 are redoubling during the war due to torpedoed trading vessels and inexperienced labour. The statistically reliable to the period 1920-1955 are redoubling during the war due to torpedoed trading vessels and inexperienced labour. The statistically reliable to the period 1920-1955 are redoubling during the war due to torpedoed trading vessels and inexperienced labour. The statistically reliable to the period 1920-1955 are redoubling during the war due to torpedoed trading vessels and inexperienced labour.

This linear increase in the number of accidents, which according to the statistics had begun already before the 1930s, was of course problematic for the actors of the hegemonic bloc and counteracted their efforts to achieve the legitimising assent of the workers to prevailing production and insurance conditions. The government therefore appointed several commissions of investigation in the 1930s, whose task was to propose solutions to the problems of poor working environment, increasing work accidents, and work-related illnesses. The work of these commissions was impeded by the war but finally resulted in two important new laws. These were the Worker Protection Act in 1949, including the establishment of a new public authority, the National Board of Occupational Safety and Health, to both supervise and be responsible for defining limits and making new regulations, and the Act on Occupational Injury Insurance in 1955. Also in 1955, health insurance was guaranteed for all through the new National Insurance scheme. This gave employees the right to take a week of sick leave for lesser complaints without needing to produce a doctor's certificate.¹⁸

This new and radical intervention by government and parliament meant that from 1955, all minor injuries not leading to sick leave of more than a week were

¹⁶ Lundqvist (2000) p 32.

¹⁷ Isacson & Söderlund (1975) p 71.

¹⁸ Åmark (2000).

removed from the accident statistics, leaving only the more serious injuries. This provided better control and the number of occupational injuries (accidents and work-related illnesses) stabilised on a much lower level. But, as it turned out, the problem of poor working environment remained. The more trivial injuries concealed a working-life reality that spoke of harsh conditions, stress and a number of other risk factors.¹⁹

This came to light through an extensive working environment survey carried out by the powerful LO head office at the end of the 1960s, in response to the sharp criticisms raised in various quarters – including the proletarian writers – against existing work organisation and poor working environments. The survey revealed that workers generally experienced their working environments to be deficient. Eighty per cent of respondents saw their environments as risky. The signals from this survey and other reports, as well as the great miners' strike in the ore fields of northern Sweden in 1969-70 led to state investigations and intense reform activity.

New laws were passed to try to stabilise the workplace situation and to create security for the workers – the Act on Co-determination at Work in 1976, the Act on Occupational Injury Insurance in 1977 and the Work Environment Act in 1978. Further, the major actors on the labour market negotiated a working environment agreement in 1976 (the first since 1942). The aim of the Working Environment Act was to prevent ill health and accidents at work and create a good working environment. A vital idea behind the law was to increase worker power through participation in management. This aim, to increase job satisfaction through participation, was also behind the Act on Co-Determination.²⁰

What was new in the 1970s, as the industrial society began to fade, was not that the number of work accidents increased but that the number of reported illnesses showed a rapid growth from year to year. These were alarming signals. Most often, the complaint was musculo-skeletal disorder – injuries caused by monotonous and repetitive work, mainly in the arms, lower back, shoulders and neck, with women being afflicted more often than men. In the 1970s and 1980s psychosocial aspects also began to come strongly to the fore and to be awarded attention, where before they had mostly been ignored.

Computerisation was one of the factors triggering the increase in reported injuries – many tasks were readapted to the new computer systems and people reacted with psychological and somatic complaints. Earlier, the limited-motion routine jobs had mostly been found in industry and especially in the textile industry. Now they were everywhere, though partly in another form. A time had come with a new awareness of unpleasant conditions at work, now expressed as open discon-

¹⁹ Sund (2000).

²⁰ Edling (2000).

tent – a wearing of the body and chafing of the soul that had long ago been pointed out and brought alive by the proletarian writers.²¹

Theory

Gramsci, Hegemony and the Intellectuals

Antonio Gramsci's theories of political sociology can usefully be applied to an analysis of power relations in the Swedish industrial society. According to Gramsci, the maintenance and development of employee consent is a major strategic task for the leaders of any hegemonic bloc. Central to Gramsci's theories of power and politics is the concept of hegemony based on force (violence or the threat of violence), on the one hand, and consensus, on the other. Hegemony is a specific power relationship between the dominating and the dominated. Gramsci calls this stable organisational relationship a hegemonic bloc, containing active cultural, political and economic forces.²²

Consensus is achieved on account of the contradictory consciousness of the leading groups and classes (common sense, manners, customs). The human mind holds the capacity for both opposition and for resignation and apathy, resulting in a form of passivity leading to a preservation of the status quo. But the concept also stands for a specific politico-historical level of development for a group or class in a society, in an awareness of sharing a common culture or fundamental pattern of ideas and a mutual standing in moral values. The concept of hegemony focuses on the entire range of cultural and ideological manifestations as a way of understanding the political and economic development of a society. Gramsci thus refutes Friedrich Engels' thesis that in the final analysis the economy is always the most crucial factor in a society's development.

The leading groups have hegemonic resources at their disposal. Such resources may include political parties, trade union organisations, cultural institutions and the educational system. These resources function as tools to legitimate the prevailing order and avoid open confrontation by holding open channels for debate and protest. Hegemony is never static, but always a compromise between the leaders and the led – a condition of balance, according to Gramsci, in a constant state of readjustment. Hegemony should therefore be seen as a process with room for debate and contradictory cultural expressions.

Consensus is organised with the help of the intellectuals. The concept of the intellectual is also central to Gramsci's thinking, their social function being as conveyors of ideas within the civil society and between the government and civil society. Every major interest group spawns its own intellectuals who give the

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²¹ Sund (1992) p 62 ff.

²² This section is based on Adamson (1980), Hobsbawm (1974), Jackson Lears (1985) and Sund (1989).

group a sense of homogeneity and consciousness of its task, not only within the economic system but also in the wider social and political arenas. Intellectuals are obligatory in every group striving for power and hegemony. To this group belong, according to Gramsci, writers, artists, journalists, administrators in industry, economists, physicians and lawyers. In modern society, new groups, such as TV reporters and personalities on the cultural scene, also arise.

It is important to point out that any individual can become an intellectual. In Gramsci's view, every person carries with him-/herself the potential ability to form his/her own environment. The ordinary person in the crowd becomes an intellectual at the very moment that s/he resists being led by "common sense" (the contradictory human consciousness) and becomes a conscious "philosopher", questioning the prevailing order. Further, intellectuals are of two kinds, traditional and organic: that is to say, those who work to preserve the status quo, and those who work to promote anti-hegemony. In Gramsci's terms, it happens that traditional intellectuals defect to the organic intellectuals trying to create a new historical bloc.

In order to build a bloc, the intellectuals must formulate a philosophy connecting to broad groups of people and make it plausible that their interests coincide with those of the society at large. A historical bloc, according to Gramsci, can be defined as an alliance between groups with mutual economic, political and cultural interests. Hegemony always requires a historical bloc, but a historical bloc need not be hegemonic. One can thus imagine several competing historical blocs, either already existing or in some state of construction.

During the era of the mature industrial society (1930-1975), only one historical bloc emerged in Sweden. No other bloc under construction has so far been evident in the literature. As we have seen, this bloc was composed of two powerful forces, the leading circles in the private sector and the labour movement, in which the farmers' movement was included for a time. Within this bloc, implicit or explicit, there were common problems, and solutions were formulated with regard to economic doctrines, organisational issues, specific vertical or horizontal work organisational structures and in managerial views of gender, science and technology. There was also a common and institutionalised method of solving conflicts, of which the investigative organs of the state formed an important part.

The historical bloc changed and became consolidated during the years, most so in the record-breaking years of the 1960s. During the 1970s, however, the bloc began to dissolve and disintegrate. The different forces in the traditional alliance began at that time to pull in different directions. This development was prompted by the labour movement, whose intellectuals could no longer accept the bloc's agenda in terms of its view of co-determination and working environment. It was becoming difficult, not to say impossible, to retain the workers' acquiescence. But up to the 1970s, the intellectuals of the historical bloc had firmly defended its view of work organisation and the working environment. Let us here abandon the

decay of the historical bloc and instead focus our attention on the early criticisms that arose in the 1940s and 1950s, such as Folke Fridell's penetrating analyses. What issues were raised and what response did they provoke? What attitude did the bloc's intellectuals take to e g Fridell's views and proposals?

The Proletarian Writers' Protest

Maria Sandel, Moa Martinsson, Elsa Appelquist, Stig Sjödin

The majority of – and the most influential – proletarian writers belong to the 1920s and 1930s, writes Helmer Lång.²³ After the 1930s the working-class writers became fewer and after the 1970s, the term can hardly be applied at all, at least not in Sweden, considering the development of the school system and of the welfare state. Yet, the theme remains as urgent as ever, though with a partly new working life to formulate and represent.

The concentrated emergence of self-taught poets from the depths of the Swedish people was unique. There is hardly an equivalent to be found anywhere else, with the exception perhaps of the other Nordic countries. These mainly selftaught authors either were or had been workers. They had never sat rapt in university lecture rooms or participated in post-seminar colloquiums. But the Swedish working-class writers had their models. The admired precursor was August Strindberg (1849-1912), in spite of the fact that he was not of the proletariat and had only in passing showed interest in or described the everyday life of the labouring man. In fact, his contribution amounted to a few interested and class conscious, but limited, references in his novel, *The Red Room*, and a few scenes in A Dream Play. But in his autobiography, Tjänstekvinnans son (The Maidservant's Son), Strindberg struck a note that incited and fired up enthusiasm. His direct followers did likewise. Eyvind Johnson (1900-1976), Ivar Lo-Johansson (1901-1990), Vilhelm Moberg (1898-1973), Harry Martinsson (1904-1976) and Moa Martinsson (more about her authorship below) all wrote in the form of fiction about their own childhoods – the experiences that they were most familiar with.²⁴

The first really import proletarian author in Nordic literature was the Dane, Martin Andersen Nexö (1869-1954). In his autobiographical suite, *Pelle the Conqueror*, he portrayed, among other things, agricultural workers on the island of Bornholm. The first important Swedish writers in this genre began to appear in the 1910s. One of these was Maria Sandel, whose novels *Familjen Vinge* (The Vinge Family) and *Virveln* (The Vortex) deal with her own experiences of factory life in Stockholm. She had been a textile worker specialised in knitwear and roundly criticised the great risks of accident and the ailments incurred in the workshops. The factory environment she paints in dark colours, but the workers,

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²³ See foreword to Olls et al (1989) p 10.

²⁴ Ibid p 10 ff.

who are skilled and proud of their proficiency, are treated with great empathy, especially the female workers. These were workers of the "right stuff", who did not succumb to facile temptations. Workers, in Sandel's description, were forced to work under irrational control systems and were further oppressed by capricious male supervisors.²⁵

In *Virveln* she gives a detailed description of the working conditions in a chocolate factory, where the work organisation leads to workers trying to avoid certain tasks. Avoidance or "go slow" becomes a game. Each evening the workers go through a body search to make sure no chocolates are stolen. The heroine, the young woman Magda Mejsel, has a hard job beating the liquid chocolate. To begin with, her wrists ache terribly, but later she learns the technique and things get better.²⁶

Maria Sandel was the first female working-class author in Sweden. Her books give a description of factory life, but they also throw light on a phenomenon that deeply marked working life at that time, namely, the very definite segregation of the sexes. "It is not a matter of chance", writes Eva-Karin Josefson, "that she places her working women in a chocolate factory. A chocolate factory at the turn of the century was a clearly female-dominated place."²⁷ Women were very poorly paid, their wages being about half the average male wage and their jobs were largely routine. Several of the women in *Virveln* had such typical jobs, packaging the finished bars of chocolate, whereas the men employed at the factory were all in managerial or supervisory positions.

In the footsteps of Sandel came Moa Martinsson, who of course also wrote from a female perspective. In the opinion of Helmer Lång, she is unequaled among the proletarian authors of the 1930s. The action in her novel *Sally's Sons* takes place in a textile factory. Moa Martinsson had not worked in such a factory but her mother had. Moa herself worked as a child-minder and as a waitress, before moving on to becoming a cold-buffet manager. The work in Sally's factory is monotonous. The factory is noisy and smelly. Sally's mother has the task of shredding rags, the same task as Fridell's workers, but in spite of the conditions, she is not unhappy. In fact, she is pleased when she gets clean, fine textiles to shred. But in her thoughts, she keeps going back to the time when she was young and was able to weave beautiful pieces of cloth herself. She is also very conscious of the fact that she can be laid off at any time, if the quantity of work should fall off.

Sally's sons also end up working in the factory. One of their workmates with whom they share a room dies of blood poisoning after having had a thumb torn off in a machine. There are no safety precautions. Earlier, this same man had lost

²⁵ Josefson (1989) p 43 ff.

²⁶ Sandel (1975 edition).

²⁷ Josefson (1989) pp 55-56.

a finger in another machine. That accident had been the result of an impatient and unsympathetic engineer forcing the pace. The surgeon at the hospital, who found himself having to amputate the next finger as well, was heard to remark angrily, "Far too many fingers are destroyed in that factory!" 28

Although Moa Martinsson indeed follows in Maria Sandel's footsteps, she does not show the same strong streak of feminism, Åke Runnquist points out. Her focus is on the women, their work and their relationships with their men, who always tend to be somewhat evasive and unreliable. The women are the ones who are forced to take responsibility, to feed the children and mind and foster them. They are the unsung heroes of home and workplace. Moa Martinsson is also in Runnquist's opinion without peer in Swedish literature when it comes to describing proletarian everyday existence.²⁹

Elsa Appelquist, on the other hand, is not at all as well known as the other writers in this selection. But she wrote on the basis of her experience as a worker at L M Ericsson in Stockholm, so she has a great deal to tell about working life and the psychosocial environment. She was also active in the trade union, with a position of trust in one of the largest shop unions in the country. She wrote only one novel, *Krig med räknesticka* (The Slide-rule War), in which she depicts the people and the working conditions in the factory, giving a vital portrayal of female and male factory work in a large Swedish enterprise with a Taylorist work organisation in the period between the wars.

The workers in the book carry out ordinary precision-tool work without demand for professional competence. Her account deals with their everyday and emotional life as women and men. She also closely describes trade union work, with its rounds of meetings and negotiations. She is opposed to unmotivated work discipline, malicious supervisors and humiliating time-and-motion studies. In her work she amply demonstrates how Taylorism was applied, how consciously "the brain" was separated from "the hand". Because of this, she concluded, workers became worn out ahead of time. Her criticism is particularly telling, coming as it did from the inner circles of the Stockholm branch of the Social Democratic Party. But she also writes about the differences between workers, the ones who acquiesced and allowed themselves to be treated in this way and the ones who protested. Her demand was for co-determination. At the same time, she believed it would be difficult to change factory work in any fundamental way.³⁰

The poet Stig Sjödin's writing is about work, the division of labour and worker consent. In his work, he branded the Taylorist control system and, together with Fridell, he was responsible for the renewal of proletarian poetry. He was himself

²⁸ Martinsson (1991) p 145.

²⁹ Runnquist (1952) p 140.

³⁰ Appelquist (1949). See also Kågerman (1961).

a steelworker and his father worked in the rolling mill at Sandviken Ironworks, and this is the working environment he portrayed. He was a man close to life. What is special about Sjödin's poetry is that, like Fridell, he not only deals with management's authoritarianism and capriciousness, but also just as sharply criticises the workers' narrowness of outlook and treatment of other, deviant workers.³¹ His breakthrough came with *Sotfragment* (Soot) in 1949, a collection that contains many of his typical poems, sharp, vibrant and self-explanatory.

Folke Fridell

When Folke Fridell's second book, *Död mans hand* (Dead Man's Hand) came out in 1946, it received a great deal of attention and also roused a great deal of indignation in some people.³² There was no mistaking that the writer of this book was a well-read worker, a person who had processed his experiences from definite political viewpoints. Folke Fridell was a card-carrying Syndicalist. But that upset no one. The market for proletarian literature had grown rapidly and many authors – Eyvind Johnsson, Ivar Lo-Johansson, etc – were established figures. What upset some people was what took place in the book and what the characters thought and spoke about. The novel lacked respectfulness and held a challenging tone. This was something new. Fridell poked fun at the belief in advancement. He criticised the Swedish welfare state and its ideology.

The action takes place on several levels. It is not only a treatise on factory life. Criticism of industrialism is not a dominating aspect. Rather it deals with the main character's self-esteem and his situation as a father and worker. He is a bit of a failure, his best years behind him. He and his family are like most other ordinary people – mostly decent, somewhat limited perhaps, and with a few minor idiosyncrasies. But David Bohm is viewed as peculiar.

The book became famous as the book where a worker on a night shift says that one ought to "be part of the sharing and the decision-making". These words about the demand for co-determination are later repeated in *Rivar-Bohm* (Fighter Bohm) when, as newly elected trade union representative, he takes part in negotiations with management. His statement causes the other workers embarrassment and the Director to quite lose his aplomb. In the book, a wildcat strike also breaks out after Bohm's son, Urban, who was another type of person and more hottempered, knocks down a time study man and is fired as a punishment. The other workers demand his reinstatement.³³

In his next novel *Greppet hårdnar* (The Tightening Grip) in 1948, a free follow-up to *Dead Man's Hand*, Fridell launched a counterattack against his

³¹ Sund (1999).

³² The whole debate is discussed in Rivar-Bohm, "rörelsen" och människovärdet, in *Klartext* (1972).

³³ Död mans hand (1989 edition).

critics, giving a more profound exposition of his viewpoint and embellishing his criticism of factory life in the welfare state. He allows his critics to present their case by organising a number of evening debate sessions, convened by the local dentist. During these sessions, he juxtaposes the arguments with each other and lets *Rivar-Bohm*, now even called *Skrivar-Bohm* (Writer Bohm), be backed up by the other textile workers. Fridell holds up the two worlds to view – the world of the worker and the world of the elite, represented by the upper crust of the region. They attempt to get him to see the error of his ways. Why not leave the factory? they ask. He is even offered a job as a travelling salesman. The well-to-do whole-salers at the meeting say, You can't improve the factories, rationalisations must be made.

The discussions become antagonistic. What does Bohm really want? Changing the owner of the machine won't help, they say, the relationship between leader and led will be recreated and new elites will appear. Bohm waves all such protests aside, but it is not as easy to handle the criticism of his workmates. The way you write is too difficult, David, it really isn't all that bad, is it? and, Don't you like your job? Or, why do you make women look so bad? asks a female workmate. At one meeting, he has to contend with criticism from Communists. Look, David, what you've written is mostly crap. You haven't put in a single class-conscious worker. What you have is just a bunch of farmyard hens that don't know what they want. You don't even respect honest labour!

This criticism puzzles Bohm. He thinks: They want heroes, of course, heroes with holy ideas in their lucid brains... His criticism of the Social-Democratic leaders is harsh and he doesn't think much of the works council. He thinks it is a bluff. Bohm is elected to the works council at the factory but does not fit in there. The lack of freedom around me, Bohm thinks, has just become a little tighter. The grip has hardened. I've pulled a little on the leash, perhaps a little more than others have, and the barbs only cut deeper if you're obstinate. But come obediently to heel at the side of your master and the slave leash hangs slack and comfortable around your throat.³⁴

In *Syndfull skapelse* (Sinful Creation) also published in 1948, Fridell focuses on the workers' existential need for freedom. The plot deals with an ordinary worker who finally revolts. The factory worker, Konrad Johnsson, decides to go AWOL, to take a "creative week". Of course, this turns everyone against him – family, employer and trade union. His rather modest demand for freedom goes against the grain of welfare state principles, the Protestant ethic, and existing industrial agreements.³⁵ In this way, Fridell shows how trapped everyone, irrespective of gender and position in society, was in their conventions of how a factory worker and family supporter ought to be. He should go to his job every

³⁴ See Sund (1999) p 124.

³⁵ Ibid.

day, hold his peace, and not be difficult. He should not revolt and absolutely not carry out a personal revolt at the expense of others. They, at any rate, had to go on working.

In the post-war period, the books about Rivar-Bohm and his world contributed to a deepening of the debate on the social aspects of industrial work. The "social issue" of the 1880s re-emerged, the problems of working life clearly evident. The actors of the historical bloc (the SAF and the LO) tried to redress these problems, among other things by coming to the agreement on work councils. Industry was booming, but the workers were still not happy with conditions and job turnover was high. Why? It could hardly just have to do with the small pay increases? Fridell had an answer, but was not taken seriously. His vision was "dark" and his solution "too speculative". Job satisfaction, the working environment and the consequences of rationalisation needed to be studied scientifically, it was said. This happened soon enough, in the epoch-making sociological study of family and working life in Katrineholm and Husqvarna, carried out under the leadership of Torgny T Segerstedt and Agne Lundquist. The main questions, related to the waning agricultural society, were: What are the values upheld by workers in the industrial society? How do they enjoy their work? How do they live and how well are they integrated into the industrial society?

The self-taught Fridell was suspicious of this research effort, his view being that humans were not geometrical figures but living flesh and blood. When the reports, *Människan i industrisamhället* (Man in the Industrial Society)³⁶, were published in 1952 and in 1955, Fridell wrote a whole novel, *Bjälken i ögat* (The Beam in Thine Eye), to prove the limitations of sociology when it came to describing and understanding human actions. In spite of the sociologists' good intentions, he maintained, their questionnaires seldom put the right questions. Without having worked in a factory oneself, how could one understand what it was like to work in a factory?³⁷

The Debate in the Clothing and Textile Industry

Working conditions after the war provoked more debate and there were many sharp critics. Among these, we can count in varying degrees Fridell, Sjödin and Appelquist. On the other side were those who defended the prevailing situation – the historical bloc's actors in industry (employers and trade union representatives, and especially certain intellectuals who will be discussed in more detail below). And of course, there were all those who had no proper opinion at all. It is especially interesting to follow the debate that arose within Fridell's own territory, the Union of Swedish Textile Workers. In their trade journal, *Beklädnadsfolket* (People in Textiles), the editor Gösta A Svensson, who had grown up in a textile

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³⁶ Segerstedt and Lundquist eds (1952, 1955).

³⁷ Ibid.

workers' home in Lerum outside Gothenburg, wrote a signed editorial in the October issue of 1947. Under the heading, "Job satisfaction must be sought on the job – not outside it," he addressed the question of how to regain job satisfaction in labour and handicrafts. His own answer was that the worker must above all be given wages that would allow him to decently support his family. Further, the worker must be valued in an entirely different way than at present and this should be done within the framework of industrial democracy. "The worker should not feel that he is an anonymous creature, a mere complement to all the technological wonders." Everyone must understand that the seamstress is as important as the seller of the suit.³⁸

To start with, Gösta A Svensson did not quite take sides; rather he took a stance close to Fridell's programme. A year later, however, in 1948, after *The Tightening Grip* had been published, Svensson again wrote an editorial on the subject of "Man and the Machine". Here he attacked Fridell for one-sidedness, because Fridell, "the most aggressive of them all", had said that "there is no longer freedom of movement in the workplace for the functioning people". But in Svensson's opinion the general public had "heard the emotional, the problematic and the intellectually stimulating, but all too seldom the arguments of the people who actually on a daily basis are on the battlefield of industrial labour."

He continued to refute Fridell's viewpoint that the worker in modern industry lacked human dignity:

"To assert this is to deny the results of the labour movement's half century of struggle on the trade union and political front-lines. It is also untrue that the workers of today are merely tamed and obedient tools. And finally, it is untrue that workers, timid and silently submissive, acquiesce to everything. No, Folke Fridell, the workers can speak on their own behalves! Are they speechless at the many and complicated negotiations of labour market agreements? Do not workers have the opportunity to make their opinions known in the discussions of the safety committees' and the works councils' many hints of unsolved problems in the workplace? The problem of well-being touches every individual worker. But we all have different temperaments, different ways of thinking, acting and reacting. Generalisation, whether rough or infinitely well polished, will therefore not lead to the truth."³⁹

Before this piece, quite opposed to Fridell, was written, the working environment and workers' well-being had been discussed at the 17th Congress of the Union of Swedish Textile Workers in 1947. The reason was a motion put forward by the Örebro branch of the union concerning the "race to break records" in in-

³⁸ See Sund (1991) p 64 ff.

³⁹ Ibid.

dustry. The motion was written by Margit Persson, who later became a journalist at the Social-Democratic newspaper, *Örebro Kuriren*. As a result of machine technology, modern rationalisation techniques and time-motion studies, the human material was being used mercilessly, the motion said. "The statistics already show an increase in neurotic ailments, especially among the female industrial workers." The branch wanted the executive board of the union to

"investigate the issue of the complications that the general frenzy of the labour market seems to be causing and together with LO attempt to arrive at suitable measures for creating better protection for the human material."

At the congress Margit Persson said

"For a long time, we have, in industry, both functioned as machines and been treated like machines. In the event that the machine slaves ever raised a voice in protest, the answer has been an exposition of the blessings of rationalisation. We are not against rationalisation as such, but human beings must not be allowed to be passively mechanised in the extreme rush of the times."

She also appealed directly to the full-time employee functionaries of the union: "Even those who have recently abandoned the battlefield to bring home a richer harvest seem not to want to understand that the risks of mechanisation are greater for assembly-line workers than for others."

Margit Persson then went on to identify the reasons:

"The workers themselves are often the cause behind the stress. They stretch themselves to the limit to achieve the greatest possible earnings. Adaptation to the killing pace of the assembly line varies of course from person to person, but one thing they have in common, is an aversion to the dictatorial style and ownership structure of the firms and their attitude to the workers. Many times, it seems strange that they can maintain the ironclad discipline. Take a look at the fifty year-olds with their shaky hands, the ones we can call the first machine-man generation."

Gösta A Svensson, on the presiding committee, immediately asked to speak at the end of Margit Persson's presentation. The works councils, he said, that had recently been introduced would take up the problems of industry, including the problems of the well-being of their workers. What was important was to "put the right person in the right place" and to "make use of all the collected knowledge", as well as "listen to experience as represented by workers with many years of training." One must do "everything possible to create a new spirit, which shall have co-operation and not despotism as its main characteristic." People must be placed in the centre of attention!

This was followed by a statement from the chairperson of the union, Per Pettersson, to the effect that textile workers as a whole did not at all consider themselves to be like slaves, oppressed by the machine. "In the many years that I myself was employed in this industry, none of us at least ever felt that way. We were well aware of our own worth." But a debate on these issues is of great value, both useful and necessary, he told Margit Persson and the rest of the auditorium.

After a number further of contributions for and against, however, the motion was rejected.⁴⁰

An important indication of the significance and level of this debate on the well-being and co-determination of workers was the publication in 1949 of the book, *Blodprov på arbetsglädje: hur det känns att arbeta – kroppsarbetare ser på sig själva och sitt arbete* (A blood test of job satisfaction: Workers' views of themselves and their work). The 34 essays in the book were written by workers studying at the LO folk high school, Brunnsvik. These all rejected Fridell's theories. In his foreword, Torvald Karlbom, intellectual, historian and principal at Brunnsvik, wrote that the problem of well-being had always existed, but only now – when the labour supply was scarce – had this problem begun to demand notice.⁴¹ The editor of *Beklädnadsfolket*, Gösta Svensson, asked three workers to review the book for his paper (May 1949). According to one of them, Karin Mårdh, the content of the book suggested that the Swedish worker had taken a quite sensible view of the issue. She went on,

"After Fridell, it was refreshing to get one's hands on this book. For while his *Rivar-Bohm* made me wonder how I could have worked for 20 years in the textile industry without being aware that I was really in an infernal limbo; Karlbom's little book came and restored the balance. I realised that there wasn't something wrong with me." ⁴²

But the choice of essays and reviewers had clearly been somewhat "skewed", because in the September issue of the newspaper, Svensson returned with the results of two questionnaire surveys, as well as a new editorial entitled "The textile workers and well-being". In one of the surveys, a Gallup poll undertaken on behalf of the textile industry, 2,000 randomly chosen women had been asked to give their views on the textile profession as compared to other jobs. The results were very clear: only six per cent could see any bright spots in the textile job compared to working as a maid or a shop girl. Mainly, it was considered "socially degrading" to be a textile worker.

In the other survey of 1,293 persons in five towns, of which 331 were textile workers, the results were less clear. The unanimous opinion among the respon-

⁴¹ Karlbom ed (1949).

⁴⁰ Ibid.

⁴² Sund (1991) p 70.

dents, however, was that work in the textile industry was unhealthy and tending to be associated with tuberculosis. Otherwise, the majority of these textile workers said that they were happy with their jobs and their workplaces.

Svensson summarised these contradictory results as follows:

"The entire basis for well-being at work is formed by a combination of different factors. But one fact remains. The job of a textile worker, despised by the general public, is far more appreciated by the workers themselves."

In his opinion, the public at large had not understood that much had changed within the textile industry. "The sins of old employers and 19th century attitudes still haunt the public mind." While the situation was not as Folke Fridell had described it, this did not mean, however, that everything was all right. There were many problems yet to be solved.⁴³

The peak of the discussion about the well-being of workers and job satisfaction in the clothing and textile industry was reached when *Beklädnadsfolket* and the branch journals *Textil och Konfektion* (Clothing and Textiles) and *Textile Information* organised a conference in the beginning of November, 1949, to which employer, supervisor and worker representatives were invited. In a document, *Trivseln i arbetet* (Well-being at Work) published after the conference in 1950, K A Billum, the editor of one of the branch journals, wrote in summary of the conference:

"What is needed now are not alarm clocks and pointers [this addressed to Fridell who was not at the conference or in any way involved]. What is needed is contact with the parties on the labour market, an open and realistic discussion between the workers, employers and supervisors in different branches, out there in the factories."

He established that national research was needed about relationships in the workplace. "This is a question of basic research, which can be placed at the disposal of the works councils of whom we hope so much."⁴⁴

The Debate in the Engineering Industry

Around 1950, many contributions both for and against the proletarian writers' descriptions of working life and the working environment appeared in the press as well as in the various forums for debate. Editors and other intellectuals, e g school principals, were the ones who foremost responded to these writers' criticisms and in this way rose to the defence of the views of the historical bloc. In *Industria*, the organ of the Swedish Employers' Confederation, an illuminating debate flared up between Alf Ahlberg – a person schooled in philosophy who had

⁴³ Ibid p 70 ff.

⁴⁴ Ibid p 72.

been a principal at Brunnsvik and there taught many trade union leaders – and Stig Sjödin. *Industria* commanded a leading position on general cultural-sociological working-life issues. In his first sally, entitled "The industrial worker in fiction and fact", Ahlberg took a philosophically optimistic developmental perspective, claiming that the industrial march forward that had solved the basic human problem of scarce resources was unavoidable and in fact totally necessary. He felt the proletarian writers' criticisms to be an expression of nostalgia for the old society, but there was no way back.

He continued: "Only in a romantic or quixotic fable could a return be possible." There was therefore every reason "to take as sceptical a view of the current idealisation of handicraft production as of the current demonisation of modern industrial production." He welcomed proletarian creativity but considered that the perspective of these writers was skewed and the picture they painted too black. They had generalised on the basis of individual cases and built their theories on faulty preconceptions of modern rationalisation and the tendencies that characterised modern industry and its leaders. The proletarian writers had not understood that the principles of scientific management could also benefit workers.

He found the proletarian writers pessimistic. He could possibly find a few bright spots in Elsa Applequist, but not in Fridell and Sjödin. In their case, this was very hard. He had especial difficulty with Sjödin's Sandviken poems and in particular the one about a time-study man that had smeared the whole profession. This dark view could be found in Fridell as well. *Rivar-Bohm* saw only the misery and the meaninglessness around himself. Principal Ahlberg became indignent and felt that there existed a deep-seated prejudice which this writing further attempted to substantiate and hammer home – that the increased mechanisation of the work process would generally make work more soulless and reduce it to a mere series of monotonous, repetitive movements. This type of job was considered, he said – alluding to the unenlightened general opinion – not to demand any intellectual or mental qualifications and might just as well be performed by a "trained gorilla". In point of fact, Ahlberg said, there were many tasks in modern, highly rationalised industry that demanded high qualifications of the worker and it was a moot question whether these were labouring jobs or not.⁴⁵

Sjödin's reply a few issues later was somewhat defensive. He retreated a bit in the face of Ahlberg's criticism, but held his ground that content and poetic license were impossible to separate. The one could not exist without the other. But if dissatisfaction with industrial work was limited to "a couple of writer freaks" then the discussion could be concluded at once. This was not the case, however. On the contrary, it was more likely that many people were unhappy with their situations. This was suggested by the results of the Gallup poll. What the proletarian writers were doing was trying to broaden the perspective and not only dis-

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⁴⁵ Sund (1993) pp 64-65.

cuss the matter of well-being at work. There was a wider sociological issue involved, including the need to be creative in a modern industrial context with an increasing number of assembly lines. It is possible, wrote Sjödin, that the proletarian writers had been somewhat naive in performing their task but hardly more.⁴⁶

In his response to this reply, Ahlberg limited himself to noting that he and Sjödin were in agreement on a number of different points, namely, that technological development was unavoidable, that a return to pure craftsmanship would mean that the majority of the population would starve, that rationalisation was a continuation of technological development, and that a nationalisation of production was not a panacea for all ills.⁴⁷

This debate was also waged among the workers themselves. At the vast export firm of L M Ericsson in Stockholm where Elsa Appelquist worked, several contributions were published in the company newspaper *Kontakten* during 1950 and 1951. The first was by Elis Lanz, engineer and chair of the engineers' shop union (SIF). He asked structured questions about why people were not happy in their workplaces and suggested the following four main reasons: One, the workplace itself, i e the working environment in its broadest sense; two, the individual; three, disagreements with management; four, capriciousness and intolerance in workplace relations.

He then discussed these different explanations and drew the conclusion that the problem was in the human relationships. It seemed to him that the different parties in the workplace had begun to discover each other as human beings – an interesting developmental phase, in his view. He proposed that the different parties in the workplace should begin to communicate in an open and honest manner. "In doing so, one should begin with the ambition to achieve what is right and get away from the feeling of who should win." "Prestige," he declared, "should be left at home." ⁴⁸

In the next issue a contribution by the metalworker Karl Ivre was published that took up the thread of the ongoing debate with the proletarian authors. His opinion was that one should absolutely not turn them into some kind of "job-satisfaction executioners". Dissatisfaction at the workplace had been discussed long before the voices of the 1940s had had a chance to make themselves heard. On the other hand, they had achieved an intensification of the debate by showing the "other side of the coin," as Fridell expressed it. Karl Ivre wondered how the production and consumption factor, humanity, would have fared at a time when the technological-organisational system was developing fast.

Karl Ivre also shared his views on a newly completed "satisfaction" questionnaire carried out at L M Ericsson. He found the differences in the responses to

⁴⁶ Ibid p 67.

⁴⁷ Ibid p 67.

⁴⁸ Ibid pp 67-68.

the general questions and the detailed questions interesting. Eighty per cent of the responses to the general questions suggested that people felt extremely well, well, or mostly well at the factory. But when the questions touched on free opinions or got into details, the answers became more critical. Karl Ivre wondered whether this did not point to methodological problems in the Gallup polls. The truth, he felt, did not really emerge.⁴⁹

Kontakten closed the debate by reporting from a talk held by the Social Democratic cabinet minister Sven Andersson, later Party Secretary and Minister of Foreign Affairs, on the subject of industrial production and worker well-being. This talk showed how important these matters were considered to be by the leading actors in the ruling historical bloc at this time. In his talk on "Our economic situation", Andersson pointed out that the problem of well-being had become an issue because there was a state of full employment in the country. Firms were being pressured to enhance the well-being of their personnel in order to keep them. He also said that modern research had shown that it was most difficult to solve the problem of well-being and adaptability within the larger units of big enterprises, into which category Ericsson fell, but that a suitable work organisation could counteract the unfavourable social and psychological consequences of company rationalisations. He even discussed the relations between supervisors and personnel and said that a good spirit in the workplace depends most often on the ability of management and supervisors to lead the work and retain contact with the workers.50

Concluding Remarks

The post-war years were an unsettled time. Sweden, which had been neutral in the war, had escaped the extensive damage experienced by many other countries, where many people had suffered and died. Yet working life had been affected by the war and it took some time before everything settled into "back to business as usual". But in Sweden, production capacity was intact and industry was going full blast. Conditions were very different from those in countries that had participated in the war. Towards the end of the war, a political radicalisation had taken place in Europe. These Leftist winds also swept over Sweden, leading to the adoption in 1944 of a radical new programme by the ruling Social Democratic Party, who had formed a coalition government with other democratic parties during the war.

In spite of the positive situation in Sweden, an aura of pessimism began to spread in writers' circles. The era of the atomic bomb and the possibility of a new – atomic – war threw its sharp shadow over their reasoning and their writing. Even the proletarian writers were caught up in this overriding spirit of the times.

⁴⁹ Ibid p 68.

⁵⁰ Ibid pp 68-69.

Folke Fridell, in the view of Olof Lagercrantz, dreamt the nightmare of the robot society – the nightmare of Huxley and Orwell.⁵¹ Conditions in society were contradictory to say the least. In industry everything was going well and there was no lack of work. At the same time, there was anxiety over the state of the world, with the war so recently over, and there was fear that a coming robotic society would follow on the industrial one. Criticism of industrial work had been raised earlier, but not like now. Fridell's, Sjödin's and Appelquist's portrayals must be seen against this backdrop of the times. Factory work, according to these proletarian writers, was soulless and degrading. The workers were oppressed and unhappy. The Taylorist work organisation implied this lack of well-being and was therefore strongly attacked by Fridell and Sjödin. Fridell even demanded real codetermination for the workers. In this he levelled criticism at the 1946 work councils agreement between the SAF and the LO.

The problem for the actors of the historical bloc was obvious. Their opinion was that industry must be as efficient as possible. One guarantee of this was the Taylorist production method, which could therefore not be discarded. Further, they were aware that rules were needed to facilitate co-operation between the parties on the labour market, but they could not be as far-reaching as Fridell demanded; that would be too much. The Social Democrats, who had gained an even stronger position after the war, also came up against stiff political opposition from the conservative forces as they attempted to push through their new, radical programme. The party was therefore forced to a retreat. It was in this situation that Fridell and Sjödin put forward their criticisms, and the leading forces in the historical bloc had to try to deflect their criticism or silence them. When that did not work, the solution instead became the broad sociological survey undertaken at the beginning of the 1950s. This would hold the answers. But even this effort on the part of the historical bloc was criticised by Fridell, who considered that the survey did not manage to uncover the true problems.

It is interesting to note by whom and the way in which Fridell and Sjödin were criticised. Functionaries – intellectuals – within the labour movement mainly took up the debate. In their philosophy, the prevailing order could not be changed; development was unavoidable. The proletarian writers' criticisms did not directly lead to any new reforms. But they certainly stimulated the efforts made to produce a more effective regulation scheme for occupational safety and sickness benefits. The proletarian writers could therefore be said to have had a "blowtorch" effect, while the labour movement could retain the approbation of their members. The development of welfare continued and the workers largely accepted Taylorism, until the miners finally staged the great revolt against this military structure in 1969-70. There would then be a delay of two decades before the labour movement took the necessary steps to reform working life (co-determina-

⁵¹ Lagercrantz (1978) p 60.

tion, occupational safety and new working environment regulations). But the criticisms that were raised against working life regulations were essentially grounded in Fridell's and Sjödin's literary portrayals. This is something that has not been adequately pointed out earlier. What has mainly been underlined is the revolt of the 1968 generation, the Leftist winds of change and the miners' strike.

While it is hard to prove the direct importance of the proletarian writers for the development of occupational safety, the working environment and working life, as they were hardly actors in that sense, they did initiate the extensive debate concerning problems of working life that took place both within and outside the trade unions around 1950. Their opponents in the debate were intellectuals who were often affiliated to the leading historical bloc – men operating in the service of the trade union movement. The debate in turn increased general awareness of how people experienced their workplaces. But no decisive changes were made until the 1970s, when the industrial society began to fade away. For even if the will to change existed within the labour movement, the leading forces felt for a long time that it would be unwise to jeopardise the survival of the bloc by entering into fundamental discussions of a change in labour legislation and work organisation. This discussion was therefore not treated seriously until the 1970s, 20-25 years after the proletarian writers' had published their novels.

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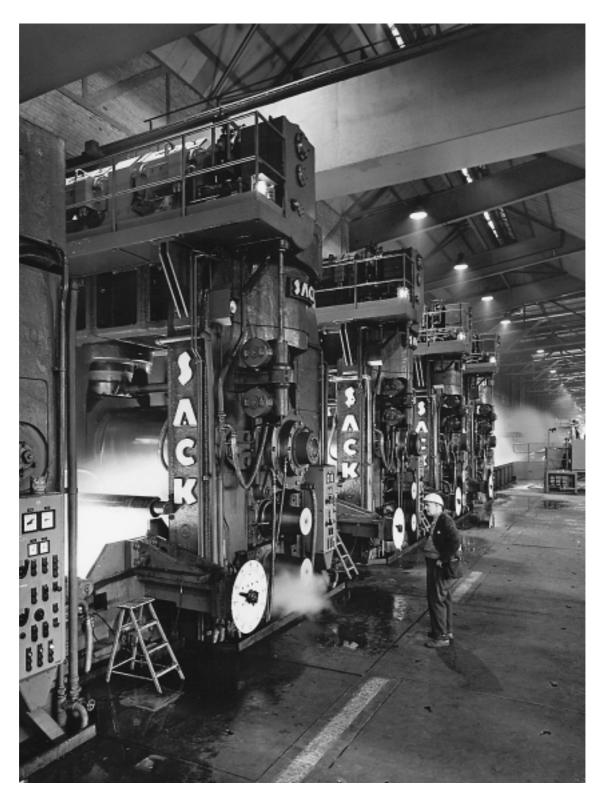
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The broad band works at Domnarvet. Source: Svenska Metallindustriarbetare-förbundets arkiv, Stockholm.

The Work Environment in the Swedish Iron and Steel Industry during the 20th Century

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Throughout the ages, iron and steel has been produced under unhealthy conditions. Despite better equipment, new production processes and active safety measures, today's iron and steelworkers are still exposed to considerable health and accident risks. This assertion is supported both by available statistics and by the report of the 1988 Work Environment Commission.¹ The Commission's survey concluded that iron workers are one of the "most endangered groups" with a clearly above average risk of serious accident, stress injuries and premature death.²

A full century before this Commission examined Sweden's 400,000 most dangerous jobs, the Workman's Insurance Committee (Arbetarförsäkringskommitten) studied sanitary conditions in the country's factories by order of the national government. The dark sides of industrialisation were then becoming increasingly apparent. Liberal MPs pushed through the study, which led to the Occupational Hazards Act of 1889. The Committee found that sanitary conditions were worst in the urban industries. Included here were Stockholm's cigar factories, metal casting plants, cotton-wool factories, painting shops and snuff and bone meal grinding establishments. All these were housed in close quarters that totally or partially lacked ventilation. In these industries, injuries took time to develop. Work accidents, on the other hand, were usually less serious here than in the many rural work places. Mining suffered the most fatalities, followed by construction and tanning. The iron industry also had a very high accident rate, even if the injuries were usually not as serious as in mining. Still, the risk of injury was substantial. The blast furnace gasses were explosive and reaped their victims. Workers had their fingers crushed in the forges. In the rolling mills, which were then replacing the older hammers, pinching and crushing accidents were common. The smiths inhaled pernicious coal dust and the ore crushers breathed in ore dust. In the rolling mills and casting plants, stomach and lung catarrhs were common. Drafts were a major problem, as was excessive heat and cold. The dark and

¹ A state commission that was appointed to investigate work related illness before a modification of the work environment law.

² Kartläggningsgruppens rapport till arbetsmiljökommissionen, p 59. For risk profiles, see p 42.

dirty rest huts where the smiths and blast furnace workers spent their break time were unsanitary. Time spent there reduced the worker's resistance to disease.³

The intention in this article is both to paint a picture of the ever-changing working conditions and health risks faced by those who worked in the iron and steel industry over the past century and to suggest some plausible explanations for these conditions and changes. I have carried out this investigation with the help of available statistics, reports and life histories.

The Industry⁴

The Swedish iron and steel industry goes back to the Middle Ages. By the end of the 12th century, mine working peasants had erected furnaces where they co-operatively smelted the ore they took from their small mines. Starting in the 13th century, the original primitive furnaces, the so-called blister ovens, in which the peasants smelted their limited amounts of lake and marsh ore, were successively replaced by larger and more costly installations. The area in Central Sweden where this occurred has long been known as *Bergslagen* ("the Mining District"). These furnaces produced pig iron, which initially was further refined into osmund iron. This was then primarily exported to ports on the south coast of the Baltic. Somewhat later, probably during the first half of the 15th century, the peasants known as *bergsmän*, in co-operatives erected hammers where the iron was refined, its carbon content being reduced and converted into bar iron. The quality was improved and larger quantities could be produced.

During the 16th century, the Swedish state took a more active role in the industry, but production did not increase significantly until the 1630s. Swedish participation in the European wars required iron. Encouraged by the state, foreign merchants and Swedish nobles now entered the business. A rapid expansion followed, with first Holland and then, starting in the 1670s, England being the principal exports markets. At the end of the century, there were 320 bar iron works in Sweden. In addition, Finland, at this time part of the Swedish kingdom, had approximately ten more. There were also an additional 110 facilities owned and operated by *bergsmän*. Owing to opposition from the state and the new iron masters who had emerged since the 1630s, the peasants had been driven out of the final stage of production. The division of labour favoured by the state called for the peasants primarily to mine the ore and convert it to pig iron. The last, and most profitable, stage was to be reserved for the iron masters.

Swedish iron had its heyday during the first decades of the 18th century, before English iron masters and metallurgists had yet developed methods for producing

³ Gårdlund (1942) pp 336 ff.

⁴ Hildebrand (1992), Attman (1986), Fritz (1997). See also Ruist et al (1989), Isacson (1992) and Industriförbundet (1992).

iron with mineral coal (puddle iron). Sweden had iron ore of good quality and vast forests that could produce the fuel required by blast furnaces and forges. Indeed these consumed huge quantities of charcoal that were produced in the forest and delivered by peasants. At least four peasants or cotters were required to produce and transport the charcoal required by a single smithy worker.

A few decades into the 18th century, Sweden accounted for approximately one third of world bar iron production. Starting in the 1720s, however, Russian iron began to take a much larger share of the rapidly growing English market. Sweden elected to restrict production, partly in order to maintain prices, but also to avoid the problem of rising charcoal and transport costs. Fifty thousand tons per year had by the early 19th century risen to 60,000, of which 85-90 per cent was exported. Now, the industry was struggling with major problems. True, other markets such as North America, Germany and France had partly replaced England. Still, modernisation was essential if Sweden was to survive as an iron producer. During the 1840s this necessary adaptation gained speed, first with the Lancashire method and then, starting in the 1870s, with ingot steel.

The old hammering technology (i e German and Walloonian forging) that required great skill was, during the last decades of the 19th century, replaced by ingot steel (i e the Bessemer, Martin and Thomas processes). Fuel consumption was drastically reduced, and larger capacity plants, employing a growing force of unskilled workers, were erected. Together, ingot steel, the railroads and the new joint stock organization quickly altered circumstances, and ferrous metal production was industrialised. Between 1862 and 1914, the number of bar iron works decreased from 440 to 140, while average production per plant increased ten fold. A growing share of iron production was going to domestic customers, especially the engineering industry, shipbuilding and construction. Despite this major expansion, however, Sweden's share of world production shrank. Around 1890, it was down to approximately two percent.

A second wave of consolidation occurred during the 1920s, when a number of large concerns were formed in the aftermath of the post World War I downturn. The period between the late 1930s and the mid-1970s, however, was generally a period of non-stop expansion. This was especially rapid during the 1950s and 1960s, when the production of raw steel increased by nearly 7 per cent per year (from 1.5 million to 4.5 million tons). At the same time, a clear division emerged between commercial (*handelsstålverk*) and speciality steel plants. The former produced simple, standardised products in great quantities, while the latter's output consisted of specialised products (especially wire, tubes, laminated steel, tool steel and cold rolled plate). Technology developed step wise. The electric steel process had its breakthrough in the early 1930s, while Bessemer and acid Martin steel diminished. In the mid-1950s, the oxygen process appeared. Starting in the mid-1970s, it and electric steel totally replaced the older methods. Following the economic crisis of that time, Martin facilities were rapidly scrapped. At the same

time, the production of pig iron was concentrated in two locations (Luleå and Oxelösund). Under state leadership, the production of commercial steel was restructured and rationalised. A similar process occurred in speciality steel on the initiative of the private owners. By the mid-1980s, the Swedish steel industry had passed through a severe and, for many communities, painful restructuring process that left it in a stronger international competitive position. Still, when the new decade of the 1990s dawned, Sweden accounted for only one-half per cent of world production.

In 1890, approximately 23,000 persons worked in the industry (17 per cent of all industrial employees). By 1935, despite a drop following World War I, the number had risen to circa 30,000. There then followed a period of rapid growth. Despite major rationalisation during the entire post World War II period, employment increased almost continually. At its peak in the 1960s, the iron and steel works employed circa 55,000 persons (7 per cent). Starting in the mid-1970s, there then ensued a very rapid decrease in employment. In the course of ten years, 43 per cent of the labour force disappeared. This was slightly more than what occurred in the EC, but much less than in Great Britain. Right after the mid-1990s, the industry employed just over 20,000 persons (2 per cent of all industrial employees). New technology, rising quality requirements and new products, together with changes in work organisation, have also combined in recent decades to increase the share of white collar workers in the remaining firms. These, incidentally, now have a growing element of foreign ownership.

Historical Research on the Work Environment

In Sweden, historical studies of the work environment are a new and not as yet well-developed area of research.⁵ Existing studies are either very general or directed at areas other than iron and steel.⁶ The exception is the research on working conditions at the iron works in Österbybruk by historian Annette Thörnquist. Even this study, however, is directed at a limited, albeit very important, health problem, namely silicosis.⁷ More recently, Karl Fredrick Lindstrand, previously the plant administrator at the Halmstad ironworks, has presented a survey of the work environment problems specific to the iron and steel industry.⁸ Previously,

⁵ For surveys of this research, see Edgren & Olsson (1991), Thörnquist (1994) and Karlsson (1998).

⁶ For general studies, see Sund & Åmark (1990), Sund (1993), Lundh & Gunnarsson (1987), Ekström & Hall (1990), Isacson & Söderlund (1995), de Kazinczy (1996). For industry studies, see Olsson (1986) (graphic industry), Berggren & Olsson (1988), Isacson (1990) (engineering industry), Bjerregard (1993) (shipyards), Persson (1993) (forestry), Eriksson (1991) (mining industry)

⁷ Thörnquist (1993).

⁸ Lindstrand (1995).

Sigvard Montelius and Barbro Bursell have briefly described working conditions in the pre-industrial iron industry.⁹

The present article does not consider all aspects of the work environment within the industry. I limit myself, first of all, to the *workers* in the iron and steel industry; that is, to those directly affected by the industry's production processes. Secondly, I concentrate on the physical aspects of accidents and work induced illnesses. Psychosocial health risks, such as psychological stress, harassment, isolation, inconvenient working hours and inadequate or excessive responsibility, are given less attention. ¹⁰ Thirdly, I concentrate on conditions inside the production facilities and, to some extent, on outdoor work. The external environment, that is the industry's pollution of air, water, soil and populated areas, is barely considered. Indeed, this latter problem is generally seen as being outside the area of research on the work environment

The Concept of Work Environment

Since the 1960s, the term "work environment" has been a standard part of the Swedish language. The concept gained wide spread currency during the 1970s, when work life was closely scrutinised and new safety legislation was enacted in several stages. Previously the standard term had been occupational safety, which referred principally to equipment intended to prevent accidents and, to some extent, work related illness. The term work environment, however, actually existed long before the late 1960s. An article in *Teknisk Tidskrift* (Technical Review) from as early as 1943 uses the term in a remarkably modern way: "A new work environment thus is much more than the office or the plant. It is a totality with many features".¹¹

As noted, however, this broad perspective only became generally accepted during the 1970s. Starting in the last decade of the 1880s, when health problems in industry first attracted attention, until the end of the 1960s, the state and the parties on the labour market concentrated on reducing work accidents and on providing victims or survivors with reasonable economic compensation. The basic causes of health problems, technology and work organisation, were seldom addressed. A realisation that the rising trend in accidents had to be broken, as well as the need to consider psychosocial conditions, only emerged slowly. The possibilities for correction were limited by economic constraints, as well as by a lack of knowledge concerning ergonomics and the effects on people of dust, drafts,

¹⁰ For a survey of the psychosocial factors, see Järvholm (1995). For the iron and steel industry in particular, see SOU 1975:83.

⁹ Montelius (1959), Montelius (1966), Bursell (1974).

¹¹ Isacson & Söderlund (1995) p 51. *Nationalencyklopedins ordbok* (1995) states that the term "work environment" goes back to 1956.

gasses, poisonous substances and stress. Generally speaking, working conditions were subordinated to productivity and profitability goals.¹²

One hypothesis in this connection is that working conditions in the iron and steel industry improved substantially mostly during two periods, during the end of the 19th century and during the 1970s and 1980s. Between these two periods, there was limited improvement and even deterioration. The history of work environments is by no means one of continuous advancement. The last century displays several retreats.

The introduction of ingot steel technology and rolling mills, together with the resulting concentration of production that occurred at the end of the 19th century, probably increased the number of accidents and work related illnesses. The small German and Walloonian forges, as well as the charcoal blast furnaces, were closed, and production was concentrated in fewer and larger facilities. The production of Bessemer, Martin and Thomas blooms that were then processed in rolling mills noticeably altered the work and the work environment. It is reasonable to expect that the new workers did not know how to protect themselves from the dangers of the strange environment. In these facilities, the workers generally had less responsibility and influence on work organization than had been the case in the old German, Walloonian and Lancashire forges. The recruiting of new workers, many of whom lacked experience of iron and steel production, can be expected to have led to more accidents and work related illnesses.

I locate the second turning point in the late 1970s and early 1980s. Now working conditions improved. The closing of old facilities as a result of the international steel crisis, the consequent concentration of production and investments in new technology (including robotics), as well as increased awareness of the problem that resulted in stricter legislation and inspection, all contributed to this outcome.¹⁵

Starting in the 1960s, the Iron Works Association (*Järnbruksförbundet*), the organisation representing the employers, devoted resources to improving personal safety equipment. This program was expanded during the 1970s. Efforts were shifted from improving the individual's protective gear to improving the entire work environment. In 1972, the Metal Workers' Union, the Iron Works Associa-

¹² Isacson & Söderlund (1995).

¹³ Attman (1986) pp 95 ff.

¹⁴ Unfortunately there is a lack of reliable statistics from the 19th century. Furthermore, when statistics increasingly were collected during the early 20th century, they still had serious shortcomings. The hypothesis in the text is supported by the qualitative pronouncements of district physicians, contemporary writers, life histories and government studies. The latter include the Worker Insurance Committee of 1884 and the Occupational Hazards Committee of 1905. On the history of the statistics, see Andersson (1990).

¹⁵ See Berglund (1987), chapters 1 and 2 for a review of the development and pages 104-112 for a description of problems and actions taken concerning the work environment. See also SOU 1975:83 p 15.

tion and the Work Environment Laboratory initiated a joint project concerning the work environment of the steel mills. This survey was followed up by additional projects. ¹⁶ During the next two decades, work places have been retrofitted, hazardous work assignments and environments have been eliminated, protective gear has been improved and inspection has been made more effective. However, as is clear from the previously mentioned Work Environment Commission report, risks have not been totally eliminated. The problems of smoke, noise, dust, heat and cold remain in part. Transport, the handling of red-hot iron and steel, repairs in tight spaces and so on occasionally result in accidents and illnesses. In addition, new health risks have appeared and increased. These include psychological stress and shift work related heart attacks, repetitive motion injuries and the boredom and isolation associated with automation. ¹⁷

The Work Environment as a Power and Awareness Question

Industrialisation brought new, previously unknown, health problems. The large-scale recruitment and rapid turnover of labour undermined the old system of successive instruction in an occupation, which included learning how to handle dangers. Industrialisation also increased the risk of accidents through its higher work pace and reliance on piece wages.¹⁸

Accidents, and growing health problems in general, resulted in successively stricter occupational safety acts (1912, 1931, 1938 and 1949), as well as in a general insurance system. Within the framework of the Saltsjöbaden settlement, 19 the Swedish Trade Union Confederation (LO) and the Swedish Employers' Confederation (SAF) reached an agreement in 1942 concerning occupational health and safety. This led to a major acceleration of efforts to prevent work-related injuries in Sweden. Joint safety committees worked successfully in many enterprises. Initially, however, the emphasis was on simple measures, together with an awareness campaign with the slogan "safety first". 20 Still, even these efforts gave measurable results. In the early 1950s, the rise in the number of accidents in

¹⁶ Berglund (1987) pp 104-105. Among these projects were studies of the climate in electric steel mills, hot work environments and the problem of dust. See SOU 1975:83 p 10.

¹⁷ Kartläggningsgruppens rapport till arbetsmiljökommissionen (1989) pp 42 and 99. See also SOU 1975:83 p 45 and passim.

¹⁸ See for example Berglund (1982). See also other studies of work life from the late 1800s, including Ekdahl (1983), Johansson (1988), Berggren (1991) and Gårdlund (1942) pp 303 ff.

¹⁹ The Saltsjöbaden settlement refers to the general agreement reached in December 1938 between the principal parties on the Swedish labor market, the Swedish Trade Union Confederation (LO) and the Swedish Employers' Confederation (SAF). This agreement was reached after the national government threatened to intervene with legislation limiting labor market conflicts. The parties themselves preferred to reach an agreement designed to reduce such conflicts. See Magnusson (2000) pp 232-34.

²⁰ See, among others, Isacson (1990) pp 142 ff, Thörnquist (1993) pp 67 ff, de Kazinzcy (1996) pp 265 ff and Sund (1993).

Swedish industry was halted.²¹ The expanded occupational safety organization at individual work places, including safety representatives and committees, together with the visits and suggestions of occupational safety inspectors, resulted in fewer work injuries. New technology and the closing of old facilities also helped reduce accidents. At the same time, however, new, previously unknown risks gradually appeared in the work place. Before these new risks were understood and counter measures taken, the workers were once again exposed to accidents and illnesses. The more intense work pace and the recruitment of new workers also had negative effects.

During the last century, measures to improve occupational safety have had their ups and downs. Knowledge and effort has been directed towards those problems that, at a critical point in time, have attracted the attention and interest of the actors. Once such problems have been identified and measures against them taken, it has been tempting for firms and unions to relax. They neglect to follow up on the consequences of the introduction of new technology, processes and substances. Only when human beings have once again been injured, medical costs risen, protests grown in strength and convincing data on injuries and their causes become available, is a new series of measures taken.²² From the end of the 19th century until the 1970s, the basic approach was to use existing technology and work organization to cure the worst problems, but only after they had arisen.²³

Over a long time period, people's comprehension of risk, and what is acceptable and what is unacceptable, has changed. The work environment and health risks are an awareness and power question, encapsulated in a cultural context. As long as work largely was done by hand, and people toiled in mines and factories, on roads and at sea, in the forests and on walk ways, in cattle sheds and in fields, attention was primarily directed at reducing serious accidents. Working class and peasant men and women were both less aware of, and less concerned with, protecting themselves from other, less apparent, health risks, such as smoke from furnaces, moulds and dust. While it is difficult to say for sure how those living in the early industrial society felt and thought on this question, it is reasonable to assume there then was a greater acceptance among workers of hard physical work and minor injuries than is the case today. Hand injuries, worn out backs and knees and lung disease were part of life and something that artisans, peasants and workers pretty much had to accept. This was especially the case in the masculine working class culture. These were no place for coddling. Old timers recall how

²¹ See Johansson (1990) pp 99-94.

²² This reasoning can be found in the final chapter of Isacson & Söderlund (1995) pp 47-50 and Isacson (1997).

²³ This said without denigrating the instructions of the Occupational Safety Authority (from 1949), the work of the occupational safety inspectors or the proactive efforts undertaken at individual work places.

difficult it was to get workers in noisy work places to start using ear guards, helmets and other protective gear, and not just because these were unwieldy and troublesome. Using such equipment was seen as a sign of weakness.²⁴ Furthermore, those working on piece rates felt pressured to take risks and to ignore protective equipment, especially as long as they were young and vigorous. The low level of sick pay, together with the difficulty in getting firms, doctors and insurance companies to accept injury claims, made it easier to ignore mild injuries.

Unhealthy Work Environments as Steelworkers Remember Them

Like their compatriots in the German, Walloonian and Lancashire forges, the workers in the charcoal blast furnaces had physically demanding and exhausting jobs. The same applied to all those who loaded and transported raw materials, intermediate goods and finished products in the old iron industry. The work required both strength and endurance. Old industry films that have been preserved, such as one concerning the Korså mill and the Ågs blast furnace in Dalarna from the 1920s, reveal the physical nature of the work and raise questions concerning earlier work environments.²⁵ How accident prone were these facilities? Thus, for example, ingots were dropped under reloading, tram cars derailed and turned over, horses bolted and kicked, red hot iron caused burns and workers fell from ladders and fell on slippery surfaces.

Oscar J. Kypengren, a foreman at one of Domnarvet's steel plant intermediate rolling mills, has described the working conditions at start of the 20th century in a, for the time, large and modern steel plant. He emphasises the intense heat near the furnaces, the work intensity and the filth:

In the wire mill, there was a hectic pace to the work, especially during the actual rolling. The heating furnaces, where the materials were heated, were so close together that those workers had to endure terrible frontal heat from their furnace and radiating heat on their backs from the next furnace. The initial rolling workers had to bear the heat from the furnaces and from the material. The rest of workers had to be continually alert and to use their tongs to grab the speeding wire. It then had to be quickly reinserted in to the next pair of rollers. This was repeated until the wire had been reduced to the proper dimension, usually circa 5 millimetres. Water had to spray on the taps and on some of the rollers. During the winters, the workers were often soaked, and since there was no temperature control, their clothes often

²⁴ See, for example, Isacson (1990) chapter 5.

²⁵ The Korså/Åg film is preserved in the Stora Corporation's museum in Falun. Since it is very illustrative and educational it is often shown. The iron and steel industry, however, has many other preserved films, although they have not usually been transferred to videotape. See Molander et al (1996).

froze, especially while the rollers were being reset. During the summer, the air was full of small iron particles, scraped off during the work, and glowing embers, all mixed with sweat, soot and oil. When the workers left the plant at the end of their shift, they looked like Negroes.²⁶

Work in the large halls was in many ways different from outdoor work in switching yards, depots and loading areas. To a much greater extent than the indoor workers, the outdoor workers were, and still are, dependent on the weather. Often the weather was less favourable than in the Korså/Åg film from the 1920s. The gradual bringing of work tasks in under roofs and into heated buildings improved conditions during the 1920s.²⁷

During the 1950s and 1960s, things were further improved by the abandonment of charcoal ovens and Lancashire forges.²⁸ The heat, noise, drafts and heavy physical work, especially in connection with transport, did not disappear, however, with these old plants. The Bessemer, Martin and Thomas processes continued to demand heavy physical labour. In addition, for a long time rolling continued, at least partially, to be done with the help of manual work and simple tools.²⁹ Even today, some transport and reloading work is done outdoors.

Gradually the work environment in iron and steel improved. Many health risks, however, remained for a long time – and new ones arose. In the middle of the 20th century, work in the steel industry was still physically demanding, and the work environment was dusty, smoky and noisy. Cold and drafts from open gates alternated with intense heat from furnaces and materials. Conditions, however, varied between, and even within, plants for the industry's roughly 38,500 year round workers (of which 1,075 were women).³⁰

The Work Environment at Domnarvet Steel Mill in the 1950s

The Thomas process (basic Bessemer steel) was already an established refining method at Domnarvet at the start of the 20th century, when Oscar J. Kypengren

²⁷ Outdoor work under sometimes harsh weather conditions did not disappear all at once. See, for example, Thörnquist (1993) pp 139 ff concerning the working conditions for cleaning cast products at the iron works in Österbybruk during the 1950s, 1960s and 1970s.

²⁶ Rehnberg (1952) pp 224-25.

²⁸ The Lancashire forge at Ramnäs was the last in Sweden. It was closed in 1964. The last charcoal blast furnace was in Bredsjö. It ceased operations in 1966. Molander et al (1996) and Industriförbundet (1967) pp 151 ff.

²⁹ The country's last Bessemer furnace closed as late as 1961. The last Thomas converter (in Luleå) ceased operations in 1972, while the last Martin furnace was abandoned during the early 1980s. See Ruist et al (1989) p 37.

³⁰ The survey of technical developments can be found in, for example, various annual editions of the Industrial Association's (Industriforbundets) publication *Sveriges Industri* (1925, 1936, 1948, 1961, 1967, 1985 and 1992). For the number of year round employees, see the 1967 edition, p 161. Compare to SOS *Bergshantering* (yearly), Ruist et al (1989) p 43 and Fritz (1997).

began to work at the intermediate rolling mill. Starting in 1910, the company was totally dedicated to basic steel production. The Thomas process replaced the production of acid Bessemer and Martin steel. At that time, production amounted to approximately 100,000 tons annually, making Domnarvet the largest steel mill in the country.³¹

Following World War II, Domnarvet was quickly modernised and expanded. The owner, Stora Kopparbergs Bergslag, had grand plans. Production was to be increased from 200,000 to 400,000 tons annually. The facility's work area was virtually doubled during the first six post war years. All aspects of production were modernised; among other things, new large intermediate and final rolling mills were built. Despite difficult conditions, production was maintained during the expansion period. The turnover of workers was at some points as high as 45 per cent annually. Still, the number of employees rose from 2,000 to 3,000. Since the early 1940s, even some women had worked on the factory floor.³² Most of the new workers, however, were men who came from the Swedish countryside or foreign countries, including Finland.

Leo Pantsu began working in Domnarvet's Thomas works just before Christmas of 1951. Together with a younger brother, he had just fled unemployment and poverty in Finish Karelia. The rest of the family was still in Finland, but they were soon to follow. The brothers immediately found work in the Thomas works at Domnarvet. Leo became a puddler (*skänkskötare*).³³

As a puddler, Leo did shift work as part of a team that had a rolling schedule. Four mornings, followed by 48 hours rest, four afternoons, followed by another 48-hour rest period, four nights yet again followed by 48 hours rest and then the same schedule all over again. The facility operated continuously, even during major holidays. It halted only for a few weeks during the summer. Leo had his workstation near one of the furnaces in the great hall. A small diesel locomotive pulled the ladles full of red hot metal, on specially designed cars, some distance from the red-hot furnaces. The workers poured the metal (5-6 tons) into the hearth. They cleaned the ladle before the furnace was once again tapped. Their assignment also included inserting a new plug in the tap hole. Any scrap metal in the ladle also had to be removed before the next tapping. When the brick lining of the hearth was worn out and had to be replaced, a special work team was called in.

Leo Pantsu recalls that in the Thomas works it was hot in the summer and cold in the winter (except by the furnaces). The gates were open, and it was draughty, dusty, noisy and tiring. "There was a terrible roar when the oxygen was blown

³¹ See Rydberg (1992) p 85. For comparative production figures, see Attman (1986) p 111.

³² Domnarvet 100 år (1978) pp 47-48 and 53-54. See also Rydberg (1992) p 178 for a description of the post war modernization. For the entrance of women in the iron and steel industry, see Rylander (2000).

³³ Interviews with Leo Pantsu (born 1926) 1996 and 2000.

through the iron." The smoke and dust, as well as the heat, were a problem. "During the summer, the work shirt could stand by itself. We sweated, ate salt tablets and drank enormous quantities of water. It was easy to burn oneself. The iron was 1,600 degrees (centigrade). If we took too long before emptying the metal, and the brickwork was worn, the metal could burn through the bottom of the ladle. We were supposed to test the heat with our hands on the outside of the ladle." The safety equipment consisted of gloves and overalls. The company provided the former. The overalls the workers bought themselves from some store. Only in the late 1950s were protective goggles, helmets and ear protectors introduced.

As for Leo Pantsu, he successfully avoided work accidents. On the day after Easter in 1953, however, a very severe accident occurred in another division. Five furnace workers were killed by poisonous gas that leaked out because of a faulty water seal. Only two weeks earlier, in a similar accident, blast furnace gasses had extinguished a human life at the Fagersta mill, another large iron works in the area. Overall, gasses have reaped many lives in furnaces, iron works and steel mills.³⁴

Steel production also left its mark on the environment surrounding the furnaces and mills. The smoke and the drifts of ashes were extremely troublesome for both people and buildings. Ultimately, electric filters and ash separators were required to reduce these emissions.³⁵ At Domnarvet, the Thomas works was closed in the early 1960s. The blowing of pure oxygen through melted pig iron was introduced at Domnarvet in 1956. The success of this method caused the company leadership to substitute it for the old production methods over the course of the next decade.³⁶ Both the inner and the outer environment benefited from this change in technique. The awareness of work environment problems also increased at this time. Both management and labour began to understand the drawbacks of environments such as that at Domnarvet's old Thomas works. It was not until the 1970s, however, that work on identifying and solving problems took off.³⁷

The Work Environment at Storfors Tube Mill

In 1954, Leo Pantsu moved to the tube rolling mill at Storfors. There he worked for two years as a hand roller of seamless tubes. The work team consisted of three men who exchanged assignments every hour. One step involved using a grasping tong to move the end of the preheated, red-hot sections of metal into each new hole along the roller. Large sections weighed 80 kilos. The tube of metal was moved back and forth through the mill, until it had been stretched to the desired

³⁴ Stråby (1984) pp 145 ff.

³⁵ See Lindstrand (1995) p 37.

³⁶ Rydberg (1992) pp 180 ff. *Domnarvet 100 år* (1978) p 67.

³⁷ Berglund (1987) pp 104 ff and SOU 1975:83.

dimensions. Smaller sizes required replacing the grasping tong with a device attached to the metal. During the milling process, a reaming rod bored the appropriate inner size.

Even though the tube rolling mill was also hot, dirty and noisy, conditions were not as bad as in the Thomas works in Borlänge. No protective wear, not even gloves, was used here either. The graphite dust was especially troublesome. The reamer rod that drilled the hole in the tubes was dipped in a graphite mixture. As a result, the air was constantly full of graphite dust. Things were even worse in the sliding bench workshop, the "spaghetti works". Many women were employed there. One worker in ten was a woman, which was an unusually high number at that time. One of them was Elvi Pantsu, Leo's wife. Together they had two young daughters (6 and 4 years old). On many occasions, when their parents' shifts coincided, the little girls had to fend for themselves.

Elvi Pantsu worked as a regulator and in an elevated location. Right below her, a pair of men brushed the tubes with graphite. She recalls that she was jet black after her shift. There was no protection against the dust. The environment was unhealthy, especially for pregnant women. Elvi herself had an early stage miscarriage and had to quit the tube mill after barely a year. "The doctors said the foetus was totally deformed".38

Back to Domnarvet

From Storfors, the Pantsu family moved to Nora, where the parents worked at Nobel's explosives factory. This was also an extremely unhealthy environment. In 1960, they returned to Borlänge where Leo got back his job as a puddler in the Thomas works. As he remembers, the environment had not improved during the intervening six years. From other sources we however know that the managers were aware of the problem with silicosis. During the 1950s they tried to diminish the risk, using for example olivine instead of quartz in the sand for the cast.³⁹ According to Leo the environment in the Thomas works had not changed much, but at least the firm now provided dark goggles, helmets and ear protectors (ear muffs or plugs). "At first no one wanted the helmets. They were heavy and clumsy. I resisted at first, but you got used to them."

The calcium that formed the basic lining of the converter gave Leo dermatitis, "...itching and red blotches all over my body. The doctor told me to get away from there". Leo then switched to the new and large thin plate works. Following

³⁸ Interviews with Elvi Pantsu (born 1929) 1996 and 2000. The new, modern tube mill in Storfors was profiled in *Dagens Nyheter* in the May 31, 1955 edition. Special emphasis was put on the large number of women workers, most of them with a foreign background. Among the 850 workers at Storfors, ten different nationalities were represented.

³⁹ See Annette Thörnquist's article in this book.

a period in packaging, he went to the coating works (*betverket*). There he remained until 1987, when he took early retirement because of back problems.

The plate that was to be coated came from the broad band works. After having been temporarily stored outdoors, the rolls of plate were taken to the coating works and opened. The ends were cut off and evened, and the plate was then put on a reel. The next step was to machine-weld the plates together into a long band. The metal was then freed of dross and other surface particles in a bath of chemicals. After the bath, the plate was rolled up and cut into suitable sections. From the coating works, the plate was taken to the cog mill for final processing.

During Leo Pantsu's first years in the division, the plate was coated with sulphuric acid. This quickly burned holes in clothing. If anyone got acid on his hands, it had to be washed off immediately. The acid was automatically pumped in and out of the vat. If a weld broke during the coating process, the work was immediately halted. The vat was emptied, and a worker climbed in and hand welded the joint. Then the vat was refilled with acid.

Around 1980, the facility was modernised and converted to hydrochloric acid, which is less harmful to the skin. Still, caution continued to be important. Hydrochloric acid is dangerous to breathe. Those who worked close to the vat, or who repaired a broken weld, had to wear facemasks. By this time, the firm provided the safety equipment, including acid resistant shoes.

Compared to the Thomas facility, the work environment in the coating works was better. It was also gradually being improved. Initially, putting the rolls of metal on, and then taking them off, the reel was done from a modest hut. The supervision and welding was done next to the vat. In the new coating facility, the workers moved into a comfortable control room. From there, the process was supervised and controlled with the help of computers. The machines were adjusted according to tables. Naturally, the workers still occasionally had to go out to control the reeling, the edge smoothing and the coating or to redo faulty welds. In the control hut, they had a good view of things, and they escaped the noise, dust and smoke. There they could brew coffee and keep and heat their food. In the Thomas works, Leo and his comrades had eaten their sandwiches right next to their work place. No screened off eating area existed in the early 1950s, or ten years later for that matter. In the late 1960s, the coating works had a hut where the workers could eat the food they had brought.

The work environment at Domnarvet improved markedly starting in the early 1970s. In addition, more and more women were employed in the plant, as in the industry in general.⁴⁰ In the Thomas facility, however, there were no women. In several other workshops, however, women had been working since the 1940s. Labour turnover was high, and employment rose during the 1950s and 1960s.

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⁴⁰ The number of women increased from 1,660 out of 34,170 annual workers in 1960 to 3,480 out of 36,060 ten years later. SOS *Bergshantering*.

This was a period of high labour demand throughout the economy. If they could, many workers refused to work in poor environments, especially at a time when these were a subject of discussion and increasing concern. The companies simply had no choice but to improve matters. As noted, this was often done in conjunction with new investments.

At Domnarvet, many physically demanding, noisy, dirty, draughty and dangerous work places were closed after the mid-1960s. These included the blast furnaces, the Thomas facility and the electric steel facility. Fork lifts and new, more flexible overhead travelling cranes facilitated the handling of tools, materials and finished products. The buildings were equipped with heating and ventilation systems. Control rooms eliminated the worst noise. At the same time, however, the pace of work increased. In the old coating works, for example, 180 meters of plate were processed per minute. The new facility could soon handle 500 meters per minute, and the pace kept increasing. Work operations were done more and more quickly, and supervision was tightened all along the line.⁴¹

The work organization at Domnarvet was changed in the early 1980s. Responsibility was shifted from the foremen to the workers. The latter were given more responsibility for the daily work, and the supervisors began to listen to their opinions. At the same time, the labour force was reduced. Six thousand employees in the late 1960s had, by the mid-1990s, shrunk to 2,500 (of which 1,800 were unionised). It was expected that the workers would take greater responsibility and actively contribute to increased production. Two hundred thousand tons in the mid-1940s had risen to 400,000 tons ten years later. The million ton mark was passed in the early 1970s.⁴² By the late 1990s, the thin plate facility of SSAB in Borlänge was producing 2.1 million tons annually. A much smaller number of persons were thus producing a much greater quantity of plate, with the help of ever more technically advanced and expensive equipment. Even in this environment, however, extremely serious work accidents occurred on occasion. Thus, in early September 1996, a 35-year-old was crushed to death under a freight car in SSAB thin plate's switching yard. Today, freight trains are radio controlled. Instead of three men, two are responsible for switching and coupling the cars. The dead worker simultaneously had to use a control box attached to his belt, handle radio communications through a microphone on his chest and manually couple cars.43

⁴¹ Leo Pantsu 16/7 1996.

⁴² Rydberg (1992) pp 177-78 and 184.

⁴³ Södra Dalarnes Tidning 17/9 1996. The occupational safety representative is highly critical of the work conditions at the modernized switching yard. "The company wanted to save on personnel, and thus sacrificed safety", he maintains. He adds: "It was too much to keep track of at one time. These dangerous jobs must have routines that are as simple as possible."

Accidents

The description of the work environment in the iron and steel industry makes it clear that work place accidents were not unusual. Personally, Leo Pantsu escaped serious work accidents. On the other hand, both he and his wife suffered illnesses that can be related to the work environment. A serious back problem resulted in Leo being retired early, barely sixty years old. Elvi changed jobs. She found employment in a store.

What then do the available statistics have to say about the character and change over time of accidents within the iron- and steel industry? I primarily want to discuss three questions: how have accident rates changed over time, how does the industry compare with other industries in terms of the frequency and severity of accidents and, finally, what are the principal causes of accidents in the iron and steel industry?

Industrial Accident Rates in Sweden over Time

The official statistics on the number of accidents have serious shortcomings and give far from an accurate picture of developments. For a long time, reporting, especially by small firms, was disturbingly poor. The reporting rules were also changed on several occasions. Particularly the changes contained in the 1955 law complicate long-term analysis.⁴⁴ Since no better source exists, however, reliance must be placed on the official occupational injury statistics.⁴⁵

The number of reported work place accidents in Sweden increased continuously from the beginning of the 20th century until the end of the 1940s.⁴⁶ Especially starting in the mid-1920s, following a deep economic crisis, both the number of accidents and the rate of accidents per worker increased rapidly. This development has several possible explanations. For one thing, injury insurance was improved, making it worthwhile to report even minor injuries. In addition, industrial rationalisation increased the pace of work and the propensity to take risks.⁴⁷ Yet another possible explanation is the large migration of young men and women from agriculture to industry during the 1920s and 1930s. Most of them lacked any industrial experience and did not know how to protect themselves. The rate of accidents per 100 annually employed workers doubled during the 1920s. The Depression of the early 1930s, when many workers were excluded from the fac-

⁴⁴ Starting in 1906, occupational injuries have been reported in the annual Swedish government statistics: SOA, later SOS, SCB (Statistics Sweden) and reports from Arbetarskydds-styrelsen (The National Board for Occupational Safety and Health). The reporting was changed in 1917, 1929, 1955 and 1977. See Andersson (1990).

⁴⁵ Sund & Åmark (1990) p 43 and de Kazinczy (1996) pp 421 ff.

⁴⁶ See SOS Olycksfall i arbete.

⁴⁷ Berggren & Olsson (1988) pp 64 ff and Isacson (1990) pp 16 ff. The rationalization movement in Sweden is treated by De Geer (1978).

tories, resulted in a temporary decrease in the accident rate. When the wheels once again began to turn, however, rationalisation and new investment also accelerated. The result was an increased number of work place accidents. Occupational safety became one aspect of the discussions concerning labour market peace and productivity growth. Accidents were expensive, both for the firms and for society. As noted, occupational safety became a central part of the new Swedish policy of labour market co-operation that developed during the late 1930s.⁴⁸ Starting then, local, organised safety efforts became widespread.⁴⁹

The over all accident rate in Swedish industry, however, did not immediately decline. In fact, it continued to rise until the last years of the 1940s. The annual rate of reported accidents per 100 yearly workers then peaked at 15, as compared with 6 in the mid-1920s and 10 in the mid 1930s.⁵⁰

At the start of the 1950s, the rate declined, but it soon stabilised at a slightly lower level. The mid-1960s saw a modest increase, followed by a new downturn in the 1970s. The really great decrease, however, did not come until the 1990s, together with the deep economic crisis. Many old, non-modern facilities were abandoned and many people, both old and young, lost their jobs. The organisation of work changed, and firms invested in new technology. In addition, the introduction of waiting periods before health insurance could be claimed and reduced compensation levels helped tidy up the numbers.

The number of work place fatalities, however, decreased continuously starting in the early 1950s, indicating an improvement in the work environment. By the early 1990s, approximately 80 persons died annually in Sweden as a result of work place accidents. Adding those who died in work related travel accidents and illnesses, the number rises to approximately 170. In the early 1950s, a normal number would have been over 550.⁵¹

While the number of accidents has decreased during recent decades, the number of reported work related illnesses have increased sharply. It is also the case that the accident rate per 100 yearly workers did not fall, but rather increased, during the 1980s and the early1990s; that is, until the economic crisis and the radical changes in the insurance system.⁵²

⁴⁸ Johansson (1989) pp 149 ff.

⁴⁹ See, for example, Isacson (1990) pp 137 ff.

⁵⁰ SOS *Olycksfall i arbete*.

⁵¹ Isacson & Söderlund (1995) p 71 and Andersson (1990) pp 164 ff.

⁵² See SCB Statistisk Årsbok för Sverige , SCB/Abetarskyddsstyrelsen (1993) table 1.2.4. Also de Kazinczy (1996) pp 426 ff and Isacson & Söderlund (1995) pp 70-71.

Work Place Accidents in Iron and Steel⁵³

How does iron and steel compare to the overall Swedish accident picture? The industry follows the general pattern, but clearly at a higher level. For a long time, iron and steel was one of the most accident-prone industries in Sweden. The rate of accidents per 100 yearly workers was sky high compared to the over all average. During the 1910s and early 1920s, only the mining industry, especially coal mining, had a higher accident rate. From 1924 through 1937, the iron and steel industry generally was worst. The high, or low, point was reached in 1935, with almost 29 accidents per 100 annual workers (compared with barely 10 for the whole economy). Starting in the late 1930s, the industry improved its positions and gradually made its way down the ranking list. In 1944 it had reached sixth place and in 1954 a creditable eleventh place. Other industries quickly passed it, especially mining, metal processing (fast growth and new workers), navigation (especially during the war), transport (traffic accidents), construction (rapid expansion starting in the mid-1930s) agriculture and forestry (mechanisation) and the wood industry (including construction related carpentry).⁵⁴

During the 1950s and early 1960s, the iron, steel and metal works industry places just below the top group of most accident-prone industries. Starting in the late 1960s, however, the industry began to move back up the list. The accident rate increased. Starting in 1955, the number of accidents, measured per one million work hours, increased from a low of 32 in 1963 to 53 in the early 1970s. By then, the industry had assumed second place in the rankings.⁵⁵

It was in this situation that the industry's leadership commenced a co-operative effort intended to reverse the negative trend. At the same time, the national government appointed an investigative commission.⁵⁶ This commitment by the industry, the unions and the government to improve the work environment succeeded over time in reducing the accident rate. Since accident rates in other industries also declined, however, the iron and steel industry retained its high position on the list, for women as well as for men. Looking only at women, the industry was number one in the accident rankings in 1993. In that year, the men were in third place, trailing only metallic mining and fire and rescue services on this far from desirable list.⁵⁷

⁵³ The official statistics do not consistently separate out the iron and steel industry, but instead include a small number of firms that process other types of ore. Firms dedicated to iron and steel, however, dominate throughout the period. The "Ore Processing Industry" was the term long used in the official statistics. It was later replaced by "Iron, Steel and Metal works". See SOS *Olycksfall i arbete*, SOS *Yrkesskador* and later injury statistics published by Riksförsäkringsanstalten (The National Swedish Insurance Bureau), SCB, etc.

⁵⁴ SOS *Olycksfall i arbete*. See also Berggren & Olsson (1988) p 65.

⁵⁵ SCB Miljöstatistisk årsbok 1978.

⁵⁶ SOU 1975:83.

⁵⁷ SCB and Arbetarskyddsstyrelsen.

Despite major efforts in the area of occupational safety, in the early 1990s the iron and steel industry once again was among the leaders in accidents per worker. The explanation can be found in a number of inter-related factors. First of all, the share of white-collar workers has been, and remains, lower than in most other industries (thus raising relative rates). In addition, it is difficult to eliminate all risks in this type of production, where people work in the vicinity of red hot metal, large rolling mills, overhead cranes and forklifts. The control panels, on the other hand, mean watching display screens and can result in long periods of inactivity. When problems occur in complex processes, there is great danger of injury, both to line workers and to the repair personnel. This is especially the case when the stakes are high and speed is essential.

Accident Severity

By itself, the relative accident rate by no means tells the whole story concerning worker peril. The official statistics also indicate that average accident severity was generally *lower* in iron and steel than in many other industries. When, during the first half of the 1920s, the industry led the rankings for the reported number of accidents per 100 yearly workers, it did not make the top ten for the number of work days lost to accidents per yearly worker (severity index).⁵⁸ Starting in the late 1920s, however, there was a deterioration. Until the mid-1940s, the industry fluctuated between fourth and sixth place on this list. In the late 1940s, improvement once again set in. The severity index declined, and the industry fell a few places on the list. Mining continuously topped this tragic list.

Starting in the early 1960s, the severity index for the Swedish economy as a whole slowly declined, from 1.5 lost work days per 1,000 work hours in 1960 to 1.3 in 1970 and 0.98 in 1975.⁵⁹ The iron and steel industry continued to find itself a few notches down on the list (5th-8th place). The industry also had a lower severity index during the 1960s and 1970s than in the mid-1950s. After a drop in the late 1950s, however, the index remained well above 2 lost workdays per 1,000 work hours for the following decades, with some year to year variations. Mining continued to lead, followed by quarries, forestry, the wood industry, transport and construction.

The situation improved, with the severity index declining, towards the end of the 1970s. By 1993, for all sectors combined, it was 0.4 for men and 0.2 for women. It was considerably higher in iron and steel, but still well below the industry's performance two or three decades earlier. Construction now led the list for

⁵⁸ The severity index is the number of lost workdays per yearly worker calculated according to a special formula. See SOS *Olycksfall i arbete*, for exampel 1954, p 22.

⁵⁹ SOS Yrkesskador.

men and food processing that for women. Ore refining was still among the most dangerous industries, particularly in terms of the severity index for women.⁶⁰

Causes of Accidents

To what types of accidents have iron and steelworkers been most prone, and has the industry's accident profile changed significantly since the 1920s? Does the industry display an accident profile similar to, or very different from, the Swedish economy as a whole?

Generally speaking, the iron and steel industry fits the general pattern. In the pre-1950 period, industrial machinery caused many serious accidents everywhere. "Lifting, carrying and handling objects" also led to serious injuries. The industry was different mainly because of frequent accidents caused by "flammable and hot materials" and "intensive light and radiant heat". Accidents involving rail bound vehicles and lifting mechanisms were also relatively common and severe. Slipping and falling, on the other hand, were less common in iron and steel than in the economy in general.⁶¹

Over the period 1920-1954, the tendency, both in the economy as a whole and in the iron and steel industry, was for accidents caused by lifting, carrying and handling objects to become relatively more common.

Even after the mid-1950s, machinery continued to be the most important cause of accidents. Lifting and carrying, on the other hand, caused fewer and fewer serious accidents, both in the industry and in the whole economy. The explanation lies in the post-war rapid increase in the use of electric overhead lifts, cranes, forklifts, rail bound vehicles and trucks. On the other hand, serious accidents involving vehicles, elevators or cranes became increasingly common. During the 1960s, there were three pre-eminent causes of accidents in the Swedish economy: vehicles, machines and falls. These were followed by hand tools and elevators and cranes.

Each industry had its special problems. Mining and forestry, the most accidentprone industries, were also different in that falling objects resulted in many serious accidents. In the iron and steel industry, accidents were primarily caused by machinery, followed by elevators and cranes, falls, vehicles and hand tools. Over time, heat and physical stress also became increasingly common causes of injury.

The investigation of the steel industry's work environment that was done at the government's behest during the first half of the 1970s confirms and deepens the picture. A questionnaire was sent to a sample of the industry's workers. The answers revealed that the risk of injury was perceived to be greatest in steel mills,

⁶⁰ SCB/Arbetarskyddsstyrelsen (1993).

⁶¹ SOS Yrkesskador.

followed by rolling mills and wire works. The workers put the risk of burns first, followed by crushing and being hit by objects on overhead lifts.⁶²

Work Related Illnesses

For a long time, the insurance system was primarily directed at work accidents. It was, and still is, much more difficult to demonstrate that an illness is work related. The examples of asbestos (asbestosis), quarry and casting plant dust (silicosis) and vinyl chloride (cancer) confirm this. Resistance from physicians, firms and insurance companies resulted in workers reporting few of the illnesses that they thought were work related. The official statistics contain only 1,400 reported cases of work related illness in the mid-1950s, compared to 120,800 workplace accidents and 13,500 work-related travel accidents. Thereafter, the reports increased only slowly, until the late 1960s when they more than doubled in just a few years. In 1972, 7,100 work related illnesses were reported. The really great increase, which was partly the result of changed insurance compensation rules, however, occurred after the late 1980s. Furthermore, repetitive motion injuries and allergies now emerged as a major problem. As noted, it was in 1988 that the government appointed the Work Environment Commission.

Here we shall discuss the illness profile for the iron and steel industry since the mid-1950s. At that time, women in industry were particularly subject to occupational illnesses, especially in the chemical and wood industries. The iron and steel industry consistently had lower figures. Even here, however, women, such as Elvi Pantsu, were disproportionately the victims.

The government study of the steel industry's work environment from the early 1970s also dealt with the risk of occupational illness. The workers consulted placed hygienic problems first, ahead of accident risks and ergonomic stress. Three environmental factors were emphasised: noise, air pollution and indoor climate. The workers in the Martin facility, the electric steel facility and the rolling mill were especially tormented by the noise. As for air pollution, dust and smoke were particularly troublesome in the steel works, the blast furnaces and the sinter and sponge iron works. The climate problem concerned drafts and temperature changes, which were most troublesome in steel mills and at blast furnaces.⁶⁵

The changeover to working at control panels, together with an increased work pace, made the problem of repetitive motion injuries more serious. The report of the fact-finding group for the 1988 Work Environment Commission notes, among

⁶² SOU 1975:83 pp 11 and 36. In the spring of 1973, a questionnaire was sent to 1,242 selected workers at eight different companies. 1,021 (83 per cent) replied. Ibid, chapter 3.

⁶³ Sund & Åmark (1990) chapter 3, Thörnquist (1993), Isacson & Söderlund (1995) pp 60 ff.

⁶⁴ SCB/Arbetarskyddsstyrelsen (1993) table 1.2.4. See also Sund & Åmark (1990) chapter 4, Ekström (1990) and Isacson & Söderlund (1995) pp 60 ff.

⁶⁵ SOU 1975:83 pp 11, 29 and 93.

other things, that women in the iron and steel had an "increased frequency of stress injuries". Male furnace and metal oven workers were observed to have an increased risk of developing stress injuries, lung disease and heart attacks. Male hot and cold roller mill workers, like the smiths, also suffered a large number of stress injuries. The smiths also suffered an elevated risk of hearing loss. The foundry workers too were badly affected by hearing injuries, as well as joint problems. In addition, their risk of developing lung cancer was above normal.⁶⁶

A study of the relationship between working life and heath, published in the mid-1990s, complements this picture. According to the mortality registers, male furnace and metal oven workers, like all iron and metal plant workers, display an elevated risk of experiencing a heart attack.⁶⁷ Asthma is also common among furnace and metal oven workers. Female steel, metal, smithy and casting workers suffer an increased incidence of stress injuries. With regard to skin disease and psychic disorders, however, the situation of iron steelworkers in the early 1990s is more favourable.⁶⁸ Still, statistics from the 1980s and 1990s clearly show that steel and metal works rank high in reported work related illnesses per 1,000 workers.⁶⁹ The numbers are especially high for women workers, who suffer in particular from stress injuries in the neck, shoulder, back and arms. The men also have a high ranking. They are afflicted with stress injuries, in addition to hearing loss, dermatitis and allergies.⁷⁰ Leo Pantsu is not alone in having suffered injury from his work in the post World War II Swedish steel industry.

Conclusion

Today's iron and steel industry has come a long way from its obviously unhealthy work environment at the turn of the 20th century and even in the 1950s. Even so, the industry's workers are often afflicted with accidents, musculo-skeletal disorders and hearing injuries, as well as lung disease. Work place accidents are common, although on average not quite as serious as in many other industries. Despite a major effort since the 1970s, it has not been possible to eliminate all risks. New technology and new processes continually bring with them new, unanticipated dangers. The combination of a higher pace of work, greater demands for efficiency and profitability and greater worker responsibility leads to increased psychological stress and, it is reasonable to assume, greater risk taking.

Reports, official statistics, films, photographs and narratives concerning the earlier work environment in the iron and steel industry still support the conclu-

⁶⁶ Kartläggningsgruppens rapport till arbetsmiljökommissionen (1989) pp 42 and 99.

⁶⁷ Järvholm (1995) p 53.

⁶⁸ Järvholm (1995) pp 68 and 95 and chapters 9 and 12.

⁶⁹ SOS/SCB and Arbetarskyddsstyrelsen (1985), *Arbetssjukdomar 1985*, table 6B and the reference in note 64.

⁷⁰ SCB/Arbetarskyddsstyrelsen (1993) table 11.

sion that working conditions have improved decisively, especially since the early 1970s. The short run risk of suffering serious work injury is probably less today than at any time during the last hundred years. Nonetheless, experience indicates that it is dangerous to become complacent, assuming that the problem is largely solved. In a time of rapid change in technology and work organization, there is always a risk that new, previously unknown dangers will creep in. The work environment and human health can also easily be overshadowed by efficiency and profitability goals. The tendency towards replacing permanent employees with outside contractors at peak times and for special tasks also leads to a reduced interest in observing and improving the work environment. Still, it is important to continually improve equipment and conditions so as to minimise risk and limit work injuries and illnesses. Indeed, this is more likely to enhance, rather than lower, efficiency and profitability. Occupational illnesses and injuries not only cause unnecessary human suffering, they also lower productivity and impose great costs on firms and society.

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Efforts to solve the silicosis problem in the foundries could in turn create new hazardous working sites – outdoors. Photographer: Nils Hjort, Österbybruk.

The Silicosis Problem in the Swedish Iron and Steel Industry during the 20th Century

Annette Thörnquist

Silicosis is an industrial disease that still takes its toll over the world. In Sweden, new cases are rare today. From 1931, however, when silicosis was first acknowledged and registered as an occupational disease and up to 1979 over 4,600 established cases of silicosis were recorded in different trades. After that there have been comparatively few cases, around 220. Workers in the iron and steel industry were among those hardest struck by this illness.²

In many ways the handling of the silicosis problem reflects the development of the modern industrial safety policy and practice in Sweden. From the 1930s and up to the early 1960s, when silicosis was most prevalent in the iron and steel industry, the governmental regulation concerned primarily the prevention of occupational accidents, and thus the control of industrial dust in the plants was still comparatively weak. Therefore, the problem had to be handled mainly between the employers and workers at the company level. During these decades the so-called Swedish Model of co-operation in industrial relations was established. This model, which had developed during a long historical process, was a tripartite co-operation between the organised parties in the labour market and the state with the purpose of achieving economic growth, full employment and peaceful labour relations. Its political pre-condition was that reformist socialism was the leading ideology within the labour movement. Occupational health and safety was supposed to be an important field for co-operation within this model, which was codified in the first occupational health and safety agreement in 1942 between the Swedish Trade Union Confederation (Landsorganisationen, LO) and the Swedish Employers' Confederation (Svenska Arbetsgivareföreningen, SAF). This was a follow-up agreement to the main agreement settled in Saltsjöbaden in

¹ I want to thank Bernard Harris, Department of Sociology and Social Policy, University of Southampton and Anders Kjellberg, Work and Culture, National Institute for Working Life in Norrköping for valuable comments on the manuscript.

² Silicosis is a lung disease that is caused by the inhalation of dust from crystalline Silica (SiO₂), which mainly exists in quartz. Quartz is a mineral form found for example in granite and sand. Silica dust damages the tissues in the lungs and the resulting build-up of cartilaginous tissue successively reduces breathing capacity. Heart problems and tuberculosis often set in during an advanced stage of the disease. Quartz dust together with other industrial dust can produced mixed dust silicosis. See Ahlmark (1967) pp 21-28; few women have been afflicted with silicosis (around 20), most of them in the ceramic industry); concerning the statistics of the cases of silicosis (including mixed dust silicosis) recorded in Sweden, see Riksförsäkringsverket, silikosfall 1931-1979 and ISA, Arbetsskadestatistiken, Arbetsmiljöverket, silikosfall 1980-2000. There is no information concerning 1988,1989 and 2000.

1938, where the principles for self-regulation in the Swedish labour market were laid down. *Co-operation* in the way implied by the Swedish Model presupposed well-organised interests of labour and capital, negotiations and the settling of collective agreements between in principle equal parties. How the co-operation worked in practice depended however ultimately on the actual balance of power in the labour market. The work environment issue concerned primarily the sphere of production and not the distribution of the results of the production. Consequently, with regard to the work environment the employers had the ultimate responsibility and power.³ As will be illustrated in this article, it was some time before this co-operation was extended to include the problem of industrial diseases such as silicosis. In addition, the historical prerequisites for the local parties to act as organised and independent parties could vary greatly.

From the early 1960s, the efforts of both the government and the central parties in the labour market to prevent industrial diseases increased considerably. This period was also a time of technical and scientific progress in the development of methods for measuring and analysing industrial dust and the elaboration of effective exhaust ventilation systems⁴. Furthermore, it was a time of rising professionalisation and bureaucratisation in the field of industrial safety, which was an international trend as well.⁵

The purpose of this article is to discuss how the state and the parties in the Swedish labour market handled the silicosis problem. How did the problem arise and how was it dealt with over time? How did it affect the social relations in the plants? Which were the main driving forces behind the development of the worker's protection against silicosis? The article focuses primarily on the silicosis problem in the iron and steel industry, in which the foundries were the most hazardous working sites. The local example referred to here has been taken from my book on this issue, *The Silicosis Problem in Österbybruk* (1993). Other than that there is not much research done on the development of the silicosis problem in Sweden.⁶ The most interesting international study for my purposes is David Rosner's and Gerald Markowitz' book *Deadly Dust* (1991), which deals with the great silicosis crisis in the USA, especially during the 1930s, among other places in the foundries.

In my opinion, the historical development of industrial safety, as well as other questions in the labour market, can best be understood from a conflict perspective, where the power relations in production, in the labour market and in society

³ Self-regulation means that the main labour market parties should handle labour market issues without governmental interference; for a more detailed presentation of the Swedish Model, see Martin (1995), Kjellberg (1998) pp 74-84; for further discussion of the concept of *cooperation* in industrial relations, see Thörnquist (1994), (2001).

⁴ Gerhardsson et al (1974).

⁵ Ibid; Dwyer (1992); Thörnquist (1994) p 339.

⁶ Thörnquist (1993); see also Berggren & Olsson (1988) pp 71-75; Wikander (1988); Eriksson (1991); Kavian (1999).

as a whole are taken into account. From this point of view, industrial safety is not an isolated and neutral question, which often has been maintained, but ultimately dependent on attitudes and interests. The conflict of economic interests, however, has often been more apparent in the matters of industrial diseases than concerning industrial accidents. The problems of diseases have normally required radical and expensive investments to solve, and the question of responsibility has often been more complicated.⁷ The handling of the silicosis problem in the Swedish iron and steel industry is a good example of this.

The Recognition of Silicosis in Sweden

Silicosis is a disease that develops very slowly, normally not until 20–30 years after the beginning of the exposure to silica dust. Therefore, the roots of the international silicosis 'epidemic', which broke out during the 1930s within the iron and steel industry, were the mechanisation and rationalisation processes that had started several decades earlier. The mass-production of machines and vehicles caused a rising demand for castings, especially steel castings, which also worsened the silicosis risks in the foundries. The manufacturing of steel castings required a very high percentage of quartz in the furnace lining and in the moulding sand. In addition, steel needs higher temperatures than iron to melt, which burnt the sand and made it stick to the castings. When quartz is heated to high temperatures other forms of crystalline silica can develop as well, which are even more hazardous to inhale. With the use of sand blasting and other pneumatic tools for the cleaning of the castings, the occurrence of burnt and fine-grained quartz dust increased immensely. In extremely dusty settings, silicosis might develop after a comparatively short time.⁸

In the medical literature, silicosis was recognised as a special, non-infectious lung disease in the 1910s. However, it has probably been known since classical antiquity that stone dust causes lung lesions. In 17th century England, the grinding on sandstone wheels in metal manufacturing was connected with lung diseases. The famous Swedish scientist Carl von Linné observed in the 1730s that sandstone workers quarrying and manufacturing grindstones in the village of Orsa, situated in the province of Dalecarlia, generally died young of pulmonary diseases. As their wives and children were not afflicted, he assumed that it was work-related. In the early industrial society the workers in dusty trades called their lung diseases miners' phthisis, potters' phthisis, stone cutters' pthisis and so on, which implied that they were aware of the relationship between this illness and their work. However, accidents, diseases and all kinds of misfortunes were

⁸ Rosner & Markowitz (1991; Thörnquist (1993), (1994) pp 340-343.

⁷ Thörnquist (1994); (2001).

long regarded as God's punishment for sins, as they normally were in the preindustrial society.⁹

After the tubercle germ had been discovered in the late 1880s and up to the 1920s, physicians all over the word generally diagnosed pulmonary disease as tuberculosis. Therefore, it was often considered as a problem originating from the worker's hereditary disposition, hygienic standards and living conditions. Consequently, it was also regarded as a matter of the worker's own responsibility. As Rosner and Markowitz have put it, "...the great plague of bacterial disease, tuberculosis, camouflaged industrial dust as a source of disease".¹⁰

Nevertheless, some Swedish company doctors were deeply concerned about the dust hazards in the plants and began to make systematic observations of its effects on workers' health. In the early 20th century, Karl Emanuel Hällsjö at the big steelworks Domnarvet in Dalecarlia, found a very high death rate in tuberculosis among the workers in the steel foundry. Therefore, he directed that the workers in the dustiest settings were to be given other tasks after one or two years. Another physician, Nils Holmin, found in 1911 that the rate of tuberculosis was five times higher among grinders than among the other workers in the steel manufactures in Eskilstuna, which was something of a Swedish equivalent to Sheffield in England. It is reasonable to think that the workers suffered from silicosis, which in an advanced stage might well have been complicated by tuberculosis. 12

In Sweden, as in most industrial countries, it was not until the 1930s that silicosis was more commonly recognised as an occupational disease. In 1929 the first Swedish insurance law concerning industrial diseases had been enacted. It included injuries caused by for example arsenic, lead, mercury and phosphorous and its compounds, but not silicosis. Then in 1930, a medical study undertaken in a quartz quarry works in West Sweden showed that almost all workers who had been in this setting for more than two years had contracted silicosis. These alarming results forced an amendment to the act in 1931, which acknowledged silicosis as an occupational disease that entitled the sufferer to compensation. Sweden thus became the first country in the world, where silicosis was covered by the law of industrial insurance. Yet it was not easy for workers to get compensation. Silicosis could be difficult to diagnose, even with X-rays. In addition, the law only applied to cases that had been discovered in 1931 or later and where the worker had been exposed to silica dust within one year before the application

⁹ For a more detailed historical review see, Bruce (1942) pp 14-19; Dwyer (1991) pp 13-22.

¹⁰ Rosner & Markowitz (1991) p 9.

¹¹ Hällsjö (1953).

¹² Holmin (1911).

¹³ Mascher (1930).

was made. In 1937 this period was extended to 10 years because of the long latency of silicosis.¹⁴

Mapping Out the Spread of Silicosis

In 1930 the International Labour Bureau, an executive agency within the International Labour Organisation (ILO), arranged a silicosis conference in Johannesburg. It was not a coincidence that the conference was held in South Africa. In the Witwatersrand Goldfields in Transvaal, miners' phthisis had caused immense suffering and death among the workers, mainly Englishmen, since the establishment of the mining industry in the 1880s. The medical studies done in this area became of vital importance for the understanding of silicosis. This first silicosis conference initiated international co-operation in the research on silicosis and its prevalence, and in 1938 a new conference was held in Geneva.¹⁵

In Sweden, the government supported the idea of investigating the risks of silicosis, but gave no special grants for this purpose. Instead it was the National Association against Tuberculosis (Nationalföreningen mot tuberkulos) and the Employers' Mutual Accident Insurance Company (Arbetsgivarnas Ömsesidiga Olycksfallsförsäkringsbolag) that financed the first studies of the prevalence of silicosis in different trades. As the laws for industrial insurance covered silicosis, it was in the interests of the employers and the insurance companies to map out the spread of the disease. The physician Torsten Bruce conducted these investigations during the period 1934-1938 and became the central figure for the research on silicosis in Sweden. He also increased public awareness about the need for measures to prevent silicosis. The first project comprised 2,500 workers that were exposed to silica dust in different trades. Only a few of the workers studied were retired. The results were published in 1942 as Bruce's doctoral thesis. He showed that about 600, or 24 per cent, of the examined workers had silicosis. In the steel industry the amount was 20–40 per cent. Apart from this trade, the iron ore mines, the quartz quarrying and crushing industry and the pottery industry were the most hazardous work places. According to Bruce, silicosis had never been as prevalent in Sweden as it was in the 1930s.¹⁶

In the light of these results, a governmental decree was enacted in 1938 and came into force in the early 1940s. It provided for the medical examination of workers who worked in settings with extreme risks for silicosis, both when they signed on for jobs and thereafter periodically. In cases where silicosis were established or suspected, the workers should be transferred to dust free jobs. Workers who had some kind of illness or infirmity that could make them more

¹⁴ Ahlmark (1967) p 29-30; Ahlmark & Gerhardsson (1980) pp 45-49. The 1931 act also covered fibrosis of the lungs caused by silica mixed with other dust.

¹⁵ ILO (1930), (1938); see also Katz (1995).

¹⁶ Bruce 1942; during the 1930s the granite-industry was almost shut down SOU 1949:44.

predisposed to silicosis were not allowed to work in dusty settings at all. The employers had to organise and cover the expenses of these examinations. As the statute mainly applied to the hazardous workplaces known at that time, it covered most categories of workers in the steel foundries, but only sandblasters and quarts crushers in the iron foundries.¹⁷

After the investigations in the 1930s, it took about fifteen years until a large-scale silicosis study was done again. In the late 1950s, the around 2,220 cases of silicosis and mixed dust silicosis that had been reported to the authorities up to 1957 were followed up by a new medical project conducted by Torsten Bruce and two of his colleges, Axel Ahlmark and Åke Nyström. Over 50 per cent of these cases came from the steel industry. The report showed that silicosis was a growing problem in the iron foundries as well. However, as the development of silica dust was not so intense in this production process, it normally took between 30-50 years for workers to contract silicosis, and the disease progressed more slowly than among the workers in steel foundries.¹⁸

Hence, up to the 1960s, it was medical researchers, with Bruce in the lead, who mapped out the spread of silica dust hazard within the Swedish industries. The government responded to the alarming reports by imposing compulsory medical, but not technical, preventive measures against the dust in the plants. Indeed, the silicosis problem was also an urgent task for the parties in the labour market to take action against. To understand how the problem was handled between the parties, it is necessary to know a little about how industrial safety has been regulated historically in Sweden.

The Development of Industrial Safety

In Sweden, industrial safety has developed within a framework of legislation for worker's protection and compensation, but also to a large extent through self-regulation between the parties in the labour market.¹⁹ As in most Western countries, a rudimentary labour legislation system for the reduction of working hours, factory inspection and industrial injury insurance developed around the turn of the 20th century. The first worker protection law, the Occupational Hazards Act (*Yrkesfarelagen*) concerning mainly factories, was enacted in 1889. In the same year the governmental Labour Inspectorate (*Yrkesinspektionen*) was established. About ten years later, the employers were obliged to compensate workers for the loss of income caused by accidents at work, which also made them more willing to insure the workers in the Employers' Mutual Accident Insurance Company that started at that time. The 1916 Accident Insurance Act

¹⁷ Ahlmark (1967) pp 143-163; Ahlmark & Gerhardsson (1980) p 45-46.

¹⁸This study also confirmed that silicosis progresses even after the exposure to silica dust has been discontinued. Ahlmark et al (1960).

¹⁹ Unless stated otherwise, this part draws on Sellberg (1950) and Thörnquist (1994), (2001).

(Lagen om olycksfallsförsäkring) made insurance of the workers mandatory. In 1912 a more imperative Worker Protection Act (Arbetarskyddslagen) had been enacted and in 1919 the parliament (Riksdagen) decided to reduce the working day for industrial workers to eight hours. For a long period, however, the legislative system of workers' protection and compensation concerned mainly the problem of accidents. As mentioned above, it was only in 1929 that an insurance law was enacted that covered certain diseases.

Working conditions and working hours figured early in the local agreements in the labour market. As the trade union movement however was relatively weak in the first decades of the 20th century, it had limited resources to deal with issues other than wages. The old claim for a general reduction of working hours, for example, was therefore turned into a political question which, together with the question of suffrage, became one of the most important issues at that time. The institution of union safety representatives and joint safety committees had its breakthrough during the 1930s and 1940s. It was codified in the revisions of the Worker Protection Act in these decades, but it was first and foremost part of the development of the Swedish Model of self-regulation in the labour market. From 1942 up to the early 1990s the workers' protection acts were supplemented by central occupational health and safety agreements between the LO and the SAF.²⁰ At the same time as the first central agreement was settled, the Joint Industrial Safety Council (Arbetarskyddsnämnden) was established as a national body for co-operation between the organised parties in the labour market. Its main task was to spread information and propaganda and to support the establishment of work safety organisations at the company level.²¹ The parties were in agreement that self-regulation gave better results than legislation, which especially the employers wanted to avoid. The 1949 Worker Protection Act reinforced both state control and the principle of self-regulation. In the same year a governmental body, the National Board for Occupational Safety and Health (Arbetarskyddsstyrelsen), was set up to control the implementation of the act. The parties in the labour market were represented both on this Board and on other governmental boards, as for example the board of the Labour Inspectorate at the central and regional levels. This arrangement, as well as the central agreements, were important elements of the Swedish model of tripartite co-operation.

Up to the late 1960s, the well-organised and strong labour market parties, the stable Social Democratic government and the good state of the market were the

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²⁰ After the main agreement between the LO and the SAF in Saltsjöbaden in 1938, central agreements were also settled concerning vocational education (1944), works councils (1946), and time and motion studies (1948); see Johansson (1989).

²¹ In 1978 the Federation of Salaried Employees in Industry and Services (*Privattjänstemanna-kartellen*, PTK) affiliated as the third part. Through a revision of the agreement in 1967, principles for occupational health service and education in work environmental issues were included as. Arbetarskyddsnämnden (1992) pp 29.

basic pre-requisites for a successful tripartite co-operation in occupational health and safety issues, though mainly concerning accidents. At the end of the 1960s, however, negotiating climate got tougher due to the social consequences of the rapid rationalisation and structural transformation of Swedish trade and industry. In the following years, labour unrest broke out within several trades. The wildcat strike in 1969/70 among the miners in the state-owned company LKAB in the north Swedish ore-fields concerned not least the work environment in these mines; among other things the fear of silicosis. During the first half of the 1970s a broad opinion for improvements of the work environment developed. This was not only a prioritised issue on the agendas of the unions and the labour parties. Many public and private professionals participated in the debate as well. It was also a topic much discussed in all kinds of media as well as in art, literature, films and theatres. In 1972 the government started up the Worker Protection Fund (Arbetarskyddsfonden). Its purpose was to support and finance research and education in the field of industrial safety. The Joint Industrial Safety Council, for example, got big grants for the elaboration of educational programs and the industrial health service was reinforced. Regarded from an international perspective this sizeable state support was unique.²²

In the radical revisions of the Worker Protection Act in 1973 and 1977, and in the renewal of the central occupational health and safety agreement in 1976, a wider definition of the area for workers' protection was laid down. In addition the *prevention* of accidents and diseases was emphasised. Occupational diseases, especially repetitive strain injuries and psychosocial matters, now received increasing attention in Sweden as well as in other industrial countries. In accordance with this, the law's name was changed to the Work Environment Act (Arbetsmiljölagen) and now the Worker Protection Fund was called Arbetsmiljöfonden. The reforms above were part of a general reinforcement of Swedish labour legislation in the 1970s, which also included co-determination, job security and gender equality in the labour market. The general background was the rising pressure on workers and the many conflicts in the labour market due to the escalated structural transformation and the rising number of closedowns of factories caused by the energy crises and increased international competition. Notwithstanding that the reforms of the 1970s strongly reinforced workers' rights to participate in the decision-making process in the firms, workers' commitment to industrial safety questions decreased during the following decades, as did union power on the whole. Among other things the reinforced labour legislation contributed to an increasing political and economic mobilisation of the SAF. In addition, the long era of stable Social Democratic governments, as well as a stable parliamentary situation in general, was over. The

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²² Thörnquist (2001) pp 140-144; see also Isacson & Söderlund (1995) pp 50-53; Frick (1996); Johansson & Magnusson (1998) pp 159-167.

very stress on legislation seems also to have weakened the dialogue between the parties in the labour market, though the acts had to be completed by agreements. It broke the long tradition of strong self-regulation and many local union representatives soon became fed up with interpreting law texts. The rising unemployment rate in the 1990s, new principles for flexible ways of organising production and work (the Just-in-Time business concept) and the associated new forms for employment with short-term contracts, contributed to this development. Furthermore, Sweden followed a global trend towards more decentralised and individualised industrial relations. At the beginning of the 1990s the SAF cancelled the central agreements concerning both wages and the work environment definitely, including the principles for the industrial health services and education in health and safety issues. Parallel to this, the SAF withdrew its representatives from the governmental boards, for example the National Board for Occupational Safety and Health. Hence, big steps were taken away from the Swedish Model of cooperation in industrial safety matters and in other issues as well. The Joint Industrial Safety Council still exists, however, and there are agreements at the branch level.²³

The Work Environmental Policy Concerning Silicosis

In the research reports published by Bruce and his colleges, they underlined the importance of not only medical silicosis prophylactics. They also emphasised very strongly the need for technical measures to prevent quartz dust in the plants.²⁴ Yet, up to the 1960s the National Board for Occupational Safety and Health did not give much concrete advice on this point. Nor was the wording of the law concerning the prevention of dust particularly clear and imperative. The Swedish public policy concerning the silicosis problem could therefore be characterised as *disposition prevention*. This means that workers' physical constitution and way of acting were regarded as the determining factors for injuries at work. Workers who were susceptible to pulmonary illness were, for example, excluded from dusty jobs. Rather than prescribing compelling measures for the prevention of the dangerous dust, the length of time for workers' exposure to the dust was to be limited. The opposite, *exposition prevention*, implies that the work environment should be adapted to workers' conditions and needs. The Swedish socio-

During the first half of the 1990s the industrial health service system lost its governmental subsidies and the grants to the regional safety delegate institution was reduced. The latter institution supports working sites with weak health and safety organisation, which often are small companies. Thörnquist (2001), pp 140-146; Kjellberg (2001) pp 294-297; Thörnqvist (1999).

²⁴ Ahlmark et al (1960) pp 376-391.

logist Rolf Å Gustafsson has pointed out the longstanding dominance of *disposition prevention* in Swedish work environment policy.²⁵

In my opinion, there are two interrelated causes behind this. First, for a long time there was a strong concentration on the accident problem. Since the mid-1920s the state and the parties in the labour market were in agreement that Swedish industry must rationalise to keep pace with the international competition. As both the international and Swedish experiences showed that the rationalisation process caused a rising number of industrial accidents, the work environment policy long focused on this problem. Secondly, this policy was influenced by the American Safety Movement, which dealt solely with accidents. The fundamental idea of the Safety Movement was that industrial safety should be an integrated part of Tayloristic management and labour policy. According to the Safety Movement, the main cause of the rising accident rate in the early 20th century was not technical defects, but the workers' carelessness. Therefore, occupational health and safety programmes should be integrated in the production plan. In its pure form the Safety Movement excluded union participation, and in this sense, it contradicted the very essence of the Swedish model for the handling of industrial safety problems. Despite this, the pedagogical and organisational ideas of the Safety Movement influenced not only Swedish employers, but also the governmental authorities and voluntary occupational health and safety organisations such as the Joint Industrial Safety Council.²⁶

According to Gustafsson, the Swedish work environment policy changed towards exposition prevention with the labour reforms in the 1970s.²⁷ During the 1960s, however, a rising governmental interest in the prevention of silicosis must also be regarded as an important step in this direction. In 1963, the government started up a technical and medical investigation of 170 plants identified as dust-laden environments, among them about 50 iron foundries. The purpose was to identify the dust situation and to give proposals for a solution to the problems. At that time, approximately 25,000 workers in 1,000 working sites were exposed to silica dust. The project resulted in a considerable financial and personal reinforcement of the occupational health and safety authorities, which became even more striking in the 1970s. It was also the breakthrough for the use of scientific methods for measuring industrial dust. A dust-index was instituted, which among other thing made it easier to estimate and the compare the risks for silicosis and to lay down the general outlines of how to clean up dust. In addition, a central silicosis register was built up, where all kinds of data concerning the disease

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²⁵ This distinction was originally made by Didrichsen & Jahnlert (1981); Gustafsson (1994).

²⁶ Concerning the Swedish labour movement and the rationalisation process, see De Geer (1978) pp 359-369; for a more detailed presentation of the Safety Movement, see Sund (1993), (1994); Aldrich (1997).

²⁷ Gustafsson (1994) p. 266; other authors have used other terms for describing the same transformation; see for example Lund & Gunnarsson (1987); Tucker (1994).

were collected. As a result of the investigation, the public factory inspector began to follow up and give practical advice for the prevention of dust in the plants. The outcome was reported to the National Board for Occupational Safety and Health. Hence, the governmental control of the technical measures to prevent dust in the plants increased. Furthermore, a joint committee representing the state and the central parties in the labour market was established to plan further projects to solve the silicosis problem.²⁸ Thus, eventually the problem became an important subject of the Swedish model of tripartite co-operation.

A new governmental silicosis project started up in 1968 within the National Institute for Occupational Medicine (Arbetsmedicinska institutet). From now on reports were made to the parties in the labour market continuously. A nationwide study was undertaken which comprised over 1,000 work sites. It showed that in most of the investigated industries the recommended limit for silica dust in the air (0,2 mg/m³) was exceeded for more than half of the work force. In particular, the situation was serious in the iron foundries and the stone industry, where the silicosis risks had been identified comparatively late. As a result of this investigation the National Board for Occupational Safety and Health issued general regulations regarding technical measures to prevent dust as well as annual dust measurements in dusty trades.²⁹ Despite this, silica dust, gas and smoke still caused problems in many trades. Therefore, a follow-up study of the dust situation was carried out in the period 1974–1980. The purpose was also to inform about and give suggestions for technical preventive measures in the plants and to control that these measures really were taken. Through the revisions of the Worker Protection Act in 1977, which came into force 1978, the National Board for Occupational Safety and Health was authorised to issue compelling directives as well. The general conclusion reached by the study was that considerable improvements in the work environment were achieved during the 1970s.³⁰

Measuring dust is however a problematic method for estimating changes in environmental risks factors, which Peter Westerholm, researcher on occupational medicine, pointed out. The amount of dangerous dust in the air can vary greatly from time to time in the workplaces due to for example changes in the climatic conditions and variations in the work processes. Therefore, in his view the results of the silicosis projects were of limited usefulness. According to Westerholm, the

This silicosis investigation was carried out during the period 1964-1966 at the National Institute for Public Health (Statens Institut för Folkhälsan), the National Board for Occupational Safety and Health and, from 1966, the National Institute for Occupational Medicine (Arbetsmedicinska Institutet). Otto Westling, Arbetarskyddsstyrelsen (Arbetsgruppen för silikosfrågor) till Järnbruksförbundet 22 oktober 1969. Forskningsverksamheten, Arbetarskyddskommittén, korrespondens 1969, Järnbruksförbundets arkiv FBB 3, Stockholm; see also the final report, Ahlmark (1967).

²⁹ Gerhardsson et al. (1974).

³⁰ Arbetarskyddsstyrelsen (1983); Nordfors (1985) p 151, 184.

results from for example the iron foundries did not indicate any improvements³¹. As the reported number of annual cases of silicosis did not decline – although they appeared after a longer time and in an earlier stage – some researchers feared that the problem would remain unsolved during the rest of the century or even longer.³² However, as mentioned above, the number of reported cases of silicosis decreased notably in 1980s and 1990s, due to not only stricter dust control and better dust prevention, but also because of the structural transformation, which had reduced the number of work places in dusty trades considerably.

The state's increasing commitment to the question of silicosis prevention in the 1960s was, as will be seen below, in the first place a result of longstanding political pressure from the trade union movement, which also referred to Bruce's and other physicians' research results and recommendations. In a broader context it was also part of the rising public opinion on environmental and work environmental issues. In the 1960s chemical hazards and air pollution in the work environment and in the external environment had begun to receive increased public attention in Sweden as well as in many other countries. During and after the miners' conflict in 1969/70 the silicosis problem often figured in the radical and widespread debate on work environmental issues.³³

In the early 1970s the asbestos hazard gained great public attention in Sweden. The big alarm came in 1975, when physician Anders Englund, a researcher at the National Institute for Occupational Medicine, showed a clear connection between exposure to asbestos and a special form of lung cancer, mesoteliom. In this situation, the government transferred experts from the then current silicosis project to carry out research on the asbestos problem on the basis of their special experience. In 1976 the National Board for Occupational Safety and Health issued a directive that prohibited any new installation of products with asbestos cement. In other words, the state destroyed the market for the companies that produced these products. This was a new, controversial feature of the governmental prevention policy that caused great debate in Sweden as well as internationally.³⁴

A Labour-ManagementProblem

As the silicosis risks were most prevalent in the iron and steel industry before the governmental silicosis projects started up and the control of industrial dust increased, the problem was primarily a labour-management issue. However, as the employers' interests in occupational health and safety issues mainly concerned

³¹ Westerholm (1980) pp 52-53, 57; Interview with Professor Peter Westerholm, December 19, 2000

³² Ahlmark & Gerhardsson (1981) pp 48-49.

³³ Yrkesskadestatistiken, Riksförsäkringsverket, silikosfall 1931-1979; ISA, Arbetsskadestatistiken, Arbetsmiljöverket, silikosfall 1979-2000.

³⁴ Arbetarskyddsstyrelsen (1999) pp 99-104.

accidents, the silicosis problem was not put on the agenda as a matter of course. In addition, many small companies lacked a working industrial health and safety organisation. Hence, the problem was also highly dependent on local union power. Since the late 1920s, the central parties in the labour market and the state had discussed the idea that occupational health and safety ought to be handled in peaceful co-operation between the parties. But the economic crisis and wide-spread labour unrest made it hard to realise these intentions. During a time of longstanding mass-unemployment, it was not easy for unions to demand costly improvements in the work environment. It is reasonable to think that the Joint Industrial Safety Council, which in practice started to work in 1945, would have given the local parties technical and practical advice on how to deal with the silicosis problem. However, during the first decade of its existence, the Joint Industrial Safety Council was mainly concentrated on the accident problem.³⁵

Indeed, the silicosis problem implied many bones of contention between the local parties. First and foremost there was the question of what to do about the hazardous dust. Should the problem be tackled mainly by expensive investments in the buildings and ventilation systems, and perhaps also by automation of dangerous work operations, or should it be up to the workers to shelter themselves from the dust through for example protective masks and by changing their way of acting? Another problem, which often caused conflicts between the parties, was how mechanisation and rationalisation, for example the introduction of mechanical grids to knock the castings from their moulds, affected the dust situation, and the social situation, in the plants. Furthermore, who was really afflicted with the disease? Generally, it was the company doctor's mandate to make the first difficult assessments of the suspected silicosis cases. The unions, on their part, often had their own opinion of whether a worker had silicosis and was entitled to compensation or not. Unions often regarded the company doctors as loyal to the employers and to the insurance companies, though many doctors actually supported the workers' interests. Especially in the old, paternalistic Swedish iron and steel works, the deep social gap between the workers and the salaried employees could be a real obstacle for a fruitful co-operation between the physicians and the unions in the struggle against silicosis, which will be exemplified below. Furthermore, the local parties had to deal with the severe social consequences of silicosis, for example the fear of the dangerous dust and the problem of transferring workers with silicosis in its early stages to dust free jobs, which often also were less well paid.³⁶

³⁵ Arbetarskyddsnämndens styrelses protokoll samt årsberättelser 1942-1955. Arbetarskyddsnämndens arkiv Stockholm; Arbetarskyddsnämnden (1992).

³⁶ Thörnquist (1993).

The Employers' Policy

How then did the employers' associations react to the alarming reports of the spread of silicosis in the iron and steel industry? The Swedish Employers' Confederation (SAF) seems not to have discussed work environment problems and industrial safety very much during the 1930s. Up to the late 1940s, silicosis or other industrial diseases figured very seldom in its journal *Industria*. When the government prescribed medical silicosis prophylactic in 1938, the SAF agreed that it was needed; however, as the examinations were expensive for the employers, the state ought to discuss the problem with the SAF before issuing further ordinances. In addition, the SAF strongly emphasised that the effects of legislation in general in this field were limited. According to SAF, the parties should create safe work places voluntarily, and in accordance with the Safety Movement ideas. Ultimately, SAF claimed, it all depended on the workers' readiness to act carefully. Nor, in the 1930s, did the Iron Works Association (Järnbruksförbundet), which was the counterpart of the organised steelworkers, pay much attention to the widespread silicosis problem. In the 1940s, however, its interest in the problem began to increase due to both the pressures from the unions and the general development in the labour market.³⁷

After the Second World War, there was a great shortage of labour in industry, especially in heavy industry. In the foundries the problem of getting skilled workers appeared even before the war. Workers preferred the engineering industry, which provided both better working conditions and higher wages. In the iron works communities it was not only the hazardous work environment, but also the work in three shifts and, not least, the low housing standards that contributed to this development. The housing of workers was part of the paternalistic welfare system and many of the initiatives to improve the housing standards were deadlocked by this system, as the dynamics of the free market did not exist. In 1948 the government started up a special iron works investigation to study the social standards in this milieu and to find out how they could be improved and thereby become more attractive for workers.³⁸ The labour shortage became the turning point for management's interest in occupational health and safety issues other than accidents. In the late 1940s, the Iron Works Association established an industrial safety committee within its research department, which among other things dealt with the silicosis problem. A concrete question discussed in this committee was the possibility of replacing quartz sand by olivine sand, which did not cause silicosis. This issue was studied in a project in the mid-1950s at the research department of the Swedish Iron Masters' Association (Jernkontoret), which was a trade organisation for the iron and steel works. According to the

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³⁷ *Industria* 1938 no 5:141-144; Thörnquist (1993) p 59, p 83.

³⁸ Thörnquist (1993) pp 20-23, (1994) p 320; SOU: 1950:15.

report, however, olivine could not be generally recommended. Experiences from Norway and from a couple of foundries in Sweden showed that olivine was not suitable for all types of quality steel.³⁹

The Ironworks Associations' rising interest in work environment issues was evident also from its reaction to two nation-wide investigations of working conditions in the foundries, carried out by the Swedish Moulder Union (Svenska Gjutareförbundet) in 1929 and in 1956 respectively. The Association did not pay much attention to the alarming results of the first study, which stated that the hygienic standard was deficient in most foundries and that the risk of severe accidents and diseases, such as rheumatism, were extremely high. The latter report, which maintained that not much in the way of improvements had been achieved since 1929 and which pointed out silicosis as the major health problem, got a lot more attention. This time the Iron Works Association was obviously concerned about the situation, which also implied rising insurance costs and great problems to recruit workers. The central board discussed the report closely with the members, both to check whether the work environment really was as bad as had been stated in the union report and to find solutions to the problem. In the following decade, the governmental silicosis investigations and the successively increased state control gave the employers further motivation to voluntarily take action against the dust.40

It is also interesting to follow the opinion of the foundrymen and the foremen, who had the immediate responsibility for the machinery and the organisation of work in the foundries. In a comment on the 1929 union investigation, the Association of Swedish Foundrymen – Society for Foundry Technique (Sveriges Gjutmästareförbund – Gjuteriteknisk Förening) stated in its journal, Gjuteriet, (The Foundry), that the Moulders' Union had strongly overestimated the work environment problems, at least in the case of modern foundries. In addition, the expensive improvements required in the report must be related to the fact that the real wage rate had increased by 35 per cent during the recent two decades. According to *Gjuteriet*, the major problem was the unwillingness among the foundry workers to change their habits and to follow safety instructions, but it also emphasised that the foremen had an important role in this context. The journal often referred to the ideas of the Safety Movement as well.⁴¹ During the 1940s, on the other hand, the connection between the increasing shortage of labour in the iron and steel industry and the hard working conditions was often discussed in Gjuteriet. The problem with silica dust in the foundries, as well as

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³⁹ Hult & Beckius (1959).

⁴⁰ Järnbruksförbundet till de företag inom förbundet som ingick i Gjutareförbundets utredning om arbetsförhållandena i gjuterierna, 28 augusti 1957. Arbetarskyddskommittén, korrespondens 1957-1958. Järnbruksförbundets arkiv FBB 3, Stockholm.

⁴¹ Gjuteriet 1930 n 12, 1932 no 7.

various suggestions for its technical solution, now got a lot of space in the journal.⁴²

Of course, the employers' efforts to do something about the silicosis risk varied strongly from plant to plant, due to not only power relations between the parties, but also to their awareness of the problem, technical know-how, economic resources and company cultures. Furthermore, the production structure varied from foundry to foundry, which meant that the plants often required specific solutions for cleaning up dust. In general, small companies had the worst work environment. After the war many new, small foundries were established, which both the Iron Works Association and the foundrymen regarded as the main obstacle for improvements of the work environment, as well as for a rational development of the trade in general. In several big companies, such as the Domnarvet Steelworks, which had great problems with silicosis, the company doctors, Karl Emanuel Hällsjö and his successors, especially the legendary Johan Pontén, worked actively to improve the work environment in the foundry. The company was one of the first firms in Sweden to replace quartz sand with olivine, and it had a leading position in the Iron Works Association's occupational health and safety committee.43

The employers rising interest in the silicosis problem, which also can be described as a reorientation towards a policy of exposition prevention, meant better preconditions for co-operation between the parties in the labour market on this problem. In the 1960s, the Industrial Safety Council took up the silicosis problem as well, mainly in the stone industry. The 1950s and 1960s were the heydays of the Swedish Model of tripartite co-operation and the building up of the welfare state, the so-called People's Home. Successively the silicosis problem was subjected to this co-operation. However, the Swedish welfare system rested to a large extent also on experts. The field of occupational health and safety was no exception to this, which as we will see, in the long run had effects on the dialogue between local parties regarding the silicosis issue.

The Union Commitment

In international as well as in Swedish research it has been maintained that unions gave low priority to industrial safety questions, especially during the inter-war period. The New Zeeland sociologist Tom Dwyer claims that from about 1920, when a legislative system for workers' prevention and compensation had been established in most industrialised countries, unions generally lost their interests

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⁴² Gjuteriet 1942 no 6-7, 1944 no 10-12, 1946 no 4-6, 1947 no 1, 1947 no 6.

⁴³ Ibid; Ponten (1953); Ahlmark & Nyström (1960) pp 376-377; Thörnquist (1993); concerning the work environmental problems in general at the Domnarvet Ironworks, see Maths Isacson's chapter in this book.

⁴⁴ Arbetarskyddsnämndens styrelses årsberättelser 1965 och 1966.

in struggling for better working conditions. The institutionalisation of industrial safety in the companies, through for example the establishment of safety committees and the increasing bureaucratisation of the trade union movement contributed to this development as well. Thus, up to the 1960s, there was a "social peace" concerning occupational health and safety issues in most countries. Among others Dwyer mentions the USA, Australia and Sweden. Then, in the late 1960s, the radical political movement aroused a broad interest for work environmental problems within the trade union movement and in society as a whole. However, he only discusses how the problem of industrial accidents was handled, and industrial safety cannot be reduced only to that problem. Furthermore, he does not take into account the various industrial relations systems in the countries mentioned and hence not the various socio-economic, political and cultural prerequisites for union commitment. The system of industrial relations refers to the character of the labour market parties and the institutionalised relations between them at micro and macro levels. He institutionalised relations between them at micro and macro levels.

As will be exemplified below, my research findings present another picture of the development of unions' commitment in industrial safety questions and contradict the perception of "social peace" during the period 1920 up to the late 1960s. In the iron and steel industry, which represented a big and important sector of Swedish industry, unions worked actively for safer working conditions, especially at the local level. They also took action against changes in the work processes that they suspected would increase the dust hazard as well as decrease workers' professional status. Furthermore the unions were committed to matters concerning workers' compensation and the transfer of workers to dust-free jobs. Their claims were not only addressed to the employers, but to the government as well. The central union representatives generally supported the local initiatives. They also carried out investigations on the spread of silicosis and organised a broader front against the silicosis problem within the labour movement. In addition, union claims in the iron and steel industry also concerned the great accident risks, although the employers paid more attention to this problem.

However, on the whole, the Swedish trade union movement had a weak position in the labour market during the inter-war period, and it often had to give priority to the questions of mass unemployment and wages. In the latter part of the 1930s, the prerequisites for union claims improved due to better trade conditions, the legal reinforcement of the position of the union safety representatives and the Social Democratic government's social reform policy in general. Hence, during this period, legislation seems not to have made the Swedish union passive, but provided them with the courage to act. During the 1940s and 1950s, the

⁴⁵ Dwyer (1991) pp 72–80; see also Kelman (1981); what concerns the Swedish inter-war period, see Sund (1993), (1994).

⁴⁶ Thörnquist (2001); for a discussion of the concept of *industrial relations system* see Kjellberg (2001) pp 337-341.

Swedish model of co-operation in industrial safety was established, which of course implied a strong union commitment.⁴⁷

Several American researchers have emphasised that the trade unions in the USA, which were on the rise and politically powerful in the 1930s and 1940s, were truly engaged in the silicosis problem as well. According to Rosner and Markowitz, for example, the issue was put on the national agenda in the 1930s in the first place due to "the activities of labourers struggling to control the conditions of work in a rapidly changing industry".⁴⁸

Union commitment to the silicosis problem was also dependent on the workers' position in the production process. Ladle-men, moulders and other craftsmen had a more powerful position in the labour market than did the other foundry workers. The craftsmen had much more control over the work process and they could not be easily replaced. As they could organise their work comparatively independently, they also had better prerequisites to take measures to shelter themselves from both the stone dust and other hazards in the work environment. With the continuing mechanisation and rationalisation process though, the craftsmen lost much of their professional status, as their special competence was needed less often. However, this process progressed more rapidly and was more apparent in foundries where the rationalisation process had led to serial production. Many Swedish steel foundries produced highly differentiated and exclusive steel castings, which could not be manufactured without the traditional professional skills of ladle-men, core-makers and moulders. Hence, many craftsmen could retain a comparatively high degree of control over the work process. On the other hand, many dangerous work operations still persisted in these foundries because they could not be automated as they could in foundries with a more standardised production.⁴⁹

Due to their position in the production process and their professional skills, Swedish foundry workers were also affiliated to two different, strong unions, which had different policies. Craftsmen such as ladle-men, moulders and core makers were organised in the Swedish Moulder Union. Those who worked with the sand preparation, the knocking-out of the castings and the cleaning of the castings, which also were those who were the most exposed to the dangerous silica dust, were generally organised in the Swedish Metal Worker Union (Svenska Metallindustriarbetareförbundet). In 1962 the Swedish Moulder Union joined the latter. The Moulder Union was a craft union that restricted and controlled access to the trade. It had a decentralised organisation, with no national collective agreements. Wage differences were supposed to preserve workers'

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⁴⁷ Thörnquist (1993); (1994); (2001). Union struggle for better working conditions during this period is documented in other Swedish studies as well; see for example Olsson (1986); Lund & Gunnarsson (1987); Berggren & Olsson (1988).

⁴⁸ Rosner & Markowitz (1990) p 73; see also Rosenberg & Levenstein (1999) 206-209.

⁴⁹ Thörnquist (1993) pp 48-49; Thörnquist (1994) pp 340-343.

professionalism. Both wages and working conditions could vary greatly from plant to plant. The Metal Worker Union, on the other hand, was a centralised organisation with a broad social basis and it pursued a "trade-unionist" policy.⁵⁰

In 1929, as noted above, the central board of the Moulder Union had made a nation wide investigation of the work environment in the foundries. Although the report showed that smoke, gas and dust were common problems in the foundries, silica dust or silicosis was not mentioned. When Bruce carried out his first study, the central board discussed the silicosis risks, but it did not give much information to the unions at the plant level on how to deal with the problem. Probably the foundry workers did not know about silicosis until someone at the workplace received this diagnosis.⁵¹

During the depression in the early 1930s the local branches of the Moulder Union at different iron and steel works had started to co-operate informally in the matter of wages for the purpose of avoiding competition from underbidding. When they became aware of the silicosis hazard, this turned into another natural question to rally around. Hence unions arranged annual conferences to keep themselves informed of the spread of silicosis, to co-ordinate their claims and, not least, to discuss what they could do on their own to minimise the dust. Their main union demand was that the collective agreements should include guarantees for technical preventive measures against silicosis in the plants. The most urgent measure to be taken by the employers was to move the dustiest parts of the work process, the knocking-out and the cleaning of the castings, to a special shop. Of course, this mainly benefited the craftsmen. Therefore, preventive measures against silicosis could reinforce the social segregation in the foundries between skilled and unskilled workers that had started earlier with the mechanisation and rationalisation processes. I will return to this below.

However, unions did not manage to get any guarantees for technical measures to protect the workers against dust in the collective agreements. Instead they turned this claim into a political question. The Metal Worker Union had long advocated this course, because their members generally had limited possibilities to change their own work process. Together with other unions concerned with the problem of silica dust and the LO, the Moulder Union and the Metal Worker Union requested legislation that would make technical measures to prevent dust mandatory and guarantee injured workers better compensation. However, when the Worker Protection Act eventually was revised in 1949, it was a disappointment for the unions. It would take another decade before the state started to act on the unions' demands.⁵²

⁵⁰ Thörnquist (1993) p 49.

⁵¹ Ibid pp 51-52.

⁵² Ibid pp 52-60.

The problems of recruiting workers to the foundries and, in the long run, the reproduction of skilled workers were also a union concern. In 1956 the central board of the Moulder Union carried out a new investigation of working conditions, an investigation that comprised about 230 foundries within both the iron and steel works and the engineering industry, for example the shipyards. Except for the 28 largest foundries, which at that time employed more than half of the about 10,000 foundry workers, the hygienic standard was still reported to be miserable. Many workplaces lacked for example both dressing rooms and dining rooms. The accident risks were still very high as well. The overwhelming problem, however, was still silicosis. As ventilation was a technically complicated matter to deal with locally, the board found it necessary to require special public factory inspectors for the foundries. The board also meant that radical improvements might not be carried out unless the whole trade underwent a structural transformation. Furthermore, the board presented a detailed suggestion for a governmental investigation of the dust situation in the foundries, which was supported by other unions representing those afflicted by silicosis and the LO. This led to a bill being put to the parliament in 1961, which was the prelude to the governmental silicosis projects in the 1960s and 1970s. Another union demand in order to reduce the number of disputes in insurance cases concerning silicosis was realised as well. A central committee to judge injuries caused by industrial dust, made up of both medical and technical experts, was established in the early 1970s. However, there were never any special factory inspectors appointed for the foundries, as there were for example for the forestry, the ships and the industry that produced explosives.⁵³

Hence, from the 1930s and up to the early 1960s, the Swedish trade union movement, together with physicians such as Bruce and his colleges and several company doctors, were the main agents for the development of workers' protection against silicosis in the iron and steel industry. The handling of the silicosis problem also reflected very clearly the conflicting interests between the parties in industrial safety matters. Although management in the 1940s and 1950s began to see strong economic motives for investments in the work environment, there was indeed no "social peace" in this field.

In the international debate, Vincente Navarro has emphasised the importance of the strong trade union movement and the longstanding Social Democratic government for the successful development of the Swedish occupational health and safety policy. His main point is that the development of industrial safety in a country is ultimately determined by class interests.⁵⁴ I do agree with this conception. However, in studies on the concrete development, the role of the Social Democratic Party needs to be more analysed and discussed. In comparison with

⁵³ Svenska Gjutareförbundet (1957); *Gjutaren* 1956, no 2, 1957 no 7.

⁵⁴ Navarro (1983).

the trade unions, the Social Democratic government advocated long a more liberal attitude towards the employers what concerned the regulation of technical preventive measures against industrial dust in the plants.

A Local Example

In the following I will give an example of how the silicosis problem was dealt with in the old ironworks community in Österbybruk, situated in North Uppland, in the former steel district in central Sweden. The main purpose is to show that co-operation in industrial safety in the sense of the Swedish Model, presupposed specific historical conditions to become established and to work successfully. The aim is also to show the complex social consequences of the silicosis problem at the local level, and to further discuss the driving forces behind the development of industrial safety. In the old paternalistic Swedish iron works communities, where workers were strongly dependent on the local industry and where families traditionally had lived for generations, the silicosis problem could turn into a real social trauma.55 As the economic recession in the 1930s became longstanding within many trades, there was not much chance to get a job elsewhere either. In addition there was a longstanding housing shortage in the iron works communities that made workers less willing to leave the paternalistic welfare system, which, as mentioned above normally included workmen's dwellings. Consequently, fathers went on working and their sons followed into dusty shops with great fear for their health and lives.

This old Walloon ironworks had a traditional production structure, which included almost all stages in the iron processing industry. Thus, there were melting works, a forge, a rolling mill, a foundry, a mechanical workshop and a factory for the manufacturing of industrial knives. The raw material came from the famous Dannemora iron ore fields situated nearby. Traditionally the highquality iron and steel produced here had been exported to for example Sheffield for the manufacturing of knives and other tools. In 1926, the old ironworks merged with a modern combine of ironworks in the region called the Fagersta Combine (Fagerstakoncernen), with Fagersta Bruks AB at their head. Österbybruk became a centre within this combine for the production of castings made of stainless steel and special alloyed steel for tools and machine parts that had to resist extreme strain of heat, acid and weight. The products were used mainly in the shipbuilding industry and in the pulp and steel processing industries. The castings differed greatly in size and shape and there was seldom any serial production. The manufacturing of such complicated products presupposed a permanent staff of skilled craftsmen, and therefore much of the traditional, paternalistic social organisation of work was kept almost intact up to the late 1940s.

55 Unless stated otherwise, the following pages draw on (Thörnquist 1993).

Österbybruk provides a good example of the silicosis problem in the iron and steel industry in many senses. Most of the hazardous shops were represented in this plant. There was a quartz crushing shop, furnaces that were lined with quartz, a steel foundry and a knife factory where workers ground the knife blades on dry sandstone wheels. There was even a shop for the manufacturing of grindstones. In the long run, the new steel foundry, which was established in 1931, became the most hazardous workplace. As the foundry was too small from the very beginning and, among other things, the ceiling was too low, the ventilation was not sufficient. From the late 1930s on, management set up increasingly advanced exhaust ventilation systems and the dustiest parts of the work process were moved to a separate room in the foundry, but the dust problem still remained. The production of strongly diversified and often very large castings made the rationalisation of dangerous work operations, such as the cleaning process, extremely difficult.

The example of Österbybruk also shows very clearly how the silicosis problem arose and how it affected the social relations in the steel foundry. In the old iron foundry that had existed since the late 19th century, the whole work process had been done in the same shop by moulders who did all kinds of work operations. In conjunction with the mechanisation process, there was however a job splitting, which caused a social segregation among the workers. The moulders and the ladle-men were the most well-paid craftsmen with the highest status, while those who worked with the sand preparation, the knocking-out and the heavy cleaning of the castings were both less paid and much more exposed to the dangerous silica dust. Furthermore, the work process gave the craftsmen better opportunities of sheltering themselves from the dust. They made their own practical arrangements to reduce the dust, often without asking the management for permission. Those who worked with pneumatic machines on the other hand could not do very much to change their own work process. Yet they had the most dusty and dangerous work operations. Consequently, the silicosis problem deepened the social gap between the skilled and the unskilled workers.

The first two cases of silicosis, which affected a quartz crusher and a sand-blaster, were reported in the early 1930s. They had contracted silicosis after a short time, only 3 and 6 years respectively, in very dusty shops. The disease was in both cases further complicated by tuberculosis, and it progressed very fast. After a couple of years both men were dead. In the beginning of the 1950s over 50 workers had been afflicted with silicosis. Some of them had died and others had to change to new, often less qualified and less well-paid jobs. For craftsmen, such as ladle-men and moulders, who had great professional pride, this was a tragedy in itself.

A related problem was that the need for jobs to be set aside for the disabled was great during the decade after the Second World War, when the traditional order of organising the production and work finally began to be dismantled in

this old iron work community. Now, for example, the company engaged external entrepreneurs for many tasks within the maintenance sector, which traditionally had been big at the iron works communities. Thus many work tasks that had earlier been assigned to the old and handicapped disappeared at the same time as those who were afflicted by silicosis increased.

Furthermore, the development of the silicosis problem in Österbybruk shows that the paternalistic social order, which was based on individual and hierarchical labour-management relations, was an obstacle for co-operation in industrial safety matters in the sense implied by the Swedish Model. It should be emphasised that the development of this form for co-operation depended on special economic, social and cultural conditions. The establishment of trade unions was generally delayed in this sheltered labour market, where workers long were employed for life and where labour relations were characterised by strong personal interdependence and social control. It has been claimed that the social organisation of the paternalistic iron manufacturing community was the origin of the Swedish welfare system.⁵⁶ I do not agree with this conception however. In contrast to the paternalistic system, the Swedish welfare system, which the Swedish model was part of, presupposed developed capitalistic labour relations with organised and independent parties, collective bargaining and, not least, a developed representative democratic system.

In Österbybruk, workers started to unionise as late as 1919, and then they became strongly left wing. Consequently they regarded the reformist idea of cooperation between labour and capital with great scepticism. In the revision of the Worker Protection Act in 1931, workers' participation in work safety was recommended. Shortly thereafter, the central board in Fagersta initiated joint safety committees at the iron works in Österbybruk and at other works within the combine. In spite of this, the economic crisis and the increasing problem with silicosis deepened the antagonism between the workers and the company. Up to the late 1930s the committee did not deal very much with the dust problem. Nor did the Labour Inspectorate take much action. The main driving force for the development of the prevention of silicosis was the unions. The unions acted however mainly outside the safety committee, which they regarded only as a means of delaying any fundamental changes. Hence, the existence of a joint safety committee in a plant must not be regarded as proof of a working cooperation between the parties in the labour market.

In all essentials the company doctor, Ola Oredsson, supported the workers' interests. He inspected the dusty workshops and gave concrete suggestions as how to prevent dust development. He also made assessments of the effects on workers' health of the continuous, but comparatively moderate, mechanisation and rationalisation processes in the shops. By virtue of his medical authority, he

⁵⁶ Enzensberger (1982); Isacson (1991).

tried to convince the company of the need to make investments to diminish the dust problem. Throughout the years he also tried to convince the management of the necessity to shut down the quartz crushing shop and to stop the manual sand-blasting, which in his view were the most dangerous work operations. Nonetheless, the unions often mistrusted Oredsson. He did not diagnose all suspected silicosis cases the way the unions expected and his personal appearance often provoked them. The fundamental problem, however, seems to have been the deep class distinctions in this old paternalistic milieu. Unfortunately, the workers regarded the company doctor per definition as the company's man.

During the 1940s, the silicosis issue gained increasing attention within management and safety engineers were engaged in the problem at both the company level and at the central level within the combine. In the late 1940s a major rationalisation project started up, which also included radical steps against the dust problem. In the first place it meant a major rebuilding of the steel foundry. The silicosis problem had caused the company great insurance costs and serious disruptions of the production. However, as in many other companies, the then most important motive for management to take action against the silicosis problem was the shortage of labour, which caused great problems for the company after the war. In addition, a new, liberal managing director and the beginning of a change in the trade union policy towards reformism, also resulted in a better basis for dialogue between the parties.

The complex development of modern labour relations in the field of industrial safety at the ironworks in Österbybruk was not unique in the Swedish iron and steel industry. Many companies had long paternalistic traditions and when the silicosis problem appeared in the 1930s, this hierarchical and personal system of labour-capital relations made it difficult for employers and the employees to cooperate as organised, free and equal parties in accordance with the Swedish Model. In addition, the balance of power in the labour market as a whole to the employers' advantage created few opportunities for peaceful co-operation between the parties.

At the beginning of the 1950s, the dustiest parts of the work process, the knocking out operation and the heavy cleaning, were moved outdoors as they were in many other steel foundries with the same type of production of large and complicated castings, which had to be cleaned manually. The dangerous dust was supposed to blow away in the open air. This step did however not solve the problem. Rather it generated new, serious work environmental problems since those who had to do the heavy cleaning had to work out-doors. The new working site was cold and windy and there were great risks for accidents. In the 1950s the company also began to use modern thermal cleaning processes that caused hazardous smoke and gas. In addition it was difficult to get rid of the quartz dust even outdoors. Those who took this kind of job were, significantly enough, mainly Finnish immigrants, who had been recruited to the Swedish iron and steel

industry during and after the second World War.⁵⁷ Therefore, the place was called the "Karelia" and it became an isolated working site in both a spatial and social sense. Generally the workers at Karelia were not unionised, and the unions on their hand, did not pay much attention to the bad work environment there either. The problem became more a dispute between different groups of workers at the working site and thus few claims were directed to the employers. Consequently the problems remained unsolved. The "solution" of the silicosis problem hence caused a new social segregation in the foundry. The resulting increase in competition between the workers further weakened union power on the whole.

As shown above, the organisation of industrial safety was increasingly bureaucratised at all levels in society during the post-war period. The role of the private and public professionals was strongly reinforced and the staff of safety professionals grew strikingly. This meant that advanced technical and organisational measures could be taken to solve the silicosis problem. But, in many plants it also meant that the dialogue between the parties was more or less discontinued. In Österbybruk the "solution" of the silicosis problem was mainly discussed over the heads of the workers. Although the solutions did not benefit all workers in the foundry and even generated new work environment problems for those who had the heaviest work operations, the silicosis issue disappeared from the agendas of the joint safety committees in many companies.⁵⁸ The silence worried the Moulder Union, not least in the light of the increasing number of registered silicosis cases in the iron foundries. The union investigation of the work environment in the foundries in 1956 should be regarded in this context.

From the 1950s on, many steel foundries replaced quartz sand in the moulds with olivine sand. Dust measurement and exhaust ventilation improved, and state control was reinforced. In addition, many foundries were shut down, which as mentioned was an important factor for the declining number of reported silicosis cases. Some foundries continued to use quartz; the one in Österbybruk, for example, up to 1992. During the international crisis within the steel industry in the early 1980s, the ironworks in Österbybruk was shut down and parts of it were sold out. In 1983, the employees bought the foundry and the mechanical workshop for a symbolic sum; otherwise these parts would probably have been shut down as well. Today the company, *Österby Gjuteri AB*, employs 100 workers and the company is one of the leading steel foundries in Sweden. It still specialises in exclusive castings of stainless steel and special alloyed steel of various kinds. For the company, high quality has always been the most important competitive advantage in the increasingly tough international market. According to both

⁵⁷ Compare Rosner & Marcowitz pp 60-62.

⁵⁸ Rosner & Marcowitz have pointed out the same trend in the USA.

the management and the workers, this was the reason why quartz sand was used as long as up to the early 1990s.⁵⁹

However, many other problems at the "Karelia" still existed in the mid-1990s. It is true that the foundry inherited them from the old company, but according to the Labour Inspectorate and the central union representatives, it was also a question of prioritising employment over safety. Yet even they could sometimes feel a divided loyalty in this matter. In the 1990s, North Uppland suffered from mass unemployment, as did the whole steel region in Central Sweden and everybody was interested in the existence of the employee owned foundry. 60 During the 1990s the company has taken measures to solve the problems at the "Karelia", for example, by improving the exhaust ventilation system, by practising job rotation and by elaborating new production methods. Today, this part of the facility is under construction and will be transformed to an in-door site.⁶¹ Eventually, the main driving force for radically changing the work environment at the "Karelia" seems to have been business interests themselves, namely the increasing international claims for standardisation and certification of quality and of the protection of the external environment. Today, the work environment tends to be another important field for competition in the international market.

Finally, one can raise the question whether the motivation for investments in the work environment decreases when labour and capital become joined in the same hands. Is perhaps the dialectic relationship between labour and capital a dynamic force for the development of industrial welfare? Various kinds of co-ownership between labour and capital, which make the fundamental conflict between them less visible, are used in modern management strategies. These are however in the first place not meant to support the interests of the employees.

Concluding Remarks

The silicosis problem that emerged in the Swedish iron and steel industry in the 1930s, and which caused great suffering among workers during several decades thereafter, was an international phenomenon as well. The silica dust hazard came about mainly as a consequence of the increased production of steel castings and the mechanisation and rationalisation of the work process that had begun around the turn of the 20th century. Its social implication was not only a hazardous work environment, but also job splitting, a successive deskilling of craft-work and an increasing gap between skilled and unskilled workers. However, there was not a

⁵⁹ *Gjuteriet* 2000, no 6; in august 2001, 63 employees are full owners according to the original principle "one man one wote", which is less than during the 1980s and 1990s.

⁶⁰ Interview with Rolf Ählberg, former central representative in work environment issues at the Swedish Metal Worker Union, Stockholm, September 20 1995.

⁶¹ Interview with Hans Andersson, managing director at Österby Gjuteri AB, Österbybruk, July 6 2001.

simple relationship between rationalisation and silicosis. The efforts at solving the silicosis problem meant in turn that further technical and organisational measures of rationalisation were taken in the plants, which also could result in the establishment of new dangerous working sites and a new social segregation in the foundries. Hence, the silicosis problem was not only a conflicting labour-management issue in the plants. The dust problem – as well as its solution – also caused tension between different groups of workers, which of course also implied risks for a weakening of union power.

The work environment was supposed to be a central area for the Swedish Model of co-operation at all levels in society. Up to the 1960s, however, this cooperation mainly concerned the problem of occupational accidents. Thus the Joint Industrial Safety Council, for example, meant less for the solution of the silicosis problem in the iron and steel industry, which had its greatest problems during the period 1930–1960. Besides, the public policy of prevention long implied that the determinant factor for safety at work was the workers' own ability and willingness to avoid hazards. The solution of the silicosis problem depended more on the employers' ability and willingness to make expensive investments in the work environment. In the 1930s, however, the balance of power in the labour market made it difficult for unions to demand for costly improvements, and hence the silicosis problem was a highly conflicting issue between the parties. In addition, it would take two decades before the Social Democratic government started to support the unions' demands on stricter state control of the dust situation in the plants. In the traditional iron works communities, a common obstacle for co-operation in the way implied by the Swedish Model was the lingering paternalistic social and cultural structures. A matter of vital importance for the employers' readiness to voluntarily make radical and expensive investments to clean up the dusty shops was the great shortage of labour in the 1940s and 1950s. Hence, this also meant better preconditions for co-operation between the parties in the labour market.

A successful tripartite co-operation on the silicosis problem, in the first place at the national level, developed in the 1960s with the starting up of nation-wide silicosis investigations. Thus after hard pressure from the trade union movement the silicosis problem was eventually put on the national agenda and the state's control of industrial dust was reinforced. This development however also meant that the experts gained more and more influence on the solution of the silicosis problem, which seems to have weakened the dialogue between the parties at the local level.

The main agents and driving forces behind the development of workers' prevention of silicosis in the iron and steel industry were the trade unions and some devoted physicians. From the 1930s the unions within this important trade, as well as in other trades concerned with the silicosis problem, were increasingly committed to industrial safety matters in general. Hence, my results contradict

the conception that unions gave low priority to occupational health and safety during the inter-war period and up to the late 1960s. It is however important to consider the socio-economic, political and cultural prerequisites for union commitment over time. In addition, to understand the development of industrial safety and all the actors' commitment to these matters, as well as co-operation between them in this area, it is necessary to study not only how the problem of occupational accidents was dealt with, but also how the problem of industrial diseases was handled.

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Interviews

- Interview with Rolf Ählberg, former central representative in work environment issues (centralt arbetsmiljöombud) at the Swedish Metal Worker Union, Stockholm, September 20 1996.
- Interview with Professor Peter Westerholm, Arbetslivsinstitutet, Stockholm, December 13 2000.
- Interview with Hans Andersson, managing director at Österby Gjuteri AB, Österbybruk, July 6 2001.



The introduction of female cooks in the forest broke the old division of labour between the sexes. Source: Skogsindustriarbetarens arkiv, Stockholm.

Changing Sex, Changing Gender Lumberjacks, Female Cooks and Occupational Safety

Bo Persson

Good occupational safety has been desirable for several groups in industrial society. For the workers themselves it has been a question of self-preservation, to maintain their most important power resource in the labour market – labour. For the employers it has been a way of keeping the work force efficient and healthy and to keep it loyal to the company. The government has also had interests in occupational safety, especially since the welfare state had been established. It has been a way of fulfilling the state's obligation to take care of its citizens, to bring stability and order to the country and to maintain a balance between different interests in society. But there has always been a conflict regarding the level of safety and the costs for it.

In Sweden the development of occupational safety from the 1940s has been an interaction between legislation by the parliament and voluntary agreements between the parties on the labour market. It has been a vital component of the "Swedish model", a way of dealing with conflict of interests on the labour market. This model can be said to have worked well from the late 1930s to the early 1970s. Before that period, however, the initiative to improve occupational safety mostly came from the state and the public authorities. In 1889, during the years of the "take-off" in the Swedish industrialisation, the first general Occupational Hazards Act was passed.² At the same time a Labour Inspectorate was established. The aim of this initiative was very modest and the results were, accordingly, insignificant. In 1912 a new and more detailed Worker Protection Act was adopted and at the same time the Labour Inspectorate was reorganised and expanded. The head of the Inspectorate became the newly organised National Board of Health and Welfare (Socialstyrelsen), one of the most central public institutions in the further development of the Swedish welfare state. Among other things, some specialised inspectors were appointed for certain branches of industry, as well as for female workers.3

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¹ I want to express my gratitude to my colleagues Christina Florin, Annette Thörnquist and Bill Sund, for their valuable comments on the text.

² There had previously been legislation that prohibited child labour and in the beginning of the 20th century there was a law against women's night-work. See for example Wikander, Kessler-Harris and Lewis eds (1995).

³ For the development of the Swedish Labour Inspectorate, see *Från yrkesfara till arbetsmiljö*. *Yrkesinspektionen 100 år 1990* and de Kazinczy (1996). For the Female Factory Inspectorate, see Åkerblom (1998).

There were three ways the Inspectorate could exercise its authority over occupational safety. One was through issuing directions and recommendations on how the law should be implemented. These could be instructions on how machines or engines should be constructed, how resting-places should be arranged or which equipment or protection should be used in certain work tasks. The second way was through inspections of workplaces. Employers who did not comply with the regulations could be fined. But the policy of the Inspectorate was very cautious and here the third way of promoting occupational safety emerged: information and propaganda. A guiding principal was to persuade and convince the employers that the care for the workers' health and well-being was important for their own benefit, i e to change their attitude towards occupational safety. Not only the employers' viewpoint had to be altered. The workers also had to change their attitude towards their working behaviour – they had to learn to work in a safer way.

In short, for those institutions and leading persons who were engaged in occupational safety, one of the main ways to improve conditions for workers at the workplace, and probably also to reform society as a whole, was to change peoples' attitudes and alter their behaviour. And their ambitions were sometimes farreaching. One interesting attempt to change even the division of labour between the sexes and, as we would express it today, the construction of gender, was achieved in Swedish forestry during the interwar period. The means was to substitute individual cooking by forest workers with female cooks for groups of workers.

The aim of this essay is to apply a gender perspective on this attempt to change the division of labour between the sexes in order to promote occupational safety.⁴ I will first focus on sex and gender in the forested parts of Sweden where the main workplaces for the forest workers were situated. I will then deal with the organisation of forestry work and the conditions the Inspectorate identified as problems for the workers. Then the innovation of female cooks in log cabins and the aims and hopes of the Forest Labour Inspectorate will be discussed. Finally I will sum up what the outcomes were for the workers and for the construction of gender.

Theoretical Framework

The theoretical framework for my discussion has two important parts, common to many historians who have examined the relation between the sexes. The first is the concept of *gender*. In this essay I see gender primarily as a construction of

⁴ This essay is partly based on my book *Arbetarskyddet i skogsbruket – från tjugotalet till åttiotalet* (1993). For my discussion on gender I owe a great dept of gratitude to one of my students, Helén Rönnqvist (1997), who has written an interesting paper "*Skogsarbetare bilda gemensamma hushåll å arbetsplatserna!*" – en studie av skogsarbetarnas ändrade matförhållanden.

power relations.⁵ I see it as the perceived differences between men and women, as something humanly and societally constructed through tradition and lived experience. One could see it as a structuring principle that orders a society, closely connected to other analytical categories such as class and ethnicity. Men and women are attributed certain qualities, abilities and interests that give them a distinct position in the societal hierarchy. These attributions are constructions made by men and women and are therefore also changeable. They also differ from time to time and from place to place.

The power relations based on gender should therefore not be looked upon as an immovable and stable order. But it has some permanence. The Swedish gender historian Yvonne Hirdman has developed the concept "gender contract" as a way to get around the functionalist limitations of system theories. The contract approach emphasises that the power relations to a certain degree are maintained by both sexes and can be seen as a tacit temporary agreement between men and women.⁶

Yvonne Hirdman has found that the ordering of the sexes through gender seems to be guided by hierarchy – the masculine man is the norm for man in general – and by "keeping-apart" – that is, to have strict borders between the masculine and the feminine domains. This is obvious when we come to the second concept, the *division of labour between the sexes*. In this connection I see sex in a very simplified way, as biological men and women. This division of labour has been the object of many studies in recent decades, in Sweden as well as in other countries. From these we have obtained many interesting results on how this division is constructed, how it is maintained and how it changes. One striking result is the strong constructive element in the attribution of qualities and abilities to the sexes. The studies also clearly show the dynamics of gender, for example when professions and work tasks change sex.⁸

As I see it, gender and the division of labour between the sexes work, and can be analysed, on different analytical levels. They can be seen as a gender order for the whole society founded in laws and institutions, but also as orders that work in segments of societies, for example in certain classes and strata or in different geographical areas. These segments can often be based on certain ways of production or ways of living.

⁵ Scott, (1988), Hirdman (1990, 1993 and 1994).

⁶ Hirdman (1993).

⁷ For example Wikander (1988 and 1999), Bradley (1989).

⁸ Sommestad (1992), Wikander (1988) and Florin (1987).

Forest Work, the Division of Labour between the Sexes and the Construction of Gender

Swedish industrialisation has largely been founded on the exploitation of two basic domestic resources: forests and iron ore. With the emergence of an engineering industry in the late 19th century, based on innovations and improvements in technology, Sweden entered a period of rapid industrialisation. At the end of the 19th century the number of people employed in agriculture began to decrease in absolute figures, but Sweden was still a rural country. It was not until the middle of the 1930s that the people living in more densely populated areas exceeded those living in the countryside. In other words, until the post-war boom Sweden was an industrialised, but rather rural country.

Since its appearance in the middle of the 19th century, the modern Swedish lumber industry has had its centre in the northern, pine forested part of the country. This is a region that reaches from the county of Värmland by the Norwegian border to the mouth of the river Dalälven between the counties Gästrikland and Uppland by the Gulf of Bothnia. For the sake of simplicity I will here call it the forest region. It covers two thirds of the Swedish land surface, but is sparsely populated. The inhabitants have mostly lived along the great rivers and around some of the great lakes. In this region one makes a distinction between these settled parts (Sw. *bygd*) and the rest (forests, mires, mountains etc). People have also lived in the forests, but they have usually been poor and on the fringes of society.

The conditions for the emerging lumber industry were in many respects favourable. The companies had raw materials in the form of large forests that could be bought rather cheaply from the peasants since the trees had only a minor value for them. For the peasants the most important resources in the forests were pasturage, haymaking, hunting and fishing. Another advantage for the industry was that the rivers offered good transportation possibilities. The timber was floated on the rivers to the industries by the river mouths, and from there the sawed products, the pulp and the paper were easily carried by boat to the markets on the Continent. The companies also had a sufficient supply of labour, partly from the inhabitants that wanted the supplementary income from forest work, and partly from migrant workers who travelled around looking for jobs. The companies could also use traditional organisational forms – work teams and entrepreneurial forms – found in the local communities for the arrangement of the logging and transport of the timber.⁹

The people in the forest region welcomed the income from forest work. Many scholars who have studied the forest region have emphasised the egalitarian nature of the population, or at least the egalitarian ideology found among it. Still it was stratified. There were landed peasants and non-land-owning groups such as

⁹ For forest work and the organisation of forestry, see Persson (1991) and Östlund (1992).

crofters, tenants and cottars, and workers. Common for the agricultural population, including the peasants, was that the growing of cereals played a minor part for its subsistence. The climate and the short summer season in the forest region were often unfavourable for that kind of cultivation. Raising stock was far more important. All people, landed as well as those without land, lived in complex economies, composed of several different tasks where each one was needed for survival. Each person had a compositionally diversified working year and in that year the forest work, carried out in the winter months, offered income at a time when there was no farming and few opportunities for doing wage labour.

The division of labour between the sexes was, just as the working year, an important part of the subsistence economy. And the forest work fitted well into the gender order. It is not the easiest task to reconstruct a gender order historically, especially not within social strata that have left us few historical sources. Here I rely on relatively recent historical studies done in Sweden that focus on rural areas, especially the northern forest region in pre-industrial times and the 19th century. Many of these studies emphasise that the division of labour between the sexes varies from place to place and over time, and that one should be cautious about making firm statements. Still, there are some general features that should be valid for the forest region at the beginning of the 20th century and that are relevant for all social groups that were occupied with forest work.

There seems to have been a rather strict division of labour between men and women. One could characterise men's work as project orientated, with a clear separation between working time and rest. Women's work, on the other hand, was continuous and orientated towards the care of people and animals. The sexes were viewed as complementary, but the relation between them must still be regarded as hierarchical, even apart from the judicial and political inequality that is obvious. Women got their full political rights and majority in 1921. For men and women alike in this region, knowledge and the ability to work were worth more and more highly valued than property.

There was no strict division between indoor and outdoor work, as was common among farmers in the more agricultural regions of southern Sweden. Still most of the work tasks were regarded as either men's or women's work. The horse and the forest work were for example masculine, while the cow and the milking was feminine. But even if there was a clear division, the gender order nevertheless was flexible. When circumstances demanded it, the boundaries

¹⁰ Johansson (1989 and 1994), Löfgren (1982), Kaldal (2000), Götebo Johannesson (1996), Lundgren (1993), Lövkrona (1999), Sogner (1998), Niskanen (1998), Ericsson-Trenter (1995).

¹¹ This is obvious in a Nordic perspective, in spite of the many similarities in the way of living in the forested parts of the different countries. See Kaldal et al (2000).

¹² Here I rely mostly on Johansson (1989 and 1994), Löfgren (1982), Sogner (1998).

¹³ Maria Sjöberg has stressed the importance of this, see *Historisk tidskrift* 1996, pp 363–397.

could be exceeded. It was foremost the women who took over men's work, in many cases the younger women. Rather common activities for men during the working year were journeys for trade, haulage and seasonal work. During those periods it was regarded as natural that women took over men's work. It must also have been common that the men managed their own housekeeping during their absence; either they had food with them from their own household or they bought food.

The traditional forest work, i e providing firewood and cutting trees for tool making and house building, was thus a part of this division of labour. This was, as has been mentioned, by tradition regarded as men's work, and when men were away from home women took over the resident household themselves. But with the coming of modern "industrial" forest work there were some changes. For most men it made the periods of absence longer and more regular, and it became an integral part of the working year. As a consequence of this, both sexes must have had to exceed the boundaries for their own sex more than before. It gave the sexes a higher degree of autonomy, and since the benefit from the forest work was ready money it could not all together have been regarded as something bad by the men and women involved. Maybe it was even seen as desirable, analogous to the high esteem of men's ability to work and manage by themselves. Ella Johansson has in her doctoral thesis stressed that there was a great reluctance among the forest workers to unite and form a temporary household in the working team and to cook food together. She interprets this in terms of individualism and gender: to form a household was regarded as unmanly.¹⁴

Forest Work and Occupational Safety

The working conditions, and also the dangers, for the workers in forestry before Second Word War in Sweden were rather different from those one could find in industry at the same time. They also differed from those found in forest work in many other countries, where there was a higher level of mechanisation and where forestry depended on a working force recruited from outside the local community, often gathered in big camps at the logging places. I will therefore give an account of how the forest work was organised and the labour process. The special conditions for Swedish forestry at this time concerned among other things the way to hire and pay labour, the seasonal character of work and the low technological level of the labour process.

The sawmill and pulp companies organised the logging and the log driving on the rivers as subcontracting systems. In logging the company contracted a sleighhauler who was expected to take the full responsibility for the logging in a certain

¹⁴ Johansson (1994) pp 78–79.

¹⁵ Persson (1991); Östlund (1992), Törnlund & Östlund eds (2000).

piece of woodland and for the transportation of the timber to a watercourse. The sleigh-hauler in his turn hired and paid the cutters he needed to get the trees cut down. The sleigh-hauler was often a farmer, since horses were necessary for the transportation of the timber. In log driving an entrepreneur contracted the floating of the timber for a section of a watercourse and hired and paid the workers he needed. In log driving the work teams were larger than in logging. The work contracts were mostly put out for auction or tenders to the lowest bidder, and this subcontracting system was heavily criticised by the workers. It increased the competition between the workers and cut the wages.

Forest work was seasonal. The logging period took place in winter, from January to April. The log driving began in early spring when the ices on the rivers melted and the work lasted from some weeks to some months. The temporality was due to the possibilities available for transportation. The logging operation needed snow for transportation. The sleigh-hauler hired two or three cutters who felled the trees, trimmed the branches, striped the bark and cut the logs in appropriate lengths. The timber was loaded on a horse-drawn sleigh and transported to a watercourse. When the ice on the watercourses began to crack in the spring, the log driving began. It was a matter of making use of the spring flood. Dams collected the water from the melting snow so it could be used in the driving. Log flume took the timber past parts of the rivers that were unsuitable for driving and the log drivers supervised the log's way down the rivers. When a log got stuck on stones and similar hindrances it was the log driver's duty to pull it free with his floating-hook. Sometimes jams of floating logs formed. Then the log drivers had as quickly as possible to loosen it. This was a very dangerous task and sometimes the only way to loosen a jam was to blow it up with dynamite.

Forest work in Sweden before Second World War was manual and the technological level was rather low. The common working tools in logging were the axe, the saw and the barking iron. For the sleigh-hauler it was the sleigh and different lifting tools that were used to load the sleigh. In log driving the floating-hook and the boat were the universal working tools. A large work force was therefore needed in forestry and it depended on an abundant supply of cheap labour. The labour was formally unskilled; knowledge of the logging process was common property among the male people in the forest region. But to make good earnings you had to be skilful and experienced.

The wage form for those who were hired by the entrepreneurs was generally straight piecework, for example a price for each tree cut down, taking into account its dimension and length, or a price for each log floated. There was also an elaborate system of fines for "badly performed work", which could lower the earnings of both the entrepreneur and the workers. The working hours were unregulated. Forest work, like agriculture, was not included in the new Working Hours Act from 1919, which stipulated a working week of 48 hours. Cutters and sleigh-haulers worked as long as daylight permitted. The workers in the log dri-

ving often worked more than 24 hours without rest, just to be able to use the temporary high water level in the small watercourses.

The forest work in itself was hard and often dangerous. The climate in the winters was cold and the ground was often covered with more than meter-deep snow. The cutters had to dig themselves through the snow to be able to cut the trees at ground level, since there were heavy fines for leaving high stumps. There was always a risk of getting crushed under a falling tree, whether the cutter was oneself or a fellow-worker. If a tree got stuck in another tree during the felling operation, it was hard to get it down without taking risks. The axe and the saw often caused injuries; injuries that sometimes became seriously infected. The sleigh-haulers ran the risk of getting pinned under a log when loading a sleigh or under an overturning loaded sleigh during transportation.

In the early spring during the log driving the workers often had to wade in ice-cold water to do their work. In log driving there was always the risk that one could drown in the water or get hit by a floating log. The hard labour in forest work also often caused muscle strains, rheumatic diseases and general wear and tear. Another problem was that since the working places in both logging and log driving mostly were situated far from inhabited areas, the work force had to live in temporary cabins, often erected by the workers themselves. These cabins were often in miserable condition. In log driving in small watercourses the workers sometimes did not even use cabins, but rested and slept in the open air.

The dangers and the bad working conditions in forest work aroused attention among the authorities that were responsible for occupational safety and among liberal and labour politicians. Forest work was included in the Worker Protection Act of 1912, but the housing for workers in temporary work places, such as in the forests, was not. In 1919 the parliament therefore established laws for the lodgings used in logging, river floating and charcoal making. To implement and supervise these laws the parliament established a special Labour Inspectorate. The first Inspector to be appointed was a young and very competent forest officer, Oscar Wallner. The Inspectorate began its work in 1920, and five years later it was commissioned to supervise all occupational safety in forest work. Wallner was the sole Inspector for the first ten years. Then the Inspectorate was expanded and he became its head. He retired in 1958. During this time he exerted a great influence on occupational safety in forestry.

The issues that the Forest Labour Inspectorate focused on were the poor nutrition of the workers, the bad housing conditions and the high level of accidents, including those with a fatal end. The first two issues were not generally in focus for a factory Inspectorate, since they were not connected with the work itself but

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¹⁶ The name of the Inspectorate changed over the years; here I have chosen to call it the Forest Labour Inspectorate. For most of the time, the Swedish name was *Skogsyrkesinspektionen*.

¹⁷ Most of the specialised Inspectorates were abolished in 1974, among them the one for forest work. Henceforth they were parts of the general Factory Inspectorate.

with the way the workers lived while they were not working. These living conditions resembled those of some other workers who work at places away from home, such as sailors, construction workers and oilrig workers. 18 In comparison with those groups, however, the connection to the employer regarding food and housing were vaguer for the forest workers.

The forest worker's diet was the earliest issue. Local physicians in northern Sweden noticed already at the end of the 19th century that the diet of the forest workers was very unvaried. The typical menu consisted of "charcoal cake" (kolbulle, i e grease, wheat flour and water mixed together and fried in a pan), very fat "American bacon" and black coffee with sugar. To the physicians – the modern society's bold knights of rationalism – science and hygiene, this diet caused deficiency diseases and bad stomachs. For most of the people in the forest region, however, this was a diet of most delicious and luxurious food that was necessary for the hard work and could be afforded thanks to the cash earnings from forest work.¹⁹ Another aspect of the food in the log cabins was the individuality in housekeeping among the workers. Each worker had his own frying pan and coffee kettle, and each worker cooked his own food with the provisions he had brought with him. This way of housekeeping seemed very irrational to many observers.

The bad housing conditions have already been mentioned. Workers involved in the logging usually erected the cabins themselves as soon as they arrived at the work place. They were built of timber and often had just one room with a fireplace in the middle or in one corner. Around the walls were the bunks where the workers slept, rested, ate, sharpened their tools, mended their clothes and kept their belongings. The cabins were often crowded, smoky, draughty and dirty. The physicians who criticised the bad housing meant that they not only caused diseases and physical weakness, but that they also spread apathy, indifference and carelessness. The new laws of 1919 were one step on the road to better cabins, but the prescriptions were very modest and the implementation slow.

The third issue was the high level of accidents in forest work. When the Forest Labour Inspectorate took over all occupational safety in 1925, one of its first steps was to get a grip on statistics. The figures showed that the number of lost working days, the number of accidents and the number of accidents ending in a fatality were higher in forestry compared to the rest of industry, figured proportionately to the number of workers involved.²⁰ In fact, forest work was one of the most dangerous jobs of all. When Inspector Wallner discussed these high levels, he expressed his opinion that they were caused chiefly by bad working habits. In

¹⁸ See for example Bursell (1984).

¹⁹ Johansson (1994).

²⁰ The exact comparative figures are the numbers in relations to the number of workers in a year and worked hours. This way of calculation is necessary since forest work was seasonal.

logging the workers wounded themselves with their tools in different ways (septicaemia was a very common cause of death), they felled trees over each other because of lack of attention or they injured their backs by lifting the logs in a wrong manner. Wallner's thoughts lay in the main stream of international occupational safety at this time. The American "Safety Movement" had a great influence on the Swedish Labour Inspectorate. This movement, which was a part of the new industrial management ideology, stressed that also the employers had much to win from better occupational safety. It was in fact in the long term a way of increasing production.²¹ The way to lower work-related risks was through education, propaganda, advice and recommendations. It was a matter of changing bad behaviour in work, in short: to do things correctly and safely.

With this policy the worker and the work was put in the centre of the doings of the Labour Inspectorate. Wages, employment conditions and working-time were regarded as being outside the Inspectorate's area of responsibility. Those issues were to be handled by the parties on the labour market: the trade unions and the employers' associations. The subcontracting system in forest work, which made the employer's responsibility opaque and uncertain, and the piece-work system, which increased the tempo, were defined as non-issues in the practice of the Labour Inspectorate.

An ideal situation was if one could achieve a working co-operation between the employers, the workers and the Labour Inspectorate. But the conditions for such a co-operation in forestry were not present at this time. One major obstacle was that the labour market was so badly organised.²² The employers were very reluctant to form employer's organisations. They refused to bargain with the workers to make collective agreements, and they feared that having their own organisation would facilitate for the workers to insist on an abolishment of the subcontracting system. The workers themselves had great difficulty in forming trade unions. Only a third of the workers were organised. The obstacles were many. The social division between them was deep, the work lasted only a short time of the year and the competition between the workers for job opportunities was great.

The local work regarding occupational safety in the forest companies and in the work places was very poorly developed at this time. The conditions were better in industry. The Worker Protection Act had been revised several times during the inter-war period and a rudimentary local organisation for occupational safety had emerged in some industrial companies.²³ In 1932 the Social Democratic Party had formed a government and come to an agreement with the Farmers' Party regarding economic policy. In 1938 the Swedish Trade Union Confedera-

²¹ Sund (1993).

²² Persson (1991).

²³ Bjerregaard (1993), Sund (1992) and Thörnquist (1993).

tion (LO) and the Swedish Employers' Confederation (SAF) came to an important agreement establishing industrial peace on the labour market, the so-called Saltsjöbad agreement named after the place where it was signed. These two agreements mark the beginning of the social democratic welfare project in Sweden, the Swedish model.

In 1942 the LO and the SAF reached an agreement on labour safety, regulating local efforts regarding occupational safety and creating a firm organisation for this work. But the trade unions and the employers in forestry did not follow this example, and a similar agreement for this branch was not made until 1969.²⁴

Thus the lack of a local organisation for occupational safety in forest work meant that the Forest Labour Inspectorate came to play the leading role in the development of occupational safety for a long time. The chief Inspector Wallner was no revolutionary, but he had a strong belief in co-operation and enlightenment as a way to alter man's behaviour and to improve the workers' conditions.

In one sense, one could perhaps say that the emphasis on changing people's behaviour in the Safety First movement was also rather suitable for forest work, since the responsibility of the employer was replaced by the responsibility of the entrepreneur and the worker.

The Introduction of the Female Cook

Inspector Wallner realised that there was no short cut for improving occupational safety for the forest workers. But almost upon taking up his duties he got an idea that he thought would lessen the unhealthiness of the work and diminish many of its risks – and during the following decades he tried to put this idea into practice. This was that the forest workers should maintain co-operative housekeeping. The men in each cabin should join together and hire a female cook who would live with them in the cabin through the working season and prepare their food. This arrangement became for Wallner something of a *panacea* for health and safety in forest work.

Wallner's reasoning was as follows. Joint housekeeping with a hired female cook would mean that the workers would return from the day's work to an already warm and clean cabin. They would be served warm, nutritious and cheap food. Because of this they would feel more comfortable not only physically, but also psychologically. They would get more time for rest and for mending their clothes, equipment and tools. That would further their working capacity and at the same time lessen the risks for accidents caused by badly maintained tools. Warm food and cleanliness in the cabin would also make it more pleasant and cosy, and that would further enhance the workers' way of life. Even the general

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²⁴ Persson (1993) p 100.

standard of the cabins would improve, because no woman would accept wretched hovels and poor stoves.

The workers would gain more self-esteem, and the presence of a woman would make them more careful about their own tidiness. Wallner meant that they would take these qualities, this carefulness and orderliness, with them to the work place, working more safely and properly and paying more attention to the dangers in the work. If they were unlucky and an accident occurred, the female cook, who should have some training in the elementary treatment of wounds, would give them first aid.

This idea was present from the start of Wallner's work for occupational health. He may have got it from a one of the local physicians in northern Sweden, Dr Adolf Hassler from Frostviken in Jämtland county, who wrote an article about it. Wallner's first thought was that the workers should hire an elderly woman or a man who was not quite fit for regular work. But this thought gave way for the idea of the more professional female cook. It was obvious that it was the female presence that would be a pressure on the men to improve their own working conditions.

The way of diffusing and implementing this idea was through information and propaganda. The employers as well as the trade unions had a positive attitude toward the idea and supported the efforts to implement it. The Forest Labour Inspection drew up drafts for menus and initiated instruction courses for female cooks. They also made a propaganda film for the idea, one of the first propaganda films for occupational safety in Sweden. From 1937 the state gave grants to the cook courses, and from 1942 a special adviser was appointed at the Forest Labour Inspectorate. She – it was of course a she – was to organise the education of the female cooks and also travel around and visit them in the cabins and give good advice in all matters. This part of the Inspectorate expanded and at most there were ten advisers working at the same time.

The Outcome

The outcome of these efforts can be regarded in two ways. One is to look at the "measurable" results in the form of the diffusion of joint housekeeping with hired female cooks and improved occupational safety in forest work. The other is to look at men and women, the division of labour between the sexes and a potential change in the gender order. I will start with the "measurable" results.

The diffusion of Wallner's idea could be described as a success story. During the 1920s it was adopted slowly, but from the 1930s and particularly during World War II the diffusion was rapid. State support played an important role. The new Social Democratic government had a strong resolve to improve conditions

for workers, not least for those in rural areas.²⁵ The state support for female cooks came partly through financial funds for the cook courses. But the state also promoted the spread of female cooks by the great logging operations it initiated during the war, to reduce the shortage of fuel caused by the war blockade. The state was eager to offer satisfactory housing conditions for the workers, and female cooks were standard at these work places.

The period with better cabins and female cooks lasted a few decades. With the coming of the 1950s, a rapid and radical change in the labour process in forestry began. Forest work was mechanised. Log driving was replaced by the transportation of wood by truck, and the road network in the forests expanded swiftly. The boom after the war and the rising standard of living made it possible for the forest workers to buy mopeds and motorbikes – even cars. Thus they could go home for the night and the cosy cabin with the female cook made way for ordinary resting sheds. A new and very dangerous tool, the chain saw, replaced the traditional axe and saw. For many years, reducing the dangers of this tool became the dominant issue for occupational safety.

It is harder to say anything definite regarding the aim of Wallner's idea, the improvement of working conditions and the lessening of perils and an unhealthy environment. The conditions in the cabins became better of course, as did the food. One may suppose that the comfort and the well being of the workers also improved. If this also meant a more careful and cautious way of working is unclear. The rate of accidents in forest work, proportionately to the workers involved, rose steadily until the middle of the 1930s, and so did the rate of those ending in fatalities. From then on the rate of accidents remained on the same level, whereas the rate for those with a fatal end decreased to a lower level. There were still some very high apexes during the last years of Word War II, but they can be explained by the extraordinarily large logging operations, which included many inexperienced workers, during these years.²⁶ This check in, and even reduction of accidents, could indicate that the diffusion of female cooks in fact had the favourable consequences Inspector Wallner hoped for. One contributory element was probably also the massive propaganda for a safer way of working, which was continuously distributed by the Forest Labour Inspectorate.

The successful introduction of women into the forest work also changed the division of labour between the sexes in the forest region. In the earlier division there was a rather sharp boundary between men's work and women's work. This division had also a geographical dimension, but it was the work that was gendered, not the place.²⁷ Men and women were kept apart in work when they were at

²⁵ Persson (1991) pp 173–175.

²⁶ They employed for example factory workers, white-collar workers and also war refugees.

²⁷ I feel that this is important if one is to be able to understand gender in the forested area. Some scholars mean that in certain societies even places can be gendered: for example the

their farms or houses in the settled part of the region – they did different things. But when they were really far from each other, e g the man working in the forest and the woman keeping up the household at home, then they could – and had to – do each other's task. The woman did hard agricultural work and work on the houses and fences, while the man cooked his food and mended his cloths. Maybe it was the keeping-apart that made it possible for the men to do women's work. With only men in the cabin, all doing the same, no one had to be ashamed. Men could not form households together, but they could manage household tasks individually when they needed to.²⁸

The new division of labour Wallner wanted to introduce was not a reestablishment of the division that was common in settled parts of the forest region, when men and women were at home together. No, he wished, as far I understand, to create a new one. And to realise that new division of labour, both men and women had to be educated into it and habituated to it.

The woman was to become a modern professional housekeeper, well acquainted with the latest knowledge on cooking, nutrition and household economy. These were still the traditional tasks for women, but women who wanted to be *cooks* had to be educated, and in some sense also supervised, even if the control aspect on the part of the advisors seems to have been small. This new woman was an equivalent to the modern rational housewife and the professional working woman you could find in other places in society at that time.²⁹

The male forest workers had to be convinced of how good it was with joint housekeeping and female cooks, and they were therefore subjected to propaganda from the Inspectorate, their own unions and their employers. Once they had decided to engage a woman, she was in herself an anomaly in the forest work and a way to break old behaviour. The fact that she was a professional housekeeper announced that it was not the old order that had been established. This was not the same as being back in the village with wives, mothers and daughters. At the same time this professional knowledge was the only way to convince the men that this was a good order, and the very basic argument was used: cheap and tasty food. With this new female person, and this new division of labour between the sexes, the men had to change themselves.

A new masculinity was formed, that stressed that men should be clean and tidy, careful and dutiful, and good workers. In some ways this masculinity resembles the ideal of conscientiousness (*skötsamhet*) that historian Ronny Ambjörnsson has found among men in the labour movement and the temperance

cow-house is female and the stable is male. This is a good example of showing gender construction. The keeping apart is the important thing, but the forms can vary infinitely. ²⁸ Cf Johansson (1994).

²⁹ For the rationalisation of household work, se Hirdman (1992), Lövgren (1993) and Götebo (1996).

movement in Sweden in the beginning of the 20th century.³⁰ This ideal stressed good work ethics, order and planing, but also democratic argument, a respect for other's opinions, fairness, and class-consciousness. Ambjörnsson says this was a Swedish mentality during these years.

There was a lot of reluctance towards the idea that a lone woman should camp for weeks in a cabin together with a group of men, far from inhabited areas. Moral considerations were mixed with concern for the women, and these doubts were found foremost among people from outside the forest region. But these fears come to nought. All accounts of the conditions in the cabins were positive, almost idyllic.³¹ The men cared for their cook. She usually lived in her own section of the cabin – sometime only shielded by a hanging cloth. The men helped her with carrying firewood and water and supervised each other so no one was favoured by her or took liberties with her. Maybe also the sanction from a public authority gave her a certain position. The cook seemed to have had a strong position in "her" cabin.

Changing Sex, Changing Gender – Some Reflections

This account has shown that it was possible to change both sex and gender in forest work. And through this, behaviour that was regarded as bad for the health and comfort for the workers could be changed as well.

Female cooks took over the cooking for the workers and created better conditions for them in the cabins, through performing a professional job based on traditional female knowledge and ability. There seems to have been no shortage of women for these jobs or training programs. Farms were being closed down and "the flight from the countryside" was increasing. Sweden was on its way to becoming a modern urban industrial society. There were few job opportunities for married and unmarried women in the forest region. Cooking could be an alternative to moving south or to towns.

The doubtfulness felt by the forest workers toward joint housekeeping seemed in the long run to have given way to an appreciation of its benefits. The individual cooking was partly cultural, partly an expression of the inequality between the workers. We do not know how the workers reasoned when they decided to hire a cook. Did they realise that it could have advantages that superseded the costs of losing their independence? Was it pressure from the employers? Had the rising standard of living made the workers more equal economically so they could afford a joint household? Had the spread of trade unions increased the workers' solidarity with each other?

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³⁰ Ambjörnsson (1988).

³¹ This applies to reports from the Inspectorate, the advisers and the memoirs of cooks and workers.

The Forest Inspectorate, and through it the state, was the driving force in this process and probably played a decisive role for its success. Its aim was to change gender through sex. Through the presence of a woman, men would change their behaviour. Similar reasoning regarding sex and gender are known from for example the debate on suffrage. In new settlements women's suffrage was seen as a way of diffusing women's characteristics, like order and virtue, and of taming men's savagery and violence.³² This "contagion theory" was not quite as valid in the case of forest work. Wallner's idea was that the interaction between men and women would bring out the best in the men, or at least something better. And that would also make men more careful in their work.

This process towards integration into a more modern division of labour between the sexes was probably inevitable, since the transformation of the forest region was already at hand. Wage work for men and women alike, a monetary economy and "capitalistic" relations between people replaced the old way of living.³³ But the Inspectorate forced the change in the cabins. I think that the success of this change is due to the Inspectorate being an outside force; it was not involved in the relations within the local community. It also had backing from the workers' trade unions and the employers, a backing that probably was important. There was something of an "iron triangle", in the modern corporate sense, that made its influence felt on the forest workers. In this sense one should not perhaps be surprised at this attempt to change people's behaviour. It is rather typical for Sweden in the era of the Swedish Model: the state together with the organised interests in the labour market trying to make the world a better place for the citizens, even if the citizens had not always asked for this special solution.

Finally, I would like to present some thoughts on theory. In the pre-industrial societies in the forest region the division of labour between men and women was rather distinct. This corresponds well with the postulate that the keeping apart of men and women is a fundamental part of a gender order. But it was not an entirely tight and inflexible order: circumstances and imperative necessities now and again forced crossovers. Crossovers were also standard during the recurrent periods when men and women were separated because of work or travel. One could therefore say that crossovers were a part of the gender order, even if in a limited way.

The introduction of female cooks in the forest broke the old division of labour between the sexes. The bringing together of men and women, even if was just one woman, forced a new division of labour. And this must be regarded as a division of labour quite different from the pre-industrial one. If it also was a new

³² Therborn (1980), Björkenlid (1982), Manns (1997) and Rönnbäck (2001).

³³ The dramatic change of the forested region with the coming of the modern forest industry is studied in a multidisciplinary research project funded by the Bank of Sweden Tercentenary Foundation. It is called "Flexibility as tradition. Culture and subsistence in the boreal forests of Northern Sweden". Se http://www.svek.slu.se/Project/Project.htm

gender order can be argued. To some extent it was. It presupposed that both sexes would be working for money in a labour market that was separate from the household economy. This was the case even if it sometimes was the wives and daughters of the workers who were hired as cooks. In this way it was a more modern order, adjusted to Swedish welfare capitalism. Men as well as women worked, on more equal conditions, both professionals. But the new order rested on the idea that men and women were different.

This new order did not allow any crossovers, like the old one. Men did what men should do, women what they should do. Thus one could not say that the new order introduced by the Forest Inspectorate was more equal than the old. On the contrary it stressed that women belonged to the household sphere, but now as professionals and wage earners. In this sense it made men less capable, more vulnerable and more dependent on women's care. The division of labour between the sexes became in this way more firm in the developed capitalistic welfare state, at least in its first phase.³⁴

For women the work as cooks was an opportunity to get an education, an income of her own and thence probably also greater independence. But even if it was work in a labour market, the market itself was very segmented between men and women.

The introduction of the female cooks in forest work can thus be seen as an important part of the integration of the people in the North into modern welfare capitalism. There were both gains and losses for the sexes in this process. In any case, the introduction of female cooks seems to have had some good effect on occupational safety in forest work.

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Wearing protective gear, a woman works with lead in a battery factory. Can she live up to the new guidelines for women only? Source: *Oskarshamns-Tidningen*, 1992-11-14. Photographer: Olle Nilsson.

Perspectives on Gendered Labour Legislation in Sweden during the 20th Century

Lynn Karlsson

Historically, occupational and environmental safety issues have been the subjects of legislation that has been gendered. Where women can work and what kind of work they can do has been regulated in many different ways. For example, when the International Association for Worker Protection (the forerunner of the International Labour Organisation) was founded in 1900, the regulation of women's night work was one of the first points on its agenda.

Gendered protective legislation has raised controversy both in Sweden and abroad.¹ The regulation of women's work alone, it has been argued, created constraints for women on the labour market, making it difficult for them to compete with men. It could in certain cases worsen rather than improve their working conditions.

In this article, I want to explore these issues further by looking specifically at the controversial night work prohibition for women workers that was in effect between 1911 and 1962. This is the major piece of legislation regulating women's work in Sweden, and it was an issue of controversy throughout its fifty-year history.² In the following, I trace the history of this law. Official investigations of the legislation and its effects, as well as its treatment in the Riksdag, the Swedish parliament, are described, and the arguments for and against the special protection of women are presented. I also compare the development of the women's night work prohibition to attempts to introduce a "general" (i e for men) night work prohibition to show what implications the existence of gendered legislation has had for the male worker.³

¹ Wikander et al (1995).

² In a comparative perspective, Sweden has had relatively little gendered labour legislation. Women were prohibited from working underground in mines between 1900 and 1962/77 (the prohibition was gradually relaxed), and all Worker Protection Acts until the Occupational Safety and Health Act of 1977 have included a clause allowing the government to prohibit women from doing work considered "particularly dangerous or hazardous" for them. Under this clause, they have been prohibited from loading planks on ships and working with lead paint.

³ The question of protective legislation for women only touches upon many aspects of gender relations: for example, questions of women's citizenship, women' and men's rights and duties both in the home and at the workplace, and the gendering of work processes. I plan to look at these issues more fully in another context.

The 1909 Prohibition Against Women's Night Work

In 1906, Sweden signed the first international convention on worker protection, the so-called Bern Convention, prohibiting women's night work in industry.⁴ The fact that Sweden signed a binding international treaty is important for understanding the subsequent history of the law. This limited the government's options regarding making changes in how the prohibition was formulated. Moreover, throughout most of the history of the women's night work prohibition, impulses for change came from abroad, with the formulation of new international conventions.

In 1908-9, prior to the passing of the law by the Swedish Riksdag, union women and Social Democratic women joined with middle-class feminist organisations, such as the Fredrika Bremer Förbund, in protesting against it, arguing that it discriminated against women workers and made them less competitive with men in the labour market. They feared, they said, that groups of women who had competed successfully with men, for example women typographers, would lose their jobs if they no longer could work at night. Instead, these protestors demanded, unsuccessfully, a night work prohibition for all workers. ⁵

Despite these protest, the law was passed in 1909 and went into effect on January 1, 1911. The law required that women working with industrial work in mines, factories or handicrafts employing more than 10 workers were to have 11 consecutive hours of nightly rest, including the period between 10 pm and 5 am. The law allowed only certain limited dispensations. Industries using or producing perishable goods could be totally exempted by the government from the prohibition. Limited dispensations could be obtained by employers in the case of accidents or natural catastrophes. For seasonal work, where the bulk of production activity took place during a short period of time, or when an enterprise was forced to intensify its production for "exceptional reasons", the law stipulated that the number of hours off for women workers could be reduced from 11 to 10 hours per day during a total of 60 days per year. This reduction in the rest period was to be reported to the factory inspector, who was also to decide whether such a reduction was motivated.

After the law went into effect, it continued to raise protests among various groups of women. The Women Factory Inspection, which was charged with its enforcement, also came to the conclusion that it was inflexible and often made women's work difficult. The law's rigid stipulations regarding working hours

⁴ This was done without prior investigation into women's working conditions or formal discussion within the government on the need for such legislation. Karlsson (1995) p 247.

⁵ See Karlsson (1995), Carlsson (1986), Norlander (1984).

⁶ The Swedish canning industry was exempted by government decree soon after the law was passed. Inspecting these workplaces where women worked nights became an important task for the Women's Factory Inspector. See Åkerblom (1998) pp 54-61. It should be noted that this law remained separate from the Worker Protection Act passed in 1912 and was only integrated into that law in 1931 (see below).

and the very limited possibilities for getting dispensations – and never at the request of women workers – were felt in many cases to be a burden for women workers, rather than a protection. At the same time, the law gained support in many quarters. Once in place, the prohibition against women's night work did come to have a "protective" function, at least for some women (and, as we shall see, some men), and attempts to change or repeal it caused strife between different groups of women, as well as between women and men.

Should Sweden Ratify the Washington Convention?

The first official discussions regarding a modification of the Swedish legislation arose after a new international convention on women's night work was signed in Washington in 1919. It differed mainly from the Bern Convention in that the night work prohibition was extended to small workplaces with less than 10 workers.⁷ In the mid-1920s, the National Board of Health and Welfare (*Socialstyrelsen*), which was preparing a new Worker Protection Act, was called upon to recommend whether Sweden should ratify this new convention or seek a change in the Bern Convention, upon which the Swedish legislation was based.

During the early 1920s, women workers, sometimes with the support of male union officials, had called for an easing of the night work prohibition to make it "less of a disadvantage" for women. In 1925, the National Board of Health and Welfare met with delegates from a number of trade unions who had expressed similar views. The women workers, the Board wrote, had not demanded the total repeal of the special night work prohibition for women, but wanted to see it modified to suit their working conditions. Women working in breweries on two shifts, for example, wanted to be able to work to 11 pm, while women bakery workers needed to start work at 4 am. They also wanted more flexible opportunities for dispensations.⁸

When the National Board of Health and Welfare presented its proposal for a new Worker Protection Act in 1925 (later passed in 1931), it recommended against a ratification of the Washington Convention, citing these demands by women workers. However, the Board was not ready to support a modification of the existing night work prohibition along the lines suggested by the women. This would require the abrogation of the Bern Convention, "a step that would undoubtedly attract considerable attention in those circles interested in interna-

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⁷ The Swedish delegates at this conference, among them factory inspector Kerstin Hesselgren, proposed that the night work prohibition be made less restrictive. This met with no success however.

⁸ SOU 1925:34 p 69. Petitions regarding the prohibition were presented by unions representing brewery workers, newspaper carriers, streetcar workers, typographers, bakery workers, food industry workers, railway workers and textile workers. See also Norlander (1984) p 42 ff.

tional social political cooperation; this should not be undertaken unless there are strong, not to say compelling, reasons for such an action."

When the Board carried out an official investigation on employer and union views on the night work prohibition in 1926, it found, however, that there were no such "compelling reasons". While employers were generally negative to the law, various trade unions, and more importantly, the Swedish Trade Union Confederation (Landsorganisationen, LO), now explicitly supported the night work prohibition and called for the adoption of the Washington Convention as well. While the Board suspected that the opinions of women workers "had not been fully taken into account" in the investigation, it now felt that there was no longer any basis to push for a modification or repeal of the Bern Convention. However, the Board found that the investigation confirmed its earlier impression that an extension of the special night work prohibition to small workplaces was not to be recommended. The Board ended its policy statement to the government by saying that the ILO would soon be reevaluating the Washington Convention and urged that Sweden should work for "certain, in its view, unquestionably well-motivated modifications..." of this convention, thus allowing Sweden to eventually adopt a more suitable night work prohibition for women workers. 10

This recommendation was followed. In 1931, when the Liberal government finally introduced a bill to the Riksdag for a new Worker Protection Act, it proposed that the 1909 prohibition against women's night work be integrated into the new law without any changes.¹¹

The Regulation of Men's Night Work

While women's night work in industry had been legally restricted since 1911, men's night work was left unregulated by law until the revision of the Worker Protection Act in 1931. As early as 1908, however, in connection with the debate on the women's night work prohibition, Social Democrat Carl Lindhagen, a noted opponent of protective legislation for women only, had raised this issue. He demanded that the question of both men's and women's night work be investigated and measures be taken to alleviate unhealthy working conditions for both sexes in this regard. By 1912 his position had gathered support within the party, and in 1912-15, the Social Democratic party put bills to the Riksdag calling for measures to put a stop to men's night work except where it was necessary "for technical reasons or for the public good". In

¹⁰ Quoted in 1931: Kungl. Maj:ts proposition nr 40 p 109.

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⁹ SOU 1925:34 p 69.

¹¹ 1931: Kungl. Maj:ts proposition nr 40 p 111.

¹² Night work in bakeries had been regulated since 1919. Sellberg (1950) p 281 ff.

¹³ This short account of the development of demands to regulate men's night work is based on 1931: Kungl. Maj:ts proposition nr 40 p 54 ff and 1931: FK motion nr 206 p 2 ff.

1915 the Riksdag passed a resolution calling for an investigation of men's night work, which however was delayed by World War One. The issue was raised again in 1920, in connection with an investigation of working hours. The committee carrying out this investigation found that there was very little "abuse" of night work in industry, and it did not recommend any legislation in this regard. The National Board of Health and Welfare, in its proposal 1925 for a partial revision of the Worker Protection Act of 1912, agreed with the Working Hours Committee, that in general night work did not occur in Sweden unless it "could be considered necessary." Nonetheless, the Board did feel, it wrote, that the Worker Protection Act should contain some kind of regulation that would make it possible to intervene in any "abuse" of night work. What was needed was a statute that would allow authorities to react in the case of "unjustified night work" – which "in all probability" was rare – in a "prudent" manner that was in keeping with the spirit of viable worker protection. 14

The new Worker Protection Act put to the Riksdag in 1931 therefore contained a general (i e for men), although non-binding, prohibition against night work. The law was worded very generally: "Workers should, when the nature of the work, the public interest, or other circumstances do not legitimately require otherwise, be provided with the necessary time off for rest at night." It was recommended that night work should not take place "unnecessarily" and stipulated that the factory inspectorate could arbitrate if the law was "abused".¹⁵

In the government's bill, Liberal Minister of Social Affairs Sam Larsson made very clear that the government had taken the needs of employers into consideration:

"even if concern for the health and welfare of the workers must, to be sure, naturally be the primary consideration when the statute is applied, employers' legitimate interests should, on the other hand, receive all reasonable consideration ...On the whole, a flexible application of the statute would seem to be necessary." 16

The Liberal government's proposals regarding both women's and men's night work did not go unchallenged. Identical bills opposing the government and proposing, among other things, that the night work prohibition for women be extended to small workplaces were put forward in both chambers by leading Social-Democrats. The co-signers of these bills motivated their stance merely by saying that Sweden should adhere to the Washington Convention.¹⁷

 $^{^{14}}$ Quoted in 1931: Kungl. Maj:ts proposition nr 40 p 55.

¹⁵ 1931: Kungl. Maj:ts proposition nr 40 p 3.

¹⁶ 1931: Kungl. Maj:ts proposition nr 40 p 60.

¹⁷ 1931: FK motion nr 205 and AK motion nr 349. The Social-Democratic co-signers of these bills – among others, member of the First Chamber Sigfrid Hansson, editor of the LO's periodical, and member of the Second Chamber August Sävström, who was active in the party leadership – were critical of the Liberal government's proposal in other areas as

Carl Lindhagen, on the other hand, continued his campaign for an effective, gender-neutral prohibition against night work in a bill to the First Chamber. Accusing the Liberal government of formulating an entirely inadequate protective measure for men, he proposed that the women's night work prohibition be instead extended in full to men. His motivation for his proposal was to claim that men, as well as women, were important for the "reproduction of mankind". Men, he said, may be considered stronger than women and thus more able to tolerate night work, but this belief was a mistake, in his view:

"even for a man, night work is contrary to nature. It degenerates him as well and thus even the race, and it moreover entails an infringement of his human right...It is still emphasised that women will bear children. For that reason it is important for coming generations that they especially must be spared night work. This is undoubtedly correct. But the man's physique and way of life must have just as much an effect on the health of the race. He is the one who contributes the seed of life itself, and its quality is no doubt of vital significance for the germ and the plant. Men's night work weakens the seed of life." ¹⁸

Lindhagen is a rare voice, as we shall see, in the coming discussion regarding both women's and men's night work. He alone in the debate on the night work prohibition uses women as "the norm" in the sense of defining men, as well, in terms of their reproductive biology.

In the both chambers, the night work prohibition for men was voted through without any debate¹⁹ However, Carl Lindhagen raised the subject in connection with the short discussion on the women's night work prohibition – which Social Democrat Sigfrid Hansson had proposed be extended – arguing that the two points were inter-connected. The big question, Lindhagen said, was whether there was to be equal legislation for men and women. This did not seem to be the case, he continued. The Social Democratic party may have resolved in 1914 that worker protection should be the same for both sexes, but now, in 1931, this view had been abandoned.

"Now even the Social Democratic men in leading positions are approaching the ...old notion of the protection of women without the protection of men. Now one is saying that woman has less strength than man and therefore she must get most protection. But then I say that in this case she is protected by her own natural instincts, for she will not take on an occupation that she is incapable of doing...But when women already have a place where they have shown themselves able to make their livelihoods, one cannot throw them out through such one-sided legislation; instead im-

well. In general they felt that the revision of the Worker Protection Act did not go far enough. See also Lundh & Gunnarsson (1987) pp 69-70.

¹⁸ 1931: FK motion nr 206 p 14.

¹⁹ 1931: FK protokoll nr 30 p 44 and AK protokoll nr 31 p 10.

partial legislation, benefiting the welfare of both men and women, should be implemented."²⁰

Liberal Kerstin Hesselgren, Sweden's first women's factory inspector, also responded to Hansson's proposal. She pointed out that it was women themselves, those who would be affected by the extension of the law, who had spoken out most strongly against it. This had to do, she said, with how the night work prohibition was formulated. Being the oldest of the international acts for worker protection, it was ill suited to modern working conditions. Rules for dispensation were narrow and rigid. Were the law to be applied to small industries, such as bakeries for example, it would cause great difficulties for the women employees. Her own investigations had shown that there was little night work in small workplaces, but occasionally such work was essential. If women were prohibited from this night work, it would lead to a "serious handicap in their possibility to earn a living". The international convention upon with the law was based was to be revised, she added, and it seemed to her to be "exceedingly impractical to extend the law now, when one would be doing so without the approval of women; on the contrary they were afraid of this development." ²¹

Carl Lindhagen's accusations that Social Democrats had abandoned their policy for the equal protection of women and men in the labour market were correct as developments during the following years show. Both the LO and the Social Democratic party became firm supporters of the special protection of women.

New Attempts to Change the Women's Night Work Prohibition – the Geneva Convention of 1934

In 1934, the Washington Convention of 1919 was revised. The new so-called Geneva Convention was more flexible in terms of working hours: in "exceptional cases" the authorities, after deliberations with employers' and employees' organisations, could shift the period that had to be included in the 11 hour period of obligatory nightly rest forward one hour to between 11 pm and 6 am. Moreover, the convention was not applicable to women in managerial positions who did not perform manual labour.²² Just as the Washington Convention, the Geneva Convention was applicable to all industrial workplaces and to all women employed in such industrial workplaces, with the above exception.

The question of whether Sweden should ratify the new convention became the subject of much activity in Sweden in the following years. Investigations

²⁰ 1931: FK protokoll nr 30 p 70.

²¹ 1931: FK protokoll nr 30 pp 66-67. Hesselgren was the first woman to sit in the Swedish Riksdag. At this time, she was a radical so-called "independent" Liberal.

²² 1935: Kungl. Maj:ts proposition nr 84 p 3.

were carried out to determine the consequences of ratification, and organisations representing different interests made their views known.

In investigations undertaken during 1934/35 regarding the potential effects of extending the women's night work prohibition to small workplaces, the Women's Factory Inspector noted that night work had more or less disappeared in many branches where it had previously existed, for example among milliners and in laundering, sewing, and dairying. Here, a night work prohibition would cause little problems. Small bakeries, on the other hand, would suffer from an extension. Many of the bakeries employed only 1-3 workers, mostly women, who started work before 5 am, mostly on Saturdays or before holidays. If women's night work were prohibited, the women's factory inspector reported, the bakeries said they would have to either close down, fire their women workers and replace them with men, or speed up work to the detriment of the health of the women workers. This could affect up to 6-7,000 women.²³ Former Women's Factory Inspector Kerstin Hesselgren noted that a change in the law would entail "considerable difficulties" for these women, "without providing protection or help as the law intends." Moreover, the night work in question only involved 30 minutes or an hour during certain days. "The damage that such night work can entail cannot compensate the difficulties for these women workers that a prohibition would bring about."24

In 1935 the Women's Factory Inspection was charged with investigating how an extension of the night work prohibition to "non-industrial work" in industry would affect women workers. The investigation showed that few women were employed for such work, which took place only sporadically at night. Those women who would be most affected by a new law were cleaning women and newspaper delivery women. In particular, cleaning women working in factories that ran on two shifts had to work at night if cleaning was to be done after working hours, which was preferable. It was also "desirable", the Women's Factory Inspector wrote, "that if the cleaning was to be done in the best manner...special personnel are used for this purpose and that these should be women." Other groups, such as women canteen and workers nurses employed in industry for work at night, would be affected by an extension and would probably be replaced by men. Finally, the inspector noted, because news-

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²³ "Socialstyrelsen med utredning angående verkningarna av ett utvidgat förbud mot kvinnors natttarbete m.m." dated 19 January, 1935. (Rfa). See also Åkerblom (1998) pp 63-65 for these investigations.

²⁴ "Frkn Hesselgrens uttalande januari 1935". (Handwritten statement). (Rfa). Kerstin Hesselgren had retired from her position as women's factory inspector in 1935, but was still called upon to comment on this issue.

²⁵ "Till Konungen, socialstyrelsen med utredning rörande kvinnors användande i industriella företag till annat än industriellt arbete", dated 29 April 1935. (Rfa).

papers were considered to be industrial establishments, women journalists would be prohibited from working between 10 pm and 5 am.²⁶

This latter threat had prompted 19 women journalists to write a letter to the National Board of Health and Welfare protesting any extension of the night work prohibition that would affect their occupation, "for no comprehensible reason that we can see." Journalism, they wrote, was by its very nature characterised by irregular working hours; setting a 10 pm boundary for work was "in practice absolutely impracticable." No woman journalist would be able to report what had happened at an evening meeting or file a review of a theatrical performance, for example. As a result, women would no longer be employed by the daily press. Night work had caused no problems during the 40 years or so that women had been employed as journalists, which was moreover one of the better paid areas of employment for women. The letter ended with a "decided protest" against "every proposal for a legal limitation of working hours for women only within journalism."27

At the same time, a petition signed by over 6,000 women textile workers declared that any change in the hours of the existing night work prohibition would entail "severe consequences" for women in the textile industry, while "one-sidedly" promoting the interest of employers. Women working in this industry were often married – wages were so low, the petition stated, that the whole family had to work – and had their households to attend to after work. Were the hours of the nightly rest period shifted forward to 11 pm, women working on the second shift would loose any chance of getting a proper night's sleep because they had to get up at 4-5 am to prepare their family's breakfast. These women thus also protested sharply against a ratification of the Geneva Convention. Instead, they wrote, the protection that the existing night work prohibition gave them should be extended to the men in the industry as well, something that "the vast majority of men working on the shift system" agreed with.28

Organised working class women represented by, among others, Sweden's Social Democratic Women's Association (Sveriges socialdemokratiska kvinnoförbund) also petitioned the government, requesting that the revised convention not be ratified and that the existing night work prohibition be retained unchanged.²⁹ Organisations representing primarily groups of white-collar workers went further in their emphatic protests against ratification. "Even the existing

²⁶ "Till Konungen, socialstyrelsen med utredning rörande kvinnors användande i industriella företag till annat än industriellt arbete", dated 29 April 1935. (Rfa).

²⁷ "Till Kungl. Socialstyrelsen, Stockholm", dated 13 April 1935. (Rfa).

²⁸ Quoted in SOU 1946: 60 pp 495-96.

²⁹ 1935: Kungl. Maj:ts proposition nr 84 p 5. The Women's Section of Stockholm's Central Organisation of Trade Unions (Stockholms FCOs kvinnosektion) and Stockholm's Social Democratic Women's District (Stockholms socialdemokratiska kvinnodistrikt) also signed this petition.

rules regarding a night work prohibition", they wrote, "were an undesirable restriction in women's right to work."30

What should be noted here is that with the revised women's night work convention of 1934, the situation had changed for the various opponents to the night work prohibition. In order to get the change in working hours that many women demanded, the convention's more far-reaching definition of to whom the law applied would have to be accepted. This meant extending legislation to groups of women workers, such as journalists or nurses working in industry, who had never come under the existing night work prohibition. Thus new groups of women would be "sacrificed" for more flexible working hours, which must have seemed unpalatable for opponents of special protection. On the other hand, supporters of protective legislation for women, such as the textile workers cited above, also opposed ratification in that they felt their working conditions would become worse. Women from both camps were united in their opposition to ratification of the Geneva Convention of 1934.

Employers and trade unions had diverging views on the subject of ratification. Not surprisingly, the Swedish Employers' Confederation (Svenska arbetsgivareföreningen, SAF) argued against, saying that the legislation was not motivated by any misuse of women's night work in Sweden. The LO, on the other hand, supported an extension, but other union organisations were more critical. The Union of Swedish Garment Workers (Svenska beklädnadsarbetareförbundet) and the Union of Swedish Textile Workers (Svenska textilarbetareförbundet) both protested the change in working hours that would be the result of ratification. The former organisation pointed out, however, that it was against any move to make the night work prohibition less restrictive. On the contrary, the best solution to any problems caused by the law was to extend it to all workers, regardless of sex.31

In early 1935, the Social Democratic government, which had taken power in 1932, put the question of ratifying the Geneva Convention to the Riksdag. Influenced by the results of these investigations and petitions – Minister of Health and Social Affairs Gustaf Möller particularly mentioned the Social Democratic women's petition – the government bill proposed that the matter be deferred pending further investigation. The bill was passed without discussion.³²

³⁰ SOU 1946: 60 p 491. The Central Council for the League of Women's Professional Associations (De kvinnliga kårsammanslutningarnas centralråd) and the Association of Women Clerical Employees (Kvinnliga kontoristföreningen) sent this petition.

³¹ SOU 1946: 60 pp 490-91.

³² 1935: Kungl. Maj:ts proposition nr 84, FK protokoll nr 16 p 34 and AK protokoll nr 18 p 77.

Proposal for a New Worker Protection Act

New Regulations for Men's Night Work

In 1938, the so-called Worker Protection Committee was appointed to formulate a new Worker Protection Act.³³ The Committee decided, among other things, that the time had come for a more stringent regulation of men's night work. The existing provisions from 1931 were in its view "all too vague and general" to control a possible misuse of night work. The paragraph allowing authorities to take measures against employers abusing the law had never been used, it noted.³⁴

Employers' organisations, for example the SAF, protested vigorously against such a change in the law, arguing that night work "if it organised in a reasonable fashion" had not been proven scientifically to be dangerous. Moreover, it would be economically disastrous for the country to prohibit night work. The productive capacity in many industries would be sharply reduced, and, unless other countries also had such a prohibition, the Swedish export industry, which was "vital for the well-being of the country" would become less competitive.³⁵ The LO, on the other hand, called for a total prohibition if night work, unless it was granted dispensation after an official inquiry.

The Committee decided on a compromise. In its view, it wrote, it was "indisputable" that night work, and particularly shift work, was more exhausting for workers than day work, even though employers tried to minimise its drawbacks. It was difficult for workers to get sufficient rest. "Shift work also entails irregular mealtimes, and home life is not infrequently subjected to various forms of disruption." This was particularly the case if family members worked different shifts.³⁶ The Committee thus now placed men in a family context, although in more restrained terms than Carl Lindhagen's.

Even so, the Committee did not propose an absolute prohibition against night work, unless it was approved by the authorities, as had been requested by the LO. This, it felt, would lead to unnecessary bureaucracy. Instead it proposed a "more moderate" variant – a regulation that workers (men³⁷) were "as a rule" to

³³ While its work was interrupted by the war in 1939, the Committee was reactivated in 1942 and it presented its proposal in 1946. SOU 1946: 60 pp 9-16.

³⁴ SOU 1946: 60 p 356.

³⁵ SOU 1946: 60 pp 354-5. Other employer organisations, representing for example agriculture, handicrafts and small industry, and iron works and mines expressed similar views.

³⁶ SOU 1946: 60 p 356.

³⁷ Of course the prohibition would affect many women as well. The women's night work prohibition excluded and, as will be seen, continued to exclude women not working industry, i e in health care and services for example (which however were exempted from the general prohibition as well; see below). However, it is clear from the Committee's proposal, and indeed in all debates on night work, that a "general" night work prohibition is understood to be something concerning men. That men are "the generic" and women "the spe-

be given time off between 11 pm and 5 am. However, exceptions were made for "such work that, owing to its character, the needs of the public or some other special circumstances has to be nonetheless carried out at night." Moreover, dispensations were to be allowed for reasons of a "technical, economic and social nature", for example to fully utilise expensive production apparatus or to avoid unemployment in going from a three- to a two-shift system. If an employer or employees found it "desirable or suitable" to work during the nighttime period and came to an agreement on this matter, they should also be given a dispensation All night work could continue provisionally for one year after the law was passed and for a second year with a dispensation. In the view of the Committee, these relatively generous possibilities to get dispensations – which, it said, met the demands of the SAF – were justified by the fact that an absolute prohibition against night work could lead to "great difficulties", particularly for industries facing foreign competition.³⁹

Protective legislation for women only is retained

Even though a night work prohibition – albeit weak – for all workers had been proposed, the special night work prohibition for women was not only retained in the Committee's proposal; it was extended to small industrial workplaces as well. The Committee's justification for this is revealing. If the level of protection afforded women was to be maintained, the Committee wrote, the new "general" night work prohibition would have to have been much stricter; otherwise women could be used for night work "that at the moment is not permitted".⁴⁰

The investigations of women's night work in small industries during the 1930s had shown that an extension of the night work prohibition to these areas

cific" is a recurring theme in research on gender history. See for example Waldemarson (2000) Chapter 1.

³⁸ SOU 1946: 60 pp 357-58. The Committee listed numerous examples here: ironworks, paper factories and glassworks were examples of work processes that for technical reasons had to run 24 hours per day. Moreover, even when it was technically possible to stop work during the night, this might have such economic or technical consequences that it was questionable whether closing down at night was justified, the Committee wrote. In such cases, night work should be allowed. The "needs of the public" included transportation, restaurants and cafés, hospitals, electricity etc. "Special circumstances" were guards and porters of various kinds.

³⁹ SOU 1946: 60 pp 361-64. The spirit of cooperation and compromise that the Committee expresses here – that it had met the demands of employers in allowing dispensations, while stipulating that they were subject to negotiation between employer and employee organisations – characterises the entire legislative proposal and reflects the so-called "spirit of Saltsjöbaden" that was the result of the Saltsjöbad Agreement of 1938 between the LO and the SAF. This central agreement contained a bargaining procedure for resolving conflicts and initiated a period of compromise and consensus in relations between labour and capital in Sweden. Sund & Åmark (1990) pp 38-39, Magnusson (2000) pp 232-35.

⁴⁰ SOU 1946: 60 p 497.

could lead to more pressing working conditions and/or unemployment for women. The Committee argued nonetheless that an extension was motivated. That the prohibition had up to now been limited to larger workplaces had, it said, been considered "unfair". Moreover, small workplaces had "hygienic shortcomings" not found at larger workplaces that made women's night work unsuitable there. However, the Committee had not included non-industrial activities such as cleaning in factories in its proposal because, it said, "the disadvantages of prohibiting such work at night outweigh any benefits such a prohibition could provide." The Committee reasoned that women in these jobs only worked a few hours per night and that sporadically. Moreover, women in supervisory positions were also to be exempt from the law.⁴¹

This meant however that Sweden could not sign the Geneva Convention, the Committee noted. More radically, the Committee also proposed a number of other changes, which, it said, would require the abrogation of the Bern Convention. It recommended that the period of nightly rest be shifted forward from 10 pm and 5 am to 11 pm and 5 am. This would enable workers on two shifts to be able to take proper breaks during their shifts – the existing night work prohibition had created a problem for women workers, forcing them to take too few and too short breaks, the Committee wrote – while still allowing them a shorter work day on Saturdays, as they wished. In proposing this adjustment in working hours, the Committee did not take any account of the demands from women textile workers, mentioned above, that the hours covered by the prohibition should remain unchanged.

Another major change in the prohibition against women's night work was proposed by the Committee. According to the law of 1909, women were to have an 11-hour period of unbroken rest during the night that included the hours between 10 pm and 5 am, a provision that was not incorporated into the new legislative proposal.⁴³ The existing paragraph, the Committee wrote, "does not correspond with modern views regarding woman's right to work or freedom to work." There was no reason to require that women industrial workers over 18 years of age "under all circumstances – regardless of their age or marital status" have an 11 hour rest period during which they were not allowed to work.⁴⁴ A change in this regard would also, the Committee said, "reduce to some extent the difficulties arising from the extension of the prohibition to small workplaces."

The Committee also suggested somewhat broader provisions for exceptions to the prohibition than had existed previously. Dispensations could be given for seasonal work and emergency situations as before. To this it added work "that

⁴¹ SOU 1946: 60 pp 496-500, 503. Quotation on p 500.

⁴² SOU 1946: 60 pp 501-02.

⁴³ This rule meant that if, for example, women worked to 10 pm, they were not allowed to start work before 9 am the next day.

⁴⁴ SOU 1946: 60 p 501.

satisfies needs of great public interest or that is required to avoid considerable inconveniences of a technical, economic or social nature." It specified that such work should involve "providing for the needs of defense and the maintenance of the population". However, the Committee "assumed" that such dispensations would allow a few hours night work only, not that women would be employed during the entire night.⁴⁵ These were, it should be noted, much less liberal provisions, for both employers and women, than those provided in the Committee's proposal for a general night work prohibition. Women workers who, for example, wanted to work at night could not, through their unions, negotiate with their employers regarding night work and come to an agreement, as men were allowed to.

The Committee's proposal regarding the women's night work prohibition was, in its own view, an attempt to modernise the special protection of women, while still retaining it. In the 40-year period since the signing of the Bern Convention, working life had been transformed and attitudes towards women's right to work had changed. This motivated, it wrote, new provisions. The Committee did observe that the adjustments it had proposed "probably did not agree fully with what some women's organisations had urged in this question." But it had tried "as far as possible" to take their views into consideration, as well as "considering existing practical needs "46 What should be noted here is that the Committee's proposal involved renouncing an international worker protection convention, which was taking a major step. Seen in this perspective, the proposal can be considered radical. It was certainly controversial, as the reactions to it show.

The Committee's proposal was subject to criticism from all quarters. Organisations representing middle-class women, such as the Cooperative League of Professional Women and the Association of Women Clerical Employees, "expressed their surprise" that the women's night work was retained now that a general night work prohibition had been proposed, a point also made by the women's district factory inspectors. In their view, the special rules for women should be stricken entirely from the law. On the other hand, the LO supported the extension of the prohibition to small workplaces, but objected strongly to the change in working hours. ⁴⁷

In the end, as will be shown below, the LO's point of view prevailed, and the women's night work prohibition was left unchanged when the new Worker Protection Act was put to the Riksdag in 1948.

⁴⁵ SOU 1946: 60 pp 502-03.

⁴⁶ SOU 1946: 60 p 506.

⁴⁷ SOU 1946: 60 pp 493-94.

Extraordinary Circumstances Require Extraordinary Measures

The outbreak of World War Two halted work on new protective legislation. However, the war and its aftermath had important effects in the case of the women's night work prohibition. The mobilisation of male labour for the war effort meant that women were required to take over men's work and working hours. Thus, in December 1939 the government was given the authority to allow dispensations from the women's night work prohibition for firms producing goods necessary for the defense of the country. This was extended in June 1940 to include all production necessary for the country's survival in a time of war and remained in effect until June 1946.⁴⁸ As a result of this emergency legislation, women were employed at night, even on a regular three-shift basis, throughout the war in industries working towards the war effort.⁴⁹

In an article written in 1948, Women's Factory Inspector Ida Fischer summed up the experiences with women's night work during the war years. Women working on a three-shift system had been kept under strict medical observation, and while, as Fischer pointed out, night work was physically demanding, the women "generally speaking" managed quite well. Their physical problems (for example digestive problems and sleep disturbances) were no greater than those of men working three shifts. Married women did experience some difficulty in managing their households, and for them night and shift work was particularly burdensome. However, Fischer noted, the size of the women's earnings played a great role here. When the women were paid enough to be able to employ household help, they did not feel as tired. Generally speaking, the factory inspectors had found that particularly the three shift system created social and physical difficulties for, Fischer emphasised, both women and men. However, Fischer concluded the article, the war-time experience had convinced the Women's Factory Inspection that the newly proposed general night work prohibition, properly enforced, made the women's night work prohibition unnecessary.50

The "extraordinary circumstances" of wartime had motivated the temporary legislation allowing women's night work. In May 1948 – the same year that the government was later to refuse to relax the women's night work prohibition – it proposed new provisional emergency power acts that would allow the govern-

⁴⁸ SFS 1939: 831, 1940: 484, 1941: 126, 1942: 141, 1943: 102, 1944: 464, and 1945: 281.

⁴⁹ I will not go into detail here regarding women's work during the war. It should be noted however that there existed an unwieldy administrative apparatus for employers to get dispensations. Applications were sent to the Ministry of Health and Social Affairs, who in turn sent them to the National Swedish Insurance Board and the factory inspection for a statement. Unions, both local and central, were asked for their opinion. It could happen that dispensations were denied if the union reacted negatively. Dispensations were usually valid for about three months; after this, they had to be renewed, following the same procedure outlined above. See Rylander (2000), Åkerblom (1998) pp 58-62.

⁵⁰ Fischer (1948) pp 130-32.

ment to continue to give dispensations for women's night work during a one-year period.⁵¹ The "extraordinary circumstance" now was the "labour market situation": "in particular the iron industry was experiencing a considerable need for labour." Women, the government wrote, could fill some of this need, provided the rules regulating their night work did not prevent this. Moreover a provisional law allowing exemptions from the prohibition "should not be limited to the iron industry, in that a similar situation could exist or could be feared to arise for companies in other areas...."⁵² Thus to meet the needs of industry (not women workers) the government could take this somewhat paradoxical – not to say cynical – stance.

The Swedish Labour Market Board (Arbetsmarknadsstyrelsen), the SAF and the LO were called upon to comment on the proposal. Citing the great difficulties that had arisen to meet the labour force needs of industry – "/t/he shortage of manpower is notorious", the SAF wrote – the two former organisations supported the proposal. The LO and its two representatives on the Swedish Labour Board were critical, however. The present situation, they said, could hardly be compared to the crisis of the war years and did not motivate a dismantling of the night work prohibition to the extent that women be allowed to do recurring night work. Nonetheless, they did agree that women working on two shifts could be permitted to work after 11 pm or before 5 am. The Minister of Health and Social Affairs Gustav Möller answered that he had no intention of allowing women to work on a regular three shift schedule: "As far as using women workers for such work is concerned, we should remember that the difficulties that are connected to working on three shifts are increased for married women because the women have to devote themselves to the care of their homes and families during their free time." 53 With little debate, the Riksdag passed this provisional legislation.⁵⁴

The Passing of the 1948 Worker Protection Act in the Riksdag

In the autumn of 1948, the long-awaited revision of the Worker Protection Act was put to the Riksdag in the form of a government bill.⁵⁵

Despite protests from employers' organisations that it was economic folly to introduce a general night work prohibition in the over-heated labour market of

⁵¹ 1948: Kungl. Maj:ts proposition nr 267.

⁵² 1948: Kungl. Maj:ts proposition nr 267 p 4. Instead of experiencing a depression after World War Two, as had been feared, Sweden – as was the case in many other countries – was surprised by an economic boom and a labour shortage, particularly in iron works and the mechanical engineering industry. See for example, Höök (1952) pp 4-5, 152-53, Lundberg (1983) pp 113-30.

⁵³ 1948: Kungl. Maj:ts proposition nr 267 p 9.

⁵⁴ 1948: FK protokoll nr 26 and AK protokoll nr 26.

⁵⁵ 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298.

the post war years⁵⁶, the 1938 Committee's proposal, with some adjustments, was included in the government's bill. The LO's demand that the prohibition be absolute, with clearly defined – and restrictive – rules for dispensation, was ignored, however. The Minister of Health and Social Affairs Gustav Möller reassured employers by noting that if the proposal was accepted, "most of the night work that is now carried on would probably be covered by the general exemptions suggested by the 1938 Committee, and in other specific cases the prerequisites for dispensation would probably exist." Moreover, he added, night work was to be allowed to continue without dispensations one year after the law took effect in July 1949, and he "assumed" that dispensations would be granted if the production of goods "of importance to the country" were threatened by a crisis situation. Möller did, however, make a cautionary statement regarding dispensations for economic reasons only. It should not be possible, in his view, for an employer to get a dispensation solely on the grounds that his machinery was so expensive it had to be run 24 hours a day in order to be profitable. Applications for dispensations on these grounds would have to be considered very carefully. Nor should it be possible, he added, to get a dispensation merely on the grounds that an employer had a "rush order". Were this possible, he said, the night work prohibition would become "illusory".⁵⁷

Achieving a revision of the special women's night work prohibition as the Committee of 1938 had suggested proved, on the other hand, to be impossible. Despite continued protests from many women's organisations that special legislation for women was no longer necessary⁵⁸, when the proposal for the new Worker Protection Act reached the Riksdag in 1948, the prohibition of women's night work had not only been retained in its original form from 1909, it had also been extended to workplaces of all sizes. The Ministry of Health and Social Affairs, which had prepared the government's bill, felt that the LO's opposition to any changes in the law – the LO had stated that neither women industrial workers or their unions, in particular the textile workers' union, supported such changes – was of deciding importance. At the same time, Gustaf

⁵⁶ The SAF and other employer organisations representing such branches as iron works, mining, sawmills, and paper and pulp works argued that a strictly enforced night work prohibition could diminish productive capacity in important areas by up to one-third. 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298 p 139.

⁵⁷ 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298 pp 145-47.

⁵⁸ The Cooperative League of Professional Women repeated its protests against the law, and the Open Door, the Fredrika Bremer Förbund and Föreningen SAIA, which represented social workers within industry and business, expressed similar views. The National Swedish Insurance Board (*Riksförsäkringsanstalten*), which was the central authority for the factory inspection at this time, suggested that women over 45 years of age be exempted from the provision, considering the fact, it wrote, that the actual purpose of the night work prohibition was to protect women in their roles as wives and mothers. One can detect the influence of the women's factory inspector, a staunch critic of the night work prohibition for women, behind this statement. 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298 p 163.

Möller wrote in the government's bill, since no one had opposed the 1938 Committee's extension of the prohibition to small workplaces, he felt this new clause could be included in the law. The major factor behind the government's position was, however, the fact that the changes in the night work prohibition for women suggested by the Committee of 1938 would have required Sweden to renounce the Bern Convention. "A measure such as this should not be taken unless there are very good reasons to do so," Möller stated. Instead, he proposed that any changes to the existing law could wait until the on-going revision of the Geneva Convention of 1934 had been completed (a new convention had in fact been formulated by the time the government's bill was dealt with in the Riksdag in 1948). No mention was made of the provisional law passed earlier the same year allowing dispensations for women's night work.

The government was not unanimous in wishing to retain the women's night work prohibition. Economist Karin Kock, Sweden's first woman cabinet minister, wrote a dissent against the government's legislative proposal. The more stringent general night work prohibition that was now being proposed made it possible, she felt, to treat women and men equally in this respect, and she proposed that the special night work prohibition for women be stricken from the law.⁶⁰

The government's proposal for a new Worker Protection Act prompted a number of bills dealing with both men's and women's night work. Both Conservative⁶¹ and Liberal⁶² party bills proposed less rigid working hours at night for women, such as the Committee of 1938 had suggested, pointing to the fact that the newly revised international night work convention had more generous regulations for women than what the government was proposing. This greater flexibility in women's working hours would allow women working on two shifts to take proper breaks and would make it easier to adjust women's working hours to those of men. The Riksdag had already shown its awareness of these problems, the Conservatives wrote, when it had passed the law in June 1948 allowing temporary dispensations from the women's night work prohibition.

In the case of the general night work prohibition, both parties argued that considering the prevailing economic situation in the country – with the need to increase production particularly in heavy export industries such as iron and steel works and mechanical engineering, many of which ran on three shifts – any restriction on men's night work was ill-advised. The Conservative Party therefore demanded that the general night work prohibition to be stricken entirely from the new Worker Protection Act. The Liberals accepted the prohibition itself, albeit reluctantly, but called for dispensations to be allowed for

⁵⁹ 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298 p 165.

⁶⁰ 1948 (höstsessionen): Kungl. Maj:ts proposition nr 298 p 316.

⁶¹ 1948 (höstsessionen): FK motion nr 444, AK motion nr 617. The bills were identical.

^{62 1948 (}höstsessionen): FK motion nr 438, AK motion nr 621. The bills were identical.

economic as well as technical reasons. Moreover, they felt that the one-year grace period allowed employers before the night work prohibition was to go into effect was too short; it should be extended to at least three years. The current economic crisis required, in their view, that all industrial capacity be used to the fullest.⁶³

Communist Party bills to both chambers called, on the other hand, for an absolute general night work prohibition, citing the LO's objections to the governments proposal. Except in the case of emergency situations, all night work, these bills stated, should require a dispensation from the National Board for Occupational Safety and Health, "after consultations with workers' organisations".⁶⁴

The Standing Committee on Civil-Law Legislation, to which the government proposal as well as the bills were referred, rejected all the bills' proposals. However, influenced by the Liberals' bill, it did move that the implementation of the general night work prohibition be postponed for two years after the new Worker Protection Act was to go into effect in 1949, i e until July 1, 1951. The Committee's reasoning here is significant. There were a number of reasons, it wrote, "partly of a psychological nature" to delay the introduction of the prohibition. "Taking into consideration the importance, in the prevailing circumstances, of avoiding any disturbances in production, it hardly seems possible during the next few years to carry out any real reduction in the amount of night work existing at present." Were the prohibition to go into effect at once, the Committee wrote, it was very probable that all requests for dispensations would be granted; industry and the authorities would just experience a lot of "unnecessary bother". 66

The Committee accepted the proposal to retain women's night work prohibition and its extension to all workplaces. However, it did feel that the nightly rest period should be between 11 pm and 6 am, and it encouraged the government to re-examine the legislation in connection with the upcoming discussion in the Riksdag on the newly revised international night work convention.⁶⁷

In the following debates in both Chambers of the Riksdag, the question of both night work prohibitions, the most controversial elements in the new Worker Protection Act, came to dominate the discussions. Conservatives continued to question the need at all of the general night work prohibition, while Communist chamber members criticised the new law for being too weak. Liberals, although still critical to the prohibition, expressed their satisfaction that its imple-

^{63 1948 (}höstsessionen): FK motion nr 438 pp 3-6.

⁶⁴ 1948 (höstsessionen): FK motion nr 440, AK motion nr 619. The bills were identical.

⁶⁵ 1948 (höstsessionen): Andra lagutskottets utlåtande nr 62 p 45.

⁶⁶ Three Conservative Party members registered a dissent from the Committee's proposal; they called once again for the exclusion of the general night work prohibition from the law. 1948 (höstsessionen): Andra lagutskottets utlåtande nr 62 pp 44-63.

⁶⁷ 1948 (höstsessionen): Andra lagutskottets utlåtande nr 62 pp 52-53.

mentation would be postponed for two years. This showed, they said, an understanding of the country's precarious economic situation. Social Democrats defended the Committee's proposal, saying that it had indeed taken into consideration the need to increase industrial production.⁶⁸ Moreover, Social Democrat Emil Olovson said in the Second Chamber, the conservative fear of the new general night work prohibition was exaggerated. Considering the wording of the new law, it was, he felt, more appropriate to speak of a "supervision" of night work, rather than its prohibition. The rules for dispensation would certainly allow all "necessary" night work to continue.⁶⁹

While no male participants in the debate from any party questioned the need for the women's night work prohibition, several women, uniting over party lines in this question, did. While Social Democrat Hulda Flood was carefully critical of the retention of the prohibition⁷⁰, cabinet minister Karin Kock directly attacked the government's proposal. She pointed out that her own studies on women's wage work⁷¹ had shown that special regulations for women, in particular the night work prohibition, were one reason, if by no means the only one, for the "prevailing divergence" between men and women in the labour market. Whether or not the prohibition had been motivated when it was originally implemented, conditions in the labour market had changed, she said, and the position of women was now entirely different. They were organised and supported by their unions, and many women workers in industry were against the prohibition. Doing away with the prohibition would give women "an equality in the labour market that could help them gain equality with regard to wages." Moreover, she pointed out, the prohibition was "illogical". The idea behind the prohibition was to protect women from work that could endanger their health, but only a limited group of women were affected by the law. Women did night work in health care, restaurants and as domestic servants, but this had been left unregulated. "Indeed", she continued, "no one has even considered doing so, in view of the fact that women supply a great demand for labour in these areas." Finally, she noted that with the passing of a general night work prohibition, "which brands night work as being less desirable for everyone, both men and women", she and many others would have welcomed the disappearance of special legislation for women only.⁷² Conservative party member Ebon Andersson concurred with Kock.

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 $^{^{68}}$ 1948 (höstsessionen): FK protokoll nr 40 pp 112-34 and AK protokoll nr 40 pp 182-90.

⁶⁹ 1948 (höstsessionen): AK protokoll nr 40 pp 184-85.

⁷⁰ 1948 (höstsessionen): FK protokoll nr 40 pp 124-126.

Kock had for example written a chapter on women' work and wages in Sweden for the official investigation carried out in the late 1930s regarding married women's right to employment. Here she discussed different reasons – for example protective legislation, traditional attitudes and restrictions on women's education – for women's low wages and their segregated labour market. SOU 1938: 47 pp 351-470.

⁷² 1948 (höstsessionen): FK protokoll nr 40 pp 119-20.

Social Democrat and former chair of the LO, Albert Forslund, took issue with in particular Karin Kock regarding the women's night work prohibition. The Committee, he said, had not taken a stance in principle on this "delicate problem", as Kock had, but he understood that their goal for future legislation was to "also protect the home". He was, he admitted, "extremely surprised that women here expressed a view based on the now so modern idea of equality and [that they] attempted to mould public opinion...without ever once mentioning the word *home*." The home, he continued, was the foundation of society and had to be protected. "And who is to give the home this protection, if not the mother in the home?" It was very important, he felt, that worker protection legislation provide not only protection "for those who work in the trades and workshops, it should also have an impact on society, and that it cannot have unless the home is provided the protection it needs."⁷³

Forslund was answered by Conservative Ebon Andersson who, she said, wanted to say a few words in that she had "taken it into her head" to concur with Social Democrat Kock. Andersson noted that while there were groups of women who argued from the principle of equality between the sexes "to the point of absurdity", this was not the case regarding opponents of the women's night work prohibition. But, she continued, there were problems with the prohibition – there were cases, she said, where it was worse to prohibit women from working at night than to permit them to do so. The point was to try to find a solution that afforded the best protection for everyone. Further, she emphasised that she agreed with Forslund that women were needed in the home.

"But I am clearly even more old-fashioned than Mr. Forslund, because I consider that a home is made up of both a father and a mother. If women's night work is to be prohibited, then we should therefore prohibit fathers' night work as well."⁷⁴

Finally, she pointed out that, contrary to what Forslund had intimated, all women were not married, not all women had children and not all children were small. Thus, there were groups of women, just as Kock had said, who should be allowed to work at night if they felt they were able to do so.⁷⁵

The new Worker Protection Act, as formulated by the Standing Committee on Civil-Law Legislation, was passed in both Chambers by a large majority. The law went into effect in January 1949, but the implementation of the general night work prohibition was postponed for two years in order not to jeopardise the country's economic growth. Men were thus still left without any effective protection against night work. The women's night work prohibition, on the other hand, was extended to all industrial workplaces. The very same year, however, the post-war economic crisis prompted a new round of developments.

⁷³ 1948 (höstsessionen): FK protokoll nr 40 p 134.

⁷⁴ 1948 (höstsessionen): FK protokoll nr 40 p 136.

⁷⁵ 1948 (höstsessionen): FK protokoll nr 40 p 137.

Provisional Legislation for Women Made Permanent

"Economic considerations" seem to have been the over-riding factor behind measures taken during these years. The iron- and steel industry, considered to be vital to national economic interests, continued to suffer a shortage of labour, and the Social Democratic government, as well the LO, did somewhat of an about-face on the question of women's night work. Thus the legislation allowing women's night work in the iron industry was extended once again in 1949⁷⁶, and that same year the Social Democratic government announced that it was going to renounce the Bern Convention and propose that the provisional dispensations for women's night work be made permanent. At the same time the Riksdag, following a government proposal, decided not to ratify the new ILO women' night work convention of 1948, despite its more flexible working hours, because it would have affected all women working in industry. The Both the LO and the SAF, for example, agreed that it would cause considerable difficulties for industry if women could not be employed in a non-industrial capacity, particularly as cleaning women, at night.

With the renunciation of the Bern convention after nearly 50 years, Swedish legislation on women's night work could now be formulated independent of international developments. In 1951, the Worker Protection Act was amended. Night work for women, unless they worked in a supervisory capacity, was still prohibited between 10 pm and 5 am. However, the newly established National Board for Occupational Safety and Health (*Arbetarskyddsstyrelsen*) could grant dispensations for a "specific locality, specific type of work or specific workplace" for work between 10 pm and 7 am, provided that the woman worker had a rest period of seven consecutive hours. In "exceptional cases", the government could give dispensations for more extensive night work. None of the authorities or organisations called once again to comment upon the government's legislative proposal had any objections, although the LO "strongly emphasised" that these new provisions were to be used with "great moderation", a

⁷⁶ 1949: Kungl. Maj:ts proposition nr 189 pp 2, 6-9. Once again, Communists presented a bill to the Second Chamber protesting against the government's proposal. 1949: AK motion nr 389. The government's proposal was passed with very little discussion. 1949: Andra lagutskottets utlåtande nr 30, FK protokoll nr 19 p 111, AK protokoll nr 19 p 113.

⁷⁷ 1949: Kungl. Maj:ts proposition nr 162 pp 34-36, the Riksdag approved this course of action without discussion. 1949: FK protokoll nr 15 p 72 and AK protokoll nr 16 pp 109-10. The Bern Convention was renounced in 1950. 1950: Kungl. Maj:ts proposition nr 43 p 4.

⁷⁸ 1949: Kungl. Maj:ts proposition nr 162 pp 20-26. The National Board of Occupational Safety and Health, the SAF, the LO, the Swedish Confederation of Professional Employees (TCO) and the Delegation for International Social Political Collaboration all advised against ratification. Only the National Board of Health and Welfare recommended taking steps for ratification, without any motivation however.

point repeated by Gustaf Möller in the government's bill.⁷⁹ Motivations for the new legislation, Möller said, were the need at times to adapt working hours to public transportation schedules, as well as adapting women's working hours to those of men. Generally, he said, more flexible working hours would make it easier "to take into account the shifting conditions in different communities and workplaces." The amended law was to go into effect on January 1, 1951.

In the Riksdag, the proposed legislation was scarcely debated. ⁸¹ Communist Gunnar Dahlgren opposed the government's bill, moving that the proposal be rejected. The government's and the Standing Committee's arguments in earlier years that laws allowing dispensations from the women's night work prohibition could be accepted because they were provisional "were not worth very much", he said, now that this provision was being made permanent. Instead, he argued, the Riksdag was meeting the needs of capital and not those of workers: "In this way women are allowed to become to some extent equal with men by giving them the worst part of the privileges that exist for men in the worker protection legislation." ⁸²

Further Debates on the General Night Work Prohibition

Ironically, male workers were nearly denied even that much protection. After its two-year postponement, the general night work prohibition was scheduled to go into effect in July 1951. However, the Korean War had brought about an economic boom and rising inflation. In order to dampen the inflationary tendencies created by rising cost of imports and exports, the Social Democratic government pursued a restrictive monetary policy, continued to regulate the construction of housing and industrial plants and in early 1951 proposed the introduction of an investment tax to combat what were considered to be inflationary investments by industry in machines and stock.⁸³ In this situation, it was feared by many that the controversial new prohibition would jeopardise economic development. In private bills put to the Riksdag in January of 1951, Conservatives and Liberals called for a further two year deferral of the general night work prohibition, arguing that the continued regulation of construction and investments made it impossible for employers to adapt to the new law. Were they forced to go from three to two shifts, the level of production would decrease, requiring investments in new plants made impossible by the current economic restrictions. Instead, the bills' co-signers wrote, if the nation's productivity –

⁷⁹ 1950: Kungl. Maj:ts proposition nr 43 pp 14-19. The National Board for Occupational Safety and Health, The Swedish Labour Market Board, the LO and the SAF were called upon to comment.

⁸⁰ 1950: Kungl. Maj:ts proposition nr 43 p 16.

⁸¹ 1950: Andra lagutskottets utlåtande nr 9 p 5, FK protokoll nr 8 p 32.

^{82 1950:} AK protokoll nr 8 p 50.

⁸³ Kommersiella meddelanden (1951) p 243, Lundberg (1953) Chapter 7.

and living standard – was to increase without causing inflation, existing capital equipment should be used even more intensively.⁸⁴

These bills gathered support from many quarters, all pointing to the pressures the economy was under. Both the National Board of Health and Welfare and the National Board for Occupational Safety and Health approved of a postponement of the prohibition, the latter noting that in the present economic situation, it would have to allow so many dispensations that night work would be prohibited in theory only. The SAF and other employer organisations argued vigorously for a postponement of the prohibition, saying its implementation would seriously damage Sweden's export industries.⁸⁵

Only the Government Institute for Public Health (*Statens institut för folk-hälsan*), citing the many disadvantages "from a hygienic and social point of view" of night work⁸⁶, and the LO argued for the implementation of the prohibition. The LO in its statement said that there was nothing substantially new in the reasons put forward for once again deferring the implementation of the prohibition. It pointed out that the Minister of Health and Social Affairs had already in 1948 promised that dispensations for night work would be given generously. In fact, in the view of the LO, the prohibition was worded in such a way that it was "more justified to harbor misgivings that it will only become a night work prohibition in principle."⁸⁷

The Standing Committee on Civil-Law Legislation spilt evenly along party lines. Liberal, Conservative and Farmer party members recommended a deferment, while the Social Democrats on the Committee called for the Riksdag to vote against the bills. While they agreed, the Social Democrats wrote, with the bills' co-signers that it was necessary to increase production, they did not feel that the implementation of the night work prohibition would jeopardise this in any way, nor would it lead to "unnecessary inconveniences" for employers. They pointed out that the National Board for Occupational Safety and Health had, in its statement, indicated that it would be generous with dispensations. Furthermore, they wrote, unions also "possessed an interest in increasing production for the good of all" and would be willing to agree to employers' applications for dispensations.

After intense discussion, the bills were voted down in both chambers.⁸⁹ The general night work prohibition thus went into effect as planned on July 1, 1951. What is notable about this debate in the Riksdag is that nearly all speakers, both

⁸⁴ 1951: FK motion nr 44 and AK motion nr 63 (Conservative Party) The bills were identical. FK motion nr 59 and AK motion nr 85(Liberal Party). The bills were identical.

⁸⁵ 1951: Andra lagutskottets utlåtande nr 21 pp 6-13. A minority, representing union interests, on the Board for Occupational Safety and Health dissented.

⁸⁶ 1951: Andra lagutskottets utlåtande nr 21 p 8.

⁸⁷ 1951: Andra lagutskottets utlåtande nr 21 p 13.

⁸⁸ 1951: Andra lagutskottets utlåtande nr 2 p 17.

⁸⁹ 1951: FK protokoll nr 16 pp 110-23, AK protokoll nr 16, pp 109-15.

the Social Democratic supporters of the prohibition and its Liberal and Conservative opponents, agreed that the amount of actual night work being done would be the same, whether the prohibition was implemented or not.

New Attempts to Repeal the Women's Night Work Prohibition

In 1957, five years after the implementation of the general night work prohibition, the women's night work prohibition was challenged again. Bills⁹⁰ to both Chambers calling for the repeal of the women's night work prohibition were introduced by the Liberal Party on the initiative of, among others, social inspector Brita Elmén, a former women's factory inspector. 91 While the co-signers of the bills actively supported issues regarding women's equality, the arguments they presented against the prohibition were, in their own words, of a practical nature: the boundaries between industrial work, which was regulated, and nonindustrial work, in health care, restaurants or offices for example, was becoming blurred, and it was not possible to say that the latter was more or less dangerous for women than the former. The rules for dispensations caused difficulties in small bakeries, for example, where men, but not women, could be allowed to begin work earlier before holidays. Special legislation for women resulted in unnecessary complications and made women's position in the labour market in many cases more difficult. The co-signers of the bill declared that they were against all night work in principle, which was, they pointed out, prohibited by law.

"We consider a special night work prohibition for women not only unnecessary but also illogical. It assumes to some extent that the general night work prohibition is not obeyed."92

Of the five organisations called upon to comment on the bills, all but the LO were positive towards a repeal of the law.

The National Board for Occupational Safety and Health pointed out that working conditions had improved so much since the law had been passed that

⁹⁰ 1957: FK motion nr 330 signed by Ingrid Gärde Widemar and AK motion nr 37 co-signed by Brita Elmén and Gerda Höjer. The bills were identical. All three women have been characterised as radical liberals in the area of women's rights, generally working for equal wages, individual taxation and other improvements for working women. Drangel (1984). They were for example active in the contemporary debate on whether Sweden should sign ILO convention no 100 on equal wages for women, adopted in 1951. Elmén and Gärde Widemar helped to initiate a bill to the Riksdag to this effect in 1956. See Irlinger (1990) p 110 ff. Höjer was a member of the steering committee for the Swedish Confederation of Professional Employees (TCO) at this time. Elmén was chair of The Cooperative League of Professional Women (*Yrkeskvinnors samarbetsförbund*), while Gärde Widemar was a member of its steering committee.

⁹¹ The factory inspection had been reorganised in 1948. The women's factory inspection was replaced by so-called social inspectors. See Åkerblom (1998) pp 32-33.

⁹² 1957: FK motion nr 330 p 5.

different rules for women and men were no longer necessary. The need for decent housing, in particular a separate bedroom, for a worker working nights or on shift, was no different for women than men. Moreover, while night work or shift work always caused difficulties in connection with home life and recreation – problems which may, the Board wrote, be greater for women than men "because of the position a woman normally has within the family and the household" – these difficulties existed even with the existing women's night work prohibition. Finally, the Board noted, there was a general night work prohibition, which only allowed night work in "exceptional cases". Thus from the point of view of worker protection, a repeal, in its view, was in order.⁹³

The Fredrika Bremer Förbund, as well as the Cooperative League of Professional Women (*Yrkeskvinnors samarbetsförbund*) also called for the bill to be passed. While the law, the League wrote, may have provided women with needed protection in an earlier period, changes in the labour market, particularly fact that women had moved into new areas of industry during the war, made the women's night work prohibition a burden. An employer using both women and men could, when night work was necessary, only get a dispensation for his male workers, who thus had to bear the brunt of any extra work, the organisation continued. This situation was bound to cause "irritation and bad feelings". It was hardly satisfactory, the organisation felt, that a 16-year-old boy could be given a dispensation for night work but not a grown woman.⁹⁴

The SAF argued for the bill as well. There was no medical reason, the organisation felt, to differentiate between women and men with regard to night work, nor did it expect that night work for women would become more frequent. However, a repeal of the law would ease a transition to more work on two shifts for both women and men, necessitated, it said, by the coming reduction in working hours – between 1958 and 1960 the work week was to be reduced from 48 to 45 hours. ⁹⁵ At the same time, the SAF took the opportunity to call for a change in the general night work prohibition. It pointed out that if a five-day workweek, with free Saturdays, was to be introduced, then two nine hour shifts per day would be required. If workers were to have proper breaks, dispensations would be required for both men and women with the existing general night work prohibition. Thus, the organisation argued that the hours stipulated for nightly rest should be reduced by one hour, to between 12 pm and 5 am. ⁹⁶

The LO continued to adamantly oppose any changes in the women's night work prohibition. The organisation repeated its argument that neither women workers nor their unions had wanted a repeal earlier and that there was no rea-

⁹³ 1957: Andra lagutskottets utlåtande nr 37 pp 7-8. The representatives from the LO who sat on the Board disagreed, however, and cited the LO's comment (see below).

⁹⁴ 1957: Andra lagutskottets utlåtande nr 37 pp 9-11.

⁹⁵ A new Working Hours Act was passed in 1957. Sociala meddelanden (1957) 10 pp 640-41.

⁹⁶ 1957: Andra lagutskottets utlåtande nr 37 p 10.

son to think that anything had changed in this regard. Moreover the possibility of getting dispensations for two and three shift work were quite sufficient with existing legislation, in its view.⁹⁷

The Standing Committee on Civil-Law Legislation, to which the bills were referred, recommended their rejection, citing the LO's statement.⁹⁸

The bills were voted down in both chambers after debates mainly between Liberal and Conservative women and Social Democratic men (no women Social Democrats participated in the debate.) Many familiar arguments against the prohibition were raised by opponents. It was inconsistent to only regulate women's industrial work. The law was impractical and caused problems for employers and employees alike. Moreover, Liberal Brita Elmén repeated several times during the debate, there did in fact exist a general night work prohibition, which "the extra regulation for women somehow ...puts out of play." Elmén also argued against "the family reasons" that had been raised against the bill, "that these were perhaps more important for women." But, she said, "not all women who work have children, even if one gets the impression for the Committee's statement, that every woman in the labour market has small children." Thus Elmén repeated the point, made many times previously in the debates on the prohibition, that there were differences between women and not just between women and men.

Arguments for equality and women's rights – "all Swedish citizens equal right to freedom", in the words of Libral Gerda Höjer – were countered by arguments that the night work prohibition for women was a protective law and that it was totally wrong to try "to attain equality by making the situation worse for a group that had been given a privilege", as Social Democrat Ingemund Bengtsson said. 101

A particularly heated topic was the question of who, in fact, had the right to speak for working women. Liberal and Conservative Party women in both chambers felt that the LO had not motivated its position and questioned whether in fact its female membership held the same view as the LO leadership. This suggestion was sharply repudiated by a number of Social Democratic speakers. On the contrary, Social Democrats said repeatedly during the debate, the bill's supporters in no way represented the women affected by the law, who had expressed no wish for its repeal via their own organisations. ¹⁰²

⁹⁷ 1957: Andra lagutskottets utlåtande nr 37 pp 9-10.

⁹⁸ 1957: Andra lagutskottets utlåtande nr 37 pp 11-13. The Committee was not unanimous, however. Three members of the Liberal Party, plus one Conservative representative, registered a dissent, arguing that the prohibition be repealed.

⁹⁹ 1957: AK protokoll nr 26 pp 25-29. Quotation on p 25.

¹⁰⁰ 1957: AK protokoll nr 26 p 35.

¹⁰¹ 1957: AK protokoll nr 26 pp 33-35.

¹⁰² 1957: FK protokoll nr 26 pp 21-26 and AK protokoll nr 26 pp 36-37.

The Women's Night Work Prohibition is Repealed

In 1962, only a few years after this debate, the Social-Democratic government, with the reluctant support of LO, reversed its position on the controversial question of the women's night work prohibition. A growing need for labour in Sweden's post-war economy and the government's policy of full employment meant choosing between importing immigrant labour or mobilising the "reserves" of Swedish women. The choice fell on women, and thus restrictions on their employment were removed. ¹⁰³ At the same time, the general ban on night work was made more flexible.

Background to the Changes in Night Work Legislation

In 1960, after many years of agitation on the part of the LO's female membership, the LO and the SAF signed an historic central wage agreement that included a clause doing away the special wage lists for women workers and theoretically at least endorsing the principle of equal wages for men and women. Moreover, regulations that prohibited women from performing various kinds of work in industry were to be stricken from collective wage agreements. As part of this settlement, the organisations agreed to initiate deliberations with the National Board for Occupational Safety and Health regarding women's working hours. ¹⁰⁴

At the same time, the general night work prohibition was to been seen over. In the latter case, the discussions between the LO and the SAF concerned both reducing the period of nightly rest in order to facilitate work on two shifts, as well as the question of allowing dispensations for night work for economic reasons only. Thus, there was a change in attitude in the early 1960s not only towards women workers, but regarding the desirability of night work as well. Significantly, when a Conservative bill calling for a relaxation of the general night work ban was put to the Riksdag in 1960, the Standing Committee on Civil Law Legislation explicitly expressed its opinion that an increase in work

¹⁰⁴ The equal wages clause called in fact for "equal wages for work of equal value". The reform was to be implemented during a five-year period. *LO. Verksamhetsberättelse 1960* p 5. On the struggle to gain equal wages for women workers, see for example Waldemarson (2000) Chapter 5, Sund B (1991).

 $^{^{103}\ \}mbox{Kyle}$ (1979) p 199 ff , Hirdman (1998) Chapters 4 and 5.

¹⁰⁵ LO. Verksamhetsberättelse 1960 pp 5-6. The issue that seems to have prompted this move to relax the general night work prohibition was the crisis in the textile industry that developed during the 1950s. In order to increase the industry's competitiveness by rationalising production and decreasing costs, a commission of inquiry appointed by the government in 1958 suggested an increased use of two and three shift work. The Union of Swedish Textile Workers protested vigorously against this, but the LO agreed to consider a change in the general night work prohibition, making it more flexible. SOU 1959:42 pp 41-43, 92-93, Remissyttrande (1960) pp 15-16, 24-27. For a discussion of developments in the textile industry, see Thörnquist (1991).

on three shifts, providing that unions agreed to this, was necessary if Swedish industry was to remain competitive internationally. 106

In its official communication from December 1960, after its deliberations with the LO and the SAF, the National Board for Occupational Safety and Health expressed a very cautious stance regarding the protection of women. On the one hand, it said that while night work could be both socially and physically demanding, there was no reason to make a distinction between the sexes in this regard. The Board felt that from the viewpoint of worker protection, there were no grounds for the continued existence of special regulations for women. Nevertheless, the Board did not wish to initiate a proposal to dispense with the night work prohibition for women and confined itself to suggesting that the authority to provide all types of exemptions be transferred to the Board; in the existing legislation only the government could give certain "extraordinary" exemptions, for example for work on three shifts. ¹⁰⁷

That even such a minor change to the prohibition was still controversial can be seen from the statements of some of the nine organisations called upon to comment on the Board's proposal. The National Board of Health and Welfare opposed the Board's proposal, pointing to the "many disadvantages" of night work and suggesting instead that the general night work prohibition for both men and women needed to be made more restrictive. While accepting the proposal, the Association of First District Medical Officers (*Förste provinsial-läkarnes förening*) urged that exemptions from the law be weighed very carefully. The National Board of Medicine (*Medicinalstyrelsen*) suggested that one should differentiate between women with children under 16 and other women. While the general night work prohibition was sufficient for the latter, the former should fall under the special prohibition for women, with the Child Welfare Office authorising dispensations. 108

The SAF, on the other hand, felt that the special night work prohibition for women should be repealed entirely, as did the National Labour Market Board (Arbetsmarknadsstyrelsen), which wrote that special laws regulating women's labour – other than in connection with childbirth – were outmoded and restrictive. The LO in its statement, however, did not mention the change of the women's night work prohibition at all. ¹⁰⁹

¹⁰⁶ 1960: FK motion nr 18 and AK motion nr 26. The bills were identical. Andra utskottets utlåtande nr 33 p 8. The Committee recommended that no action be taken on the part of the Riksdag pending the outcome of the deliberations with the National Board for Occupational Safety and Health regarding night work. There was no discussion in either chamber. FK nr protokoll 16 p 116, AK protokoll nr 16 p 205

¹⁰⁷ 1961: Andra lagutskottets utlåtande nr 23 pp7-8.

¹⁰⁸ 1962: Kungt. Maj:ts proposition nr 167 pp 8-9.

^{109 1962:} Kungt. Maj:ts proposition nr 167 pp 8-9. The LO's position regarding the night work prohibition was expressed in more detail in an editorial comment in the organisation's periodical. While the night work prohibition for women might no longer be necessary, as the Board said, the law should remain in place, the LO felt, until the ques-

The Women's Night Work Prohibition Debated Again

While the Board's statement was being considered by these organisation, the LO/SAF agreement regarding equal wages for women prompted a number of Conservative Party members to introduce bills in 1961 calling for the Riksdag to request that the government initiate action to abolish the women's night work prohibition. In the view of the co-signers of the bill, legislation to protect women workers was "old-fashioned", "unless these regulations involve for example pregnancy and childbirth." Such laws limited women's choice of employment and vocational training, the authors wrote, and worked against them in the debates on equal wages, in that employers claimed that the laws made women less useful than men. With the new equal wages clause, however, "employers and unions had endorsed the idea of the equal value of the female and male labour force." There was thus no longer any legitimate reason for laws that limited the use of female labour. 110

The Standing Committee on Civil-Law Legislation pointed out that, as the question was already under investigation, the Riksdag need take no action in this case. The Committee, however, made a point of defending the special protection of women: "the regulations in question have historical roots and are intended to provide a protection for the female labour force." Protecting working women, who often had to care for a family and household as well, from all unnecessary night work has been deemed particularly important, the Committee continued. ¹¹¹

In the ensuing debates on the bills in the Riksdag, both chambers of which accepted the Committee's recommendation, familiar arguments were repeated once again. Conservative Ebon Andersson in the First Chamber claimed that the law had been a hindrance to female workers, while Committee chairman Social Democrat Axel Strand stated that those most opposed to the legislation were organisations representing women who would never be in a position of having to do night work themselves. At the same time, however, we get a glimpse of new attitudes in this debate. Andersson once again touched explicitly on men's family duties. Night work was unsuitable for both sexes, she said. "It can be just as important that men are home at night as it is for women, in particular if they are married, need to take care of the children etc." In

tions of equal wages for women had met with a definite solution. Moreover, if there was a need to use women in shift work, "when there is a lack of male labour", then the new, less bureaucratic routines for seeking dispensations would facilitate this. *Fackförenings-rörelsen*. *Organ för Landsorganisationen i Sverige* (1961) 1 p 443.

¹¹⁰ 1961: FK motion 267 and AK motion 234. The co-signers of the bill were in the First Chamber Ebon Andersson, former chair of the Conservative Party's Women's Association, and in the Second Chamber Astrid Kristensson, Hans Nordgren and Karin Wetterström, who now chaired the Women's Association.

¹¹¹ 1961: Andra lagutskottets utlåtande nr 23 pp 9-10. Committee member Conservative Karin Wetterström registered a dissent.

¹¹² 1961: FK protokoll nr 11 p 60.

turn, Strand admitted that the time had perhaps come to do away with protective legislation for women, in that women had become organised and their organisations could protect them against too much or unnecessary night work. This was the first public chink in the compact opposition to any change in the night work prohibition that had previously characterised the (male) workers' movement.

Social Democrat Sigrid Ekendahl, chairwoman of the LO's Women's Council, spoke on this question for the first time in the Riksdag. She concluded the debate in the Second Chamber by noting that she did not feel quite the same "sympathy" for employers' difficulties with the law that previous speakers had shown. Further, she noted, when she considered how to broaden occupational opportunities for women, she was hardly thinking in terms of them working nights in industry. At the same time, however, she echoed Axel Strand's careful statement that perhaps protective legislation for women had outlived its purpose. Her view on this subject, she said, was that "if employers show good faith in implementing equitable wages for women, then women will also show good faith when it comes to eliminating possible obstacles for [their] admission to certain occupations." 113

New Night Work Regulations for Women and Men

Whether or not employers had in fact shown "good faith", in April, 1962 the Social Democratic government introduced a bill to the Riksdag calling for the repeal of the women's night work prohibition. Further, the bill proposed a reduction of the time for the nightly rest period for both women and men by one hour, to between 12 pm and 5 am, in order to facilitate the use of a two-shift system during a five-day work week. Finally, the bill proposed that "economic reasons" as well as "technical reasons" were now to be considered as valid grounds for a company to get a dispensation for night work, even without the approval of its workers. ¹¹⁴

¹¹³ 1961: AK protokoll nr 11 p 165. There is very little information regarding how the LO's Women's Council, which had been founded in 1947 to uphold the interests of women within the LO, felt about the night work prohibition. Waldemarson (2000) p 26 indicates briefly that it was a point of contention between the parent organisation, the LO, and the Women's Council. In another study of the LO's Women's Council, Waldemarson shows very clearly that "women's questions" in general received little attention in the parent organisation. Waldemarson (1998) Chapter 6.

^{114 1962:} Kungt. Maj:ts proposition nr 167. It is unclear from the material used here why the LO gave up its opposition to a repeal of the night work prohibition for women or allowed changes in the general night work prohibition. Negotiations between the SAF and the LO regarding equal wages for women had continued in 1961-62, and it would seem that the LO in 1962 came to the conclusion, under heavy pressure from the SAF, that it would have to "trade" the prohibition – that is to say, allow equal working hours for women and men – to get the SAF to implement equal wages in practice. The LO presents no details about its position in this round of negotiations in either its periodical or its annual report of 1962. See, however, the SAF's periodical, *Arbetsgivaren* (1961) 17 p 9 and 22 p 11,

In the context of the previous debates in the Riksdag on the women's night work prohibition – the last one just the year before – the change in the tone is remarkable. Women are no longer "workers in need of special protection", but rather a "reserve labour force". The same change in attitude can be seen regarding night work in general. The needs of industry now outweighed concerns for worker protection.

The Minister of Health and Social Affairs Torsten Nilsson motivated the government proposal by pointing out that shorter working hours, better working conditions and a generally improved standard of living had reduced the dangers of night work. At the same time, a more capital-intensive industry required more night work. The special protection of women in this connection had its roots, Nilsson noted, in women's historically weak position on the labour market, something which had changed radically.

"Among women there is a manpower reserve, which is much sought after by industry and trade for its continued expansion, and women now have other prospects than they formerly did to assert themselves in the labour market. The remaining wage differences between men and women are being leveled out and will be abolished within a few years, in accordance with the agreement between unions and employers. It is natural that this progress towards equality between men and women in the labour market should lead us to examine laws that are likely to preserve existing differences between male and female labour when it comes to the opportunity to obtain the same returns from comparable employment." 115

Moreover, he continued, the special night work prohibition for women "hardly appears to be a question of worker protection in any real sense nowadays." Rather women's night work was now being seen as a problem in terms of children's welfare, which however, he felt "was not a question properly dealt with by the Worker Protection Act."¹¹⁶

Finally, Nilsson noted, because "the question of women's wages had taken a decisive step towards a solution that satisfies women's goals...", the LO and the SAF had jointly declared that special regulation of women's night work was no longer necessary.¹¹⁷.

The proposal to decrease the period of nightly rest by one hour had also been approved by both parties in the labour market, Nilsson noted. In this connec-

Arbetsgivaren (1962) 7 p 8. One result of the LO's accession to the SAF's demands that the general night work legislation be changed was that the Union of Textile Workers felt forced to accept employers' demands for an increase in work on three shifts as a trade-off for higher wages. Beklädnadsfolket (1962) 13 p 10 ff. The government also proposed that women could be given dispensations in certain cases to work underground in mines. For protective legislation regarding women's work in mines, see Karlsson (1997).

¹¹⁵ 1962: Kungt. Maj:ts proposition nr 167 p 10.

¹¹⁶ 1962: Kungt. Maj:ts proposition nr 167 pp 10-11.

^{117 1962:} Kungt. Maj:ts proposition nr 167 p 11.

tion, Nilsson also took opportunity to make clear that "economic reasons" as well as "technical reasons" were now to be considered as valid grounds for a company to get a dispensation for night work, without the approval of its workers. Work on three shifts, he said, had become important for "an effective utilisation of the production capacity of industry."¹¹⁸

Not all Social Democrats supported the government bill. Two party members put private bills to the First and Second Chambers calling for the retention of the night work prohibition for women, as well as opposing modifications in the general night work prohibition. These changes were "not consistent with the social considerations that the Worker Protection Act is an expression of." 119

The Standing Committee on Civil-Law Legislation, still chaired by former LO chairman Axel Strand, supported the government's proposal on all points. Regarding the repeal of the women's night work prohibition, it wrote that this must been seen in the context of women's position in the labour market as a whole, "which during later years had been moving towards an increasing realisation of equality between women and men..." The recent agreement regarding women's equal wages motivated "striving towards a uniform set of regulations..." for women and men in the area of worker protection as well. 120 The Committee did, however, express some concern with the proposal that dispensations could be given for economic reasons alone, even without the support of employees. The Committee agreed that "tougher foreign competition" demanded a more effective use of the country's productive capacity, by among other things increasing the use of the three-shift system. Nonetheless, it urged great caution in giving dispensations in this case, pointing out that dispensations that were not supported by employees who were willing to work at night would of little value to an employer. 121

While the government's bill was passed in the in the First Chamber without any debate¹²², feelings in the Second Chamber ran high. The debate was dominated by the feelings of betrayal expressed by representatives of textile workers, Social Democrats Rune Carlstein and Gördis Hörnlund. Both accused the LO of totally ignoring the interests of this group, when it reversed its position on night work. Organised textile workers, in particular its 20,000 women members, had by no means called for any changes in either night work prohibitions, they said. In fact, Hörnlund noted, at their latest union conference, they had expressly opposed all attempts to relax night work legislation. The later agreement between

¹¹⁸ 1962: Kungt. Maj:ts proposition nr 167 p 11.

¹¹⁹ 1962: FK motion nr 730 and AK motion nr 884.

^{120 1962:} Andra lagutskottets utlåtande nr 31 p 14.

¹²¹ 1962: Andra lagutskottets utlåtande nr 31 pp15-16.

¹²² 1962: FK protokoll nr 25 p 11.

the LO and the SAF had been made against the will of the textile workers, who now risked, she said, being forced into doing night work.¹²³

Carlstein was, moreover, generally critical to the proposal to allow night work dispensations for economic reasons. He was pleased, he said, to note the Committee's words of caution in this regard, but these were not sufficient to protect employees. In a situation where there were plenty of alternative jobs, employers would have to take their workers' views into consideration. In communities with one dominating employer, however, employees – including women, he warned – would have difficulties making their wishes felt and could be forced into night work against their will. ¹²⁴

As to the government's argument that the new equal wage agreement motivated a repeal of the women's night work prohibition, were we not, Hörnlund asked, getting ahead of ourselves by doing away with protective legislation before women had actually gained equality in the labour market?

"If we had had truly equal wages for women and men, shorter working hours for shift workers, a better realised family policy for working mothers with small children and in particular for single parents, was well as a fully developed public service for childcare, it would have been an entirely different question." ¹²⁵

Social Democrat Rosa Andersson, who supported the bill, expressed her surprise at Hörnlund's position. The week before, the Riksdag had voted to ratify the International Labour Organisation's Convention 100 regarding equal wages for women. This meant, she said, not only accepting the principle of equal wages, but also "the idea that women in the labour market are equal with men – not only with regard to the advantages this gives, but also with regard to the possible disadvantages that may arise." ¹²⁶

Social Democrat and LO representative Sigrid Ekendahl concluded this debate, which took place primarily among Social Democrats, somewhat on the defensive. She could, she said, sympathise with Carlstein's and Hörnlund's viewpoints, representing as they did the textile districts, with their "special problems". Nonetheless, she pointed out, the Committee had clearly stated that dispensations from the general night work prohibition should only be given carefully and after a thorough examination. She was convinced, she said, that, contrary to Hörnlund's fears, employers would not be allowed to introduce night work against the will of their employees unless they could produce a very good reason to do so.

^{123 1962:} AK protokoll nr 26 pp 39-40. The government's proposal was sharply criticised in an editorial entitled "Equality to an excess" in the Textile Union Workers' periodical, *Beklädnadsfolket* (1962) 8 p 3.

¹²⁴ 1962: AK protokoll nr 26 p 35.

¹²⁵ 1962: AK protokoll nr 26 p 40.

¹²⁶ 1962: AK protokoll nr 26 p 41.

She next defended herself against a previous speaker's accusation that she had radically changed her position on this question, by saying that this change "was in line with developments." She had earlier that week given up her opposition to the ratification of the ILO convention calling for equal wages for women for the same reason: not, she said, because she had been convinced by Liberal Party arguments, but because the LO and the SAF had agreed to do away with discriminatory provisions in labour contracts. For the same reason, she said, the LO no longer objected to a repeal of the night work prohibition for women. While it was true, as previous speakers had pointed out, that the problem of women's equal wages and other discriminatory clauses had still not been resolved, a start had been made, she said. She could therefore agree to "sell this night work prohibition for an agreement on the question of women's wages." 127

The Second Chamber voted for the government's proposal and the new law went into effect July 1, 1962.¹²⁸

Some Observations

It is clear that gendered protective legislation could be detrimental in many respects for women in the labour market. While I have not dealt more specifically here with the direct effects of the night work prohibition for women workers, the legislation did for example lead to women losing their jobs when the law was passed; the rigidly defined working hours meant having to work without rest periods in some industries particularly during the 1920s and 1930s; in others women worked illegally at night. The law was also one excuse to pay women lower wages than men. At the same time, the law did afford some women, and men, protection from "unnecessary" night work in, for example, the textile industry, where the predominance of female labour made it difficult, although not impossible, to run on three shifts.

For male workers, the special protection of women was otherwise double-edged. While it could remove female competition in the labour market, it could also work to the detriment of men. Historically, achieving a regulation of the working conditions and work hours of men has been drawn-out, contentious process. As we have seen in the example of the "general" night prohibition, the fact that the working hours of the adult workers "most in need of protection" – women – were already regulated could be used as an argument for much less stringent rules for men. The protection legally afforded men seems in practise to have been very little. "Economic considerations" could time and again overrule the effectiveness of the legislation for men, and eventually women as well.

¹²⁹ See for example Sund & Åmark (1990) Chapter 2.

¹²⁷ 1962: AK protokoll nr 26 p 44.

¹²⁸ SFS 1962: 248 and 249.

¹³⁰ Compare Malone (1996) on men's work in the white lead trade in England.

Gendered protective legislation had important ideological implications for both women and men. Labour legislation for women went beyond the workplace. Throughout the debates on protective legislation for both men and women, women are "defined" in terms of their bodies and familial functions in a way that men are not. Women are first and foremost wives and mothers; this was repeated constantly by supporters of such legislation. Hence, state intervention in the labour market was justified not only to protect women as workers, but also to secure the health and welfare of "future generations". Men, on the other hand, only rarely have bodies or families in the debates on protective legislation; they were protected as workers alone.

When women became "equal" with men, they had to accept the more unregulated conditions under which men worked. Women now had to share both the advantages and disadvantages of male status, as one speaker put it. The opposite, extending the protection given women to men – which would have also made women equal to men – was never considered seriously as an alternative. When women did become "equal" on men's terms, it left them vulnerable in new ways. While gendered protective legislation had assumed a conflict between family and work for the woman worker (whether in fact it existed or not), gaining male status meant that all such conflicts, for both women and men, could be ignored – but not, however, resolved. Ironically, this occurred when, for the first time in Swedish history, the majority of women workers were married. 131

Epilogue

In 1977, with the passing of the new Occupational Safety and Health Act, the last formal restriction on women's work in Sweden – working underground in mines – disappeared. 132 However, 15 years later the problems of gender and safety in the workplace arose again.

In 1992, the National Board of Occupational Safety and Health published new guidelines for work with lead, which were to go into effect in 1994. These stipulated that the permitted level of lead in the bloodstream of women workers under 50 was half that of the level allowed for male workers or older women, in order to protect potential fetuses from the dangers of lead poisoning. Prior to this, the limit for women and men had been the same. 133 "It was a hard decision to make", a representative of the Board stated in an interview. "We are aware of the fact", he continued, "that this can open the door for different limits for a

¹³¹ The proportion of married women workers categorised as "workers" (i e belonging to unions affiliated with the LO) rose rapidly during the 1940s and 1950s, and by 1960 a little more than half (52.3 %) of women workers were married. Qvist (1974) pp 41-46.

¹³² SFS 1977: 1160.

¹³³ Bly. Arbetarskyddsstyrelsens författningssamling 1992: 17.

number of substances in industrial production. However we cannot let equality stand in the way of our concern for coming generations."¹³⁴

As a consequence of the new guidelines, Swedish newspapers reported later in the fall of 1992, a battery factory in southern Sweden was considering firing its 30 women employees who worked with lead. The company's response to the new rules, according to the newspaper articles, was not to invest in a cleaner, lead-free environment, which would be too expensive. Rather, it warned women workers that unless they themselves were not extremely careful about hygiene and safety, thus keeping the level of lead in their blood below the permitted level, they would loose their jobs. The women workers, when interviewed, were indignant about both the new guidelines and company's reaction and expressed their concern in terms reminiscent of earlier debates on protective legislation. "Of course we care about the well-being of a fetus," said one woman. "But how about the ones who don't want to have children?" Another asked, "Do they [the company] really have the right to fire us, just because we can have babies?" 136

As it turned out, the company received a public grant to improve the working environment and the women were not fired¹³⁷, but the example illustrates the precarious position women workers find themselves in when questions of reproduction come into focus.

Lead is a dangerous poison. Not only can it endanger the health of workers; it is particularly dangerous for fetuses, and in order to protect them, all women of fertile age become subject to regulation. What is noteworthy, however – as can be seen in the example above – is that gender-specific regulation of dangers in the work environment continue to have a negative effect on both women and men. When only the sex of the worker (women) and not working conditions per se are regulated, women workers are placed in a vulnerable situation. They become "difficult" employees; it is easier for employers to fire them than to comply with the regulations. At the same time, a one-sided view of women as the

¹³⁴ Quoted in Olika blyvärden för män och kvinnor (1993) *Arbetsmiljö* 1: 8. Sweden and Germany were the only two countries in the European Union with different limits for men and women.

¹³⁵ Hög blyhalt hot mot kvinnojobb *Uppsala nya tidning* 1992-11-14 and Tjejer får sparken för blyets skull *Aftonbladet* 1992-11-13.

¹³⁶ Carlsson (1992). For discussions and interpretations of similar so-called fetal protection policies in other countries, see for example Callahan (1991), Crenshaw (1995), Daniels (1993), Jennissen (1999), Klein (1987). As these authors point out, fetal protection policies in most countries seem to have two points in common. First, it is work in male-dominated occupations that is regulated, women are not barred from potentially hazardous work in female-dominated areas such as laundries, dry cleaning, nursing or childcare. Secondly, men's exposure to toxins that can damage their reproductive systems or endanger a fetus is largely ignored.

¹³⁷ Ingen uppsagd för högt blyvärde (1993) *Arbetsmiljö* 5: 13. There is no way of judging the long-term effects of the new lead guidelines. In 1998, the company mentioned above closed down, and by 1999 the entire industry had disappeared in Sweden.

"weaker sex" has meant that men's health problems are still ignored. 138 Carl Lindhagen's image of men as "upholders of the health of the race" has yet to have become an established norm for masculinity.

"Because women are assumed to have the option *not* to work, and the duty to put the interests of children and family ahead of their own interests, evidence of maternally mediated reproductive risks has led to different conclusions and policies than evidence of paternally mediated risks or any other kind of risk. Culturally assigned sex roles make it possible to view women as uniquely vulnerable at work, while a recognition of male vulnerability, in this area as in many others, is resisted." ¹³⁹

More significantly, this example shows that the idea of women's and men's equal worth and status, despite their biological differences, is still not truly established in modern society. The authorities who decreed the new rulings on lead seem not to have considered that, in the interests of equality (and men's health), the permitted level of lead allowed for men should be lowered to a level deemed acceptable for women. The idea that women could be "the norm" is still unthinkable.

¹³⁸ Research on occupational health has only recently begun to explore the effects of dangers in the work environment on male reproductive biology. See for example Hansson (1999) and Kjellberg (1999).

¹³⁹ Bertin (1995) p 387.

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Gymnastics at the Erling Richard's factory for ready-made clothes in 1943. Source: Riksförsäkringsanstaltens arbetarskyddsbyrås arkiv. Riksarkivet, Stockholm.

Female Factory Inspectorate

Protection for Women in Swedish Working Life 1913-1948

Annika Åkerblom

In a Swedish overview about working women's health *Women's Health at Work*, published at the end of the twentieth century, it was pointed out that the information about female employees is very insufficient. The risks that affect women have been systematically underestimated, and occupational health research has dealt primarily with visible dangers such as injuries caused by machines, which mostly affect men. The dangers which women mostly are exposed to are mainly of two kinds: firstly dangers at work – physical injuries of different kinds and psychosocial stress – and secondly the stress caused by the combination of professional and home work. Thus, knowledge about the effects of the combination of paid and unpaid work is crucial for the ability to estimate the risks for women in working life. It is absolutely necessary to regard all aspects of life, including the role of women within the family, to be able to estimate the real health risks for women.²

Knowledge about the necessity of considering all aspects of life, especially for women, existed already at the beginning of the twentieth century in Sweden and was manifested by the establishment of the Female Factory Inspectorate, which existed 1913-1948. The task of the Female Factory Inspectorate was in part different from that of the general factory inspectorate. Through its special instructions, the Female Factory Inspectorate partly focused on other and different questions than traditional occupational safety and partly treated traditional questions and problems in a new way. The special focus of this inspectorate was women's paid labour as well as how it related to other areas of their lives. The aim of the Female Factory Inspectorate was to improve the social conditions of female employees in general, including women workers as mothers and housekeepers.

In almost all historical studies about occupational safety and health and the Factory Inspectorate in Sweden, occupational health for women and the Female

¹ This article is, if nothing else is stated, based on my dissertation *Arbetarskydd för kvinnor*. *Kvinnlig yrkes inspection i Sverige 1913-1948*. (1998). (Industrial welfare for women. The Female Factory Inspectorate in Sweden 1913-1948.) I would also like to express my gratitude to Helene Carlbäck, Anders Håkansson, Lynn Karlsson, Teresa Kulawik and Ylva Waldemarson for constructive and helpful comments and to Viveka Åkerblom for the translation into English.

² Kilbom, Messing and Bildt Thorbjörnsson eds (1999).

Factory Inspectorate have not received adequate attention.³ Hence, the research in this field has only just begun, and few studies have been carried out on this theme.

In this article, the main focus is on the activity directly related to the work-place. What did the Female Factory Inspectorate focus on when carrying out inspections? Which problems did the Female Factory Inspectorate find and how did it try to master the growing pressure in working life? Which strategies were worked out to reduce the stress for working women and how were these strategies motivated? These are problems that are of immediate interest also today, for women as well as men.

Separate Institutions for Women

Different theoretical approaches within feminist scholarship have as a common starting point that gender matters for the structuring of society. The modern gender order includes two major principles: segregation and hierarchy. Segregation implies that men and women should not do the same tasks and not be in the same places. Hierarchisation means that what men do and are is considered to be more valuable than that what women do and are.⁴ The labour market is a striking example of this. Typical female occupations e g in the health and service sectors have lower status and are less well paid than typical male occupations in the technical sector.⁵ The practice (and consequence) of segregation and hierarchisation is the subordination of women.

The regulations for and conditions of the activity of the Female Factory Inspectorate can also be characterised in terms of segregation and hierarchisation. Its task was the inspection of women and children in industrial work places with ten or more workers. Over time, other work places dominated by women, such as clerical work, were incorporated into its field, although never health care and social work. Supervision was to be carried out with a point of departure in the Worker Protection Act (Arbetarskyddslag), which included a special paragraph on women workers. The women employed at the Female Factory Inspectorate were to have other – social – qualifications than the men at the General Factory Inspectorate, who were engineers. The tasks of the Female Factory Inspectorate

³ See e g Från yrkesfara till arbetsmiljö. Yrkesinspektionen 100 år 1990. (1990). When women's working conditions are mentioned they only constitute a subordinate part in the publication and the conditions are not linked to the balance of power between the gender. See e g Sund (1991). Here he deals with the neck problems experienced by dressmakers and states that there is almost no research on this field. See also Arbetsmiljön. En grundsten i välfärdsbygget (1999) where repetitive strain injuries are describes as a new phenomenon for the 1980s.

⁴ Hirdman (1988).

⁵ See e g SOU 1998:6.

also indicate that women were expected to have other needs than men, which was a common view at the time.

The establishment of the Female Factory Inspectorate must be seen in the context of the systematic separation of the genders in the public sphere at the turn of the 20th century all over the western world. At the end of the 19th century a growing number of gender specific organisations and institutions, such as schools, trade unions and associations, were established. For example, women's labour unions and women's sections in parties and societies were founded. Many women also mobilized around different issues that interested no, or very few, men. Examples of such organisations were Bible societies, societies with the aim to defend women's rights in different areas and different kinds of philanthropic organisations.6

Gender segregation was inscribed into the Female Factory Inspectorate in two ways: firstly because it was restricted to the workplaces of women and children and secondly because only women could work there. Women could not work at the General Factory Inspectorate except as secretaries. The segregation was combined with hierarchisation. The Female Factory Inspectorate could not act fully independent of the male inspectors of the districts and had to announce when inspections were to be carried out. By establishing the Female Factory Inspectorate the working condition for a special group of workers, namely women, would be improved by decreasing their vulnerability and marginalisation. Thus, the Female Factory Inspectorate was established because women were/are subordinated, and it was held separate from the General Factory Inspectorate.⁷

The activity of the Female Factory Inspectorate was quite ambivalent: on the one hand, the Inspectorate's institutional setting confirmed the gender segregation at work. On the other hand, the Female Inspectorate also strongly took sides for women's rights in the labour market and in working life. In this sense it worked against the subordination of women.

The Establishment of the Female Factory Inspectorate

After several years of struggle on the part of women's organisations, mostly bourgeois/liberal organisations such as the Fredrika Bremer Förbund, the Female Factory Inspectorate was established. In the view of these organisations, the General Factory Inspectorate did not properly satisfy the interests and needs of women. This situation could be explained by the fact that women were not really represented by the labour unions and therefore women were especially exposed to health risks. Women often had worse working conditions than men and were paid less than men. Women were also frequently responsible for the family and house-

⁶ See e g Taussi-Sjöberg & Vammen (1995).

⁷ Compare LO:s kvinnoråd (Women's Council) established in 1947. See Waldemarson (2000).

hold, and in the workforce they had a low status. The struggle for a Female Factory Inspectorate was an attempt to contend with the subordination of women in working life.

At the time of the introduction of the Female Factory Inspectorate in Sweden, such institutions already existed in several western countries. The Swedish debate referred to these countries, though the way of organising occupational health for women varied internationally. In Belgium, Norway, Denmark, France and Great Britain the Female Factory Inspectorate was a completely separate public authority. In Germany, Austria and Finland it represented a special branch of the general Inspectorate where welfare institutions and social questions for woman and men were emphasised.

The Swedish Female Factory Inspectorate combined these models. It was a semi-independent unit with the explicit task of focusing on the different social conditions of working women including living standard, nutrition, housing, health care, education and morality. However, it could not, as already mentioned, act completely independently from the general inspectors in their districts. A strong argument to create a Female Factory Inspectorate resulted from the debate about the immorality and roughness of the female factory workers. A woman inspector, it was suggested, would diminish the social and moral problems and uphold female workers' respectability. Another argument was that women needed special protection because of their reproductive functions. As a consequence of the perspective on women in need of special protection, the female factory inspector had partly other tasks than her male colleagues.⁸ These tasks had nothing to do with traditional Swedish protective labour legislation.⁹

Hence, there are obvious parallels between protective labour legislation in Sweden, Germany¹⁰ and Great Britain. Barbara Harrison considers the introduction of women factory inspectors in Great Britain as a symbolic confirmation of existing gender segregation at work.¹¹ This, I believe, is also the case in Sweden.

In the following, I will give an overview of the activity of the Female Factory Inspectorate and its development in chronological order.

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⁸ Compare Wikander, Kessler-Harris and Lewis (1995).

⁹ Compare Schmitt (1995) p 129.

¹⁰ Sabine Schmitt shows in her study of worker protection for women in the German empire that it was used – by employers and authorities – to exercise governmental intervention in private homes. It was a very normative activity where the female workers and their families were to learn a "better" lifestyle. Elements of this could also be found in Swedish industrial welfare for women, which in itself is a very interesting aspect. This is dealt with in my dissertation. See also Schmitt (1995).

¹¹ Harrison (1996).

The Activity of the Female Factory Inspectorate – An Overview

The character of the activities at the Female Factory Inspectorate changed over time. To illustrate the overall changes the activities can be classified into three periods.

- 1) Philanthropy 1910s: The activities were closely related to co-operation with and co-ordination of philanthropic organisations, as the period was very much affected by the crises of World War One. Its early philanthropic features can be explained by the fact that many social reformers wanted a Female Factory Inspectorate and struggled for its establishment, combined with the social problems that occurred during the war. The society had no readiness to handle problems connected with unemployment such as famine, food riots and extreme poverty. In this situation, the Female Factory Inspectorate took several initiatives to help and co-ordinate relief actions. Obvious connections to the philanthropic roots of the Female Factory Inspectorate can be seen.
- 2) Exercise of public authority 1920-1930s: The Female Factory Inspectorate had found its mode of work as a traditional public authority¹²; after World War One a new phase begun and the work was fully oriented toward inspections at work places. Its character as a public authority can be seen in all its activities. During the inter-war period, it worked for increased actual equality between men and women for example concerning labour legislation.¹³
- 3) Decentralised exercise of public authority 1940s: Finally, during the last ten years of its existence the Female Factory Inspectorate was decentralised into four districts and its practical activities were partly integrated with those of the General Inspectorates on the local level.

As a large part of the activities moved out to the districts and became integrated with those of the General Inspectorate in the 1940s, the central part of the Female Factory Inspectorate became more politically oriented. The Female Factory Inspectorate openly took a standpoint for women's rights in the labour market and was an ardent advocate for efforts from society to make women's employment outside the home possible. This happened when women started to work in industrial areas, such as foundries, where almost exclusively men had been working up to that time.

The co-operation with the General Inspectorate, combined with the perceived increase of pressure in working life, led to the solution that also men needed social care. When the Female Factory Inspectorate was closed down, the women inspectors were to be reborn as social inspectors in each district of the General Inspectorate, with the same tasks but with the goal to include men into the work

¹³ Women suffrage was attained in Sweden 1919/21 and thus complete citizenship, but in reality women did not have the same rights as men, e g they could be dismissed from their employment if they married, even in 1939.

¹² For a discussion of the concept "exercise of authority", see Söderlind & Petersson (1988).

as well. Hence, the social inspectors were incorporated in the General Factory Inspectorate.

The Inspections

At the Female Factory Inspectorate three forms of inspections were carried out: regular inspections, night work inspections and investigations. The purpose of the night work inspections was to check that the prohibition against women's night work was upheld. The working conditions in the case of exemptions from the prohibition were also controlled. Investigations often concerned all work places in a certain branch in one city, with special consideration given to working hours. Normal inspections supervised the work environment in general with special regard to the concerns of women.

Observations and proposals for changes were mostly made concerning work-rooms, working-clothes, and the general work situation such as the possibilities to take pauses and staff rooms. These were the main themes of the inspections during the entire period, although the character of the problems changed in relation to general and technical developments. Remarks made by the Female Factory Inspectorate often concerned questions such as cleaning, ventilation, temperature, floor, lighting and draughts.

The workrooms are typical in this context, and the problems concerning these are characteristic of the period and can be found also today. Small work places are of course more exposed to these problems now and in the past. The general standard of the work place has undergone a positive development during this period. Big factory halls became a problem at several work places during the 1930s. In these premises it was hard to handle noise and draughts and to regulate temperature. They also caused stress, which is a problem today too. Working clothes are also a timeless problem in spite of the varying needs for working clothes in different branches. The Female Factory Inspectorate was permanently active concerning the actual work situation, i e physical surroundings such as the opportunity to sit down by the work place, sitting position, the construction of the chair, worktable etc, questions that we call ergonomic today.

Staff rooms were a question of dignity throughout the period. By staff rooms I mean for example toilets, wash rooms/lavatories, cloakrooms and dining rooms. Especially for small enterprises, these questions were a problem. In the beginning, the Female Factory Inspectorate concentrated on basic needs such as lavatories but later on raised the standards for what it felt employers should provide in the way of staff rooms. The existence of staff rooms and their standard depended on the size and character of the enterprise. The number of employed was normative for the requirements concerning staff rooms. Small enterprises often found it difficult to organise staff rooms, because of the cost and lack of space. Thus, problems for employees to heat food remained relevant at small enterprises

even in the 1940s, while larger enterprises at that time discussed smoking areas, terraces and gyms.

Investigations

The inspectress often carried out investigations on her own initiative, but investigations also came about as commissions from other authorities or after reports of bad conditions from workers or labour unions. Many investigations were done to control working conditions in general, and half of the investigations concerned working hours. Investigations concerning the prohibition against women's night work were often related to discussions about new ILO conventions to extend the night work prohibition, and whether Sweden should sign them or not. The result of all these investigations ended up with the Female Factory Inspectorate being negative to an extended prohibition. The Female Factory Inspectorate established that it would have negative consequences on the occupational health of the women. The reason for this was that the pace of work would be speeded up because the available hours of work would decrease. This was felt to be more dangerous for women than night work in a long-term perspective.

Most of the investigations were carried out in small enterprises (less than ten workers) with female workers. 14 Many of these inspections concerned professions that were in the service sector, such as laundries and ironing firms, ladies hairdressers, small bakeries, dressmakers and restaurants. All of these were occupations with connections to traditional female tasks within the household. Photography shops and furrier's shops can also be included in this category of workplaces. The women working at these enterprises were often marginalized and totally dependent on the goodwill of the owner. If their working conditions were poor, they had no opportunity to take action without the risk of loosing their jobs. If they were ordered to work overtime, if there was no lavatory or somewhere to sit down during lunch they could not protest.

Problems and Measures

As argued, the subordination of women was related to both the reality of and the perception of women as being frail, mainly with reference to the reproductive functions of women. This argument could be used with different purposes: to improve the situation of women in the workplace and to keep women from work /workplaces that the male collective wanted to retain for itself. In the following, I will show how the Female Factory Inspectorate tried to handle and lessen the consequences of the problem caused by the subordination of women. In the written reports of the Female Factory Inspectorate three, empirically defined,

¹⁴ These small enterprises were legally the concern of the local government, which however requested the aid of the Female Factory Inspectorate for inspections.

themes dealing with this problem can be categorised. These themes are: 1) Women' work and women's role; 2) Stress and rationalisation; 3) Health and harmony. When no specific period of time is mentioned the theme is generally valid for the entire period studied.

Women's Work and Women's Role

The theme women's work and women's role is about the disadvantages experienced by women through unhealthy work, with little influence on the work situation as such, as well as the construction of femininity. Hence, this theme concerns problems related to typical women's work and problems related to the fact that women were considered to be a different kind of work force. 16

The prohibition against women's night work is an obvious example of the construction of women as frail, in need of protection, and women's different position on the labour market.¹⁷ A large part of the Female Factory Inspectorate's time was spent on the prohibition against women's night work. At the night work inspections, the main task concerning dispensations was to find measures to decrease the disadvantages in relation to night work and to make sure that the prohibition was not infringed upon. Dispensations were given to the canning industry, the armaments industry and to other war-related industries. Dispensations were issued under the condition that the factory had a minimum hygienic standard, which was assessed by the Female Factory Inspectorate. The Female Factory Inspectorate also estimated if there really was a need for a dispensation. Inspections to control adherence to the prohibition of night work for women took place above all in crisp-bread bakeries. Infringements were caused by the fact that certain work processes in crisp-bread bakeries started and ended half an hour before and after the regular workday.

Dispensations in the canning industry were used at the time of haul and harvest. Almost every year the Female Factory Inspectorate travelled along the Swedish west coast to control and inspect canning factories. Dispensations in war-related industries were of immediate interest during the two world wars. During the First World War, the Female Factory Inspectorate insisted on ventilation of the work rooms and the serving of warm porridge to the women working on the night shifts. When the results of the dispensations were summarised after the war, the Female Factory Inspectorate noted that some of the female workers had had some health problems doing night work, although these problems were not related to their sex but to age and the food shortage. When they were given a warm meal during the night and the hygienic circumstances were improved, the

¹⁵ See e g Johannisson (1994).

¹⁶ See e g Wikander (1992).

¹⁷ For a description of questions concerning the prohibition against women's night work see Wikander, Kessler-Harris and Lewis (1995), see also Schmitt (1995).

health of the female workers improved. Paradoxically the working conditions were improved through the night work; the workrooms became more spacious and were ventilated. During the Second World War, the Female Factory Inspectorate again emphasised that women did not have more health problems relating to night work than men. Very few women were excluded from night work because of their health. On the other hand, women were excluded from night work for social reasons, for example because their children disturbed them so that they could not sleep during the daytime.

Working clothes were a special kind of problem and opposition against different kinds of working clothes existed. This opposition can be categorised in two ways: the clothes could be perceived as uncomfortable and could make the work more complicated in different ways or make the work slower; or the clothes were considered ugly. The first kind of opposition can be found among women as well as men, while the second mainly could be found among women. This can be related to the fact that women are subordinated and the opinion that women should please and attract, a role that many women adopted. Some types of work, however, required different types of working clothes for various reasons, such as protection against moisture and dirt or to prevent hair from getting stuck in machines. Clothes were sometimes used in order to protect the products manufactured, e g in the food industry or the chemical industry. Different types of shoes could be a means to counteract cold or hard floors. Not wearing working clothes could be dangerous; for instance, several women every year were severely injured when their hair got stuck in machines and they were scalped. In order to remedy these problems much effort was put into finding working clothes, shoes and caps of different types that could be accepted by the women workers.

Many of the typical female occupations involved standing or were very sedentary and, furthermore, often required precision work of different types. In e g the restaurant business, bakeries, laundry and ironing establishments and in the match industry, the work was done mostly standing up all the time. Seamstresses sat still with precision work, and in the food industry the work was often stationary, with low temperatures in the workplace. Consequently, the floors were important. There were often problems with hard, cold and/or slippery floors. This applied above all to stone and concrete floors which were believed to cause rheumatism, thrombosis in the legs, "abdominal pains", back strains and straining of the inner organs as well as tired legs and feet, etc Such floors could also cause slipping accidents. One way to remedy the problem was to put out wooden pallets to stand on, but many employers were, however, not interested in doing so.

Working in standing positions also led to the discussion of the so-called chair question, i e that there should be a place to sit or the possibility to sit down and what type of chair would be suitable. The idea was that all work that could be carried out sitting down should be done whilst sitting down, and if it was necessary to stand up it should be possible to sit down temporarily. Work that could

not be carried out sitting down could sometimes be made easier by the introduction of standing support devices. But there were plenty of employers who thought, from a moral perspective, that work could not be carried out sitting down. Yet another difficulty was that female workers were not always eager to sit down, probably because they would have to change their work routines, which in some cases could lead to a financial loss for them because the working speed then could not be maintained. One way to accommodate these problems was to find /develop chairs appropriate for different kinds of work. For example, chairs on rails were developed so that a loom could be managed sitting down, and hanging chairs were introduced in order to prevent vibrations from the floor. Furthermore, the importance of sitting "correctly" was taken seriously. Three types of sitting positions were outlined: seating for work that could be carried out sitting as well as standing; seating for short breaks if the work was carried out standing; and seating for breaks and rest.

In the case of different types of precision work, e g sewing, lighting was very important in order to avoid damage to the eyes. Good general ceiling lights were required, as well as work lamps, which every worker could adjust individually. The light intensity had to be considered carefully; neither the lamp itself nor reflections from the lamp should cause glare, and the work rooms should have daylight, but direct sunlight was to be screened off. The importance of lightning was often ignored and planned lightning was unusual, despite the fact that poor lightning often caused fatigue and headaches.

In the case of sedentary work, the temperature of the premises was important. Heat as well as chilliness and drafts could cause physical problems. Heat was a less severe problem than chilliness and drafts, which were difficult to handle, as were temperature fluctuations. In some cases the problem with chilly work rooms could be compensated by physically hard work, e g in the brewery industry where women were tapping, rinsing and labelling, provided that heated dining-rooms and the possibility to dry ones clothes existed. The work women did was, however, often sedentary and consequently chilliness and draft were very troubling, e g in food factories.

Stress and Rationalisation

Certain basic problems and questions existed which constantly reoccurred in discussions about pressing situations in working life. These related to stress in a general sense, as well as more directly to for example breaks, being physically bound to the work place, doing dependent or independent work, etc Here, as in other connections, the conditions differed between large and small working places and between men and women. During the 1930s, the interest for these questions increased considerably in connection to the so-called rationalisation

movement¹⁸. "Industrial fatigue" or "unnecessary fatigue" were often mentioned. Measures taken to remedy this applied to widely differing questions: for example clearly stress related questions such as working hours and breaks, but also questions which at first sight are not related to stress, such as the possibility to sit down.

The attention paid to these questions increased with the rationalisation movement during the 1930s, and according to the Female Factory Inspectorate this meant both advantages and disadvantages for the female workers. On the one hand much heavy work disappeared e g in breweries and in the textile industry and places to sit became more common. On the other hand, the work became more intensified and stressful. The rationalisation movement also placed higher demands on protection and hygiene and improved working premises and working conditions in general. The Female Factory Inspectorate even believed that the rationalisation of production in fact meant that the employers took questions about the working environment more seriously and made sure that conditions were improved in all respects. If they did not do so, there was no real rationalisation. It is evident that a battle about definition occurred.

When physicians reported an increased number of neuroses among workers (male workers?), which was believed to be connected with the rationalisation of production, support was found for their view that it was necessary to follow up a rationalisation with specific improvements in the working environment. In order to counteract these problems the Female Factory Inspectorate co-operated with staff consultants in companies. They were often part of the companies' protection or safety committees. The Female Factory Inspectorate imagined how "psychotechnical" departments would be set up in the companies so as to place the right person in the right place by means of "psychological observations".

One problem that became more serious because of the rationalisation movement, but that was topical during the whole period, was the few and too short breaks. In the long run the Female Factory Inspectorate considered it dangerous to work an entire day without breaks. Shift work furthermore led to increased strain, poor air in the premises since it was not possible to ventilate properly during on-going work, longer hours with artificial lightning and changed sleeping and eating hours. Unbroken work periods, i e working without meal breaks, was considered to have become a more common phenomenon because of shift work and because the workers then ate while working. In certain industries this was possible, but for example in the textile industry, where many women worked, it was not viable because the pace of work was so intense. The Female Factory Inspectorate declared that ten per cent of the workday should consist of breaks, and that meals should be eaten in peace and quiet. This was a long-term health problem that affected the female workers in particular. For example, within the

¹⁸ See also De Geer (1978) especially chapter 11.

textile industry there was a tendency to work eight hours without a break. The female workers did this in order to be able to come later to morning shifts or to be able to go earlier when working evening shifts. The reason why they tried to decrease the total hours of work, according to the Female Factory Inspectorate, was to be found in their family situation and the reproductive work that was their responsibility. The female workers did not realise the long-term health hazards that were inherent in having too few breaks and too little rest, but tried instead first of all to handle their everyday problems by leaving work earlier.

A very concrete problem which was discovered by the end of the 1930s and which increased during the 1940s was so-called "writer's cramp". It was a clear symptom of a stressful and intensive pace of work. The development of this disease was caused by the rationalisation of the emerging administration and the desire to use the new office machines as effectively as possible. The knowledge of how machines affected people was poor, but the effects were evident. The problems with writer's cramp were considered to be particularly difficult at work places with much overtime. The only remedy to this disease was, according to the Female Factory Inspectorate, to take breaks and to change one's working environment.

Health and Harmony - a Healthy Soul in a Healthy Body

In order to prepare the female workers for the demands of work, the Female Factory Inspectorate wanted to create harmony and health for the body as well as the soul. Recreation, both spiritually and physically, was considered extremely important. In order to create the possibility of recreation during work breaks and after the working day for the female workers, the Female Factory Inspectorate took the initiative to and recommended the hiring of staff consultants (e g in the beginning factory sisters) in larger companies. The staff consultants, their organisation and the Female Factory Inspectorate worked closely together concerning questions of work environment and other closely related issues.

The creation of possibilities to relax properly during breaks was a key issue here. For example, taking rest breaks outdoors was recommended. The possibility to spend breaks outdoors through access to balconies and roof terraces in the workplaces was recommended for the first time in 1930. The inspectress believed that it would be possible to arrange outdoor breaks if only the management showed an interest. Fresh air and exercise were considered to be very valuable breaks in the work. During the 1930s even smoking became a question that interested the Female Factory Inspectorate. Many female workers were troubled by tobacco smoke and consequently special smoking rooms were recommended in order to avoid tobacco smoke in the other premises. Other measures that were recommended were to arrange exercise during work e g for a duration of 5 minutes. Exercise during breaks was recommended as early as the 1930s. The

interest for exercise increased, however, particularly during the 1940s after a slow start during the 1930s.

Staff premises of different types were fundamental for creating a good environment at the work places. In certain industries, this was indeed troublesome. Above all, this applied to small work places such as restaurants and bakeries. Often rooms in which the workers could wash themselves were completely lacking and there were too few toilets. In general, there were wardrobes, but women and men often had to share the same room. This was not considered satisfactory, as the women often had to change clothes there, which could create an exposed situation. In the premises used by hairdressers, the staff areas were often very narrow and not built for this purpose. The staff did not have many possibilities of being alone during breaks and could rarely heat the food they had brought with them.

The colour of the working premises is another example of a question that received attention during the 1930s in connection with the rationalisation movement. It was considered particularly important for the well being of workers. An appropriate choice of colour could create comfort, and workers would experience satisfaction in their work. The inspectress suggested a light yellow or green, which were considered comfortable and soothing for the eyes.

Food was considered by the Female Factory Inspectorate to be very important. Both the workers' ability to work and their health were involved. The rationing during World War One brought the question of work place dining-halls to the fore. The inspectress recommended that factories should make dining-room arrangements available for their employees. In order to facilitate this, a publication was put together in 1916/17 with practical information regarding how to set up and run canteens. It was underlined that there was no reason to have separate dining rooms for women and men. The management was advised to set up a committee, in which the workers were represented, dealing with running the canteen in order to channel dissatisfaction with e g the choice of dishes or the pricing. In her experience, this would benefit the case considerably. Instead of a canteen, a dining room where the workers could eat their own food could be established. It was felt that in this case it was important to make sure that the workers could not see each other's food. The content of the lunch box would reveal the employees' standard of living, and poverty is associated with shame.

During the 1920s the number of work places with dining rooms increased — which was felt to be related to the Eight-Hour Working Hours Act. The employers, however, complained that the rooms were not being used when the workers dined. The inspectress believed that this was the case because the dining rooms were located inconveniently in relation to the work premises and because the interior decoration of the dining rooms was dull and uncomfortable. For example, they often contained long benches and tables, which were considered uncomfortable, particularly for women. Instead the inspectress recommended small

tables, giving the workers a feeling of "privacy". Dining rooms with walls decorated with art were praised – especially if the art was educational. The furniture should consist of small tables and chairs with backs so that the female workers could eat their dinners in small groups. Curtains, tablecloths and flowers were also recommended. At the small work places the Female Factory Inspectorate tried to find practical solutions to these problems, for example using existing rooms also as dining rooms or creating the possibility of heating food, etc During the 1930s, in connection with the difficult economic situation, an increased interest in canteens arose. Small companies jointly built canteens. During World War Two, with the rationing of bread and fat, this became a burning question once again. The Female Factory Inspectorate recommended that porridge, gruel or alternatively hot soups should be served. This was considered to be particularly desirable for minor workers, and it was emphasised that the labour force would be more content, healthier and more efficient if a proper meal was served.

Strategies and Motive

Long-term strategies dealing with the problems affecting women in their work situation due to their subordinate position in the family as well as in their working lives can also be discerned in the Female Factory Inspectorate's activities. We are mainly dealing with two strategies. The first strategy was about facilitating and reducing women's reproductive work, thus decreasing the pressure on them. The second strategy dealt with preparing the women better, physically as well as mentally, for the pressure they were exposed to and thereby decreasing its negative consequences.

Concerning the first strategy, to facilitate and reduce the women workers' reproductive work, the problems were related to e g how their working hours were arranged, for example whether they could work at night or not. It was stressed that women in this connection were neither physically nor mentally more vulnerable than men, but instead that they were exposed due to their subordinate position. This conclusion was drawn based on the experiences made during the inspections of female night work. The consequences were not at all as problematic as many perhaps had feared. Doing only night work during shorter periods was not considered fatiguing. Long-term 3-shift work was, however, considered very hard for both women and men. The women could not afford hiring domestic help because of their low wages – this contributed indeed to exhausting the women. Thus the female workers were burdened twofold, by a demanding 3-shift work plus their reproductive work at home, unlike most men who only worked, albeit in 3 shifts. As a consequence of this, the Female Factory Inpectorate argued, the women's pay should be increased and be placed on a par with the

men's. This was a radical idea at this point – a hot and much discussed topic. The question in itself often divided women and men.¹⁹

The first strategy can also be related to the children's whereabouts when the mothers worked, which was something that many women worried about. To decrease the stress and consequently the increased risk of accidents caused by the women worrying about their children when they were at work, it was suggested that the companies should provide child day-care centres. Another proposal that was put forward by the Female Factory Inspectorate was that the companies could sell nourishing but inexpensive cooked meals, which the women could bring home to their families or alternatively that the families could eat subsidised meals at the women's work places. Despite the radical nature of these questions, the balance of power between the genders was basically not challenged because the division of labour between men and women in the household was not questioned.

The second strategy, to better prepare the women, involved trying to change working women's lifestyles in the long run. This was – in contrast to the attempts described above to get employers interested in different kinds of exercise yards outdoors and exercise during breaks – a kind of public health project. To achieve this, consciousness and knowledge were indeed needed. Study circles with subjects such as "Health and lifestyle" and "You are what you eat" were suggested. These would enable the women to acquire tangible knowledge of how to improve their own and their families' health in the long run. The inspectress also encouraged the women to take folk high-school courses, etc to broaden their minds and thus enlarge their mental capacity to deal with a strained and stressed working life.

Concluding Remarks

The Female Factory Inspectorate was paradoxical; on the one hand it aimed at decreasing women's subordination in their work life, but on the other hand it reproduced this subordination. The Female Factory Inspectorate contributed to strengthening the segregation between women and men in working life and thus confirmed gender segregation, precisely as Barbara Harrison has shown took place in Great Britain. At the same time, however, the existing notion that women were especially defenceless was challenged, and the Female Factory Inspectorate's starting-point was always that women had a right to support themselves. The Female Factory Inspectorate formally confirmed the existing gender segregation, but the content of the Female Factory Inspectorate's work was partly challenging.

¹⁹ See also Karlsson L (1995), Carlsson C (1986) and Karlsson G (1996).

The subordination of women in working life and in the family was made visible. For example when the Female Factory Inspectorate compared women's and men's night work it concluded that the adverse affects for women was not greater than those for men in general. When women were exempted from night work during the two world wars, it was due to the women's social situation, i e that she had to take care of her children during the day. It was simply the gender segregation – in work and in family life – which caused women to be more exposed in the working life. The fundamental balance of power between men and women was, however, never questioned; instead attempts to remove the unequal conditions by creating welfare institutions such as child day-care centres were pursued.

The Female Factory Inspectorate itself is also a clear example of gender segregation and separation. In itself, the fact that a Female and a General Factory Inspectorate existed is proof of separation. Women could not be employed at the General Factory Inspectorate except as secretaries, and men could not be employed at the Female Factory Inspectorate. The two Inspectorates had essentially two different guidelines: the Female Factory Inspectorate concentrated upon "soft" issues whereas the General Factory Inspectorate concentrated on "hard" issues such as engine protection devices and technique.

In their working place inspections, the Female Factory Inspectorate focused on concrete questions such as the standard and appearance of the working premises, staff areas, working hours and the conditions of the work in general. These questions were related to the women workers' subordinate position in working life as well as their family lives. In the workplaces this involved not only the work situation as such and the availability of opportunities to take a break in e g staff premises, the possibility of catching a bit of fresh air, etc but also such matters such as toilets and dressing rooms. Many of the questions were of such a nature that they were topical during the entire period of the Female Factory Inspectorate, for example the question of chairs. The Female Factory Inspectorate believed that the rationalisation of production should also consist of improvements in working hygiene, working postures, lightening, places to sit, etc as well as dining rooms, toilets and dressing rooms. Rationalisation was often considered to be something basically positive, but its negative aspects were dealt with as well; there was a belief, however, that rationalisation would naturally lead to improvements in working conditions.²⁰ It was felt that employers would make a conscious effort to

²⁰ Hans De Geer believed that the rationalisation of production depended on a social policy and that these were two parts of the same development. The companies made production more efficient and society was to ease the social consequences; sharing the responsibilities was not considered desirable by either party. Judging from the material from the Female Factory Inspectorate, however, the picture is not so unambiguous. Here, if anything, we find that in fact a sharing of responsibility actually occurred in a number companies and the Female Factory Inspectorate also aimed at, in my opinion, integrating social responsibility and a

improve the work environment so that employees would be able to handle the stress brought about by the increased work pace. This meant good and nutritious meals, as well as the possibility to rest in harmonious, warm and cosy environments during breaks.

The problems that the Female Factory Inspectorate dealt with during work place inspections concerned, above all, issues related to every day life at the work places, which in turn were related to women's subordination. This meant that, in reality, e g breaks, catering and different kinds of staff areas were linked to the actual life situation of the women who were responsible for homes and families. The two long-term strategies designed to improve the situation of women workers mainly dealt with facilitating and reducing the women's reproductive work, as well as better preparing the women, physically as well as mentally, for the stress of working life. Consequently, the Female Factory Inspectorate knew that the individual worker's social situation outside work, that is their family situation, played an important role for how the conditions of working life affected the individual. They were indeed aware of women's subordination both within and outside working life and the concrete meaning of the female role for the individual women's actions in different situations.

During the existence of the Female Factory Inspectorate, the work pace increased and a generally increased pressure and stress was felt in working life. That this was related to the introduction of the eight-hour workday in 1919/20 and the rationalisation movement during the 1920s and 1930s is clear.²¹ In fact the increasing pressure in working life seems to be recognised as constantly rising with some periods of acceleration. The phenomenon as such can be observed today too, when many people feel a constantly rising pressure in working life, and a new term, "burned out", has been invented.

The work of the Female Factory Inspectorate is still very topical for women as well as men, but in particular for women. I believe that the Female Factory Inspectorate in many respects was ahead of its time and could predict the problems to come. One concrete example of this is what we today denote as musculo-skeletal disorders, which was then called writer's cramp, which they clearly realised the importance of. Moreover, their foresight not only applied to specific questions and problems, but also to attitudes relating to environmental issues and people in general. The Female Factory Inspectorate was aware of the individual's situation. This meant that in reality the more traditional questions regarding the work environment were linked with the women workers' unpaid reproductive work, i e their responsibilities for housekeeping. This perspective not only

more efficient production. Apparently a battle about the content and meaning of rationalisation occurred at this time. De Geer (1978), see especially chapter 11.

²¹ See e g Johansson (1977) and De Geer (1978).

involves a possibility for women but could also be essential in analysing men's working conditions as well.

Today, as well as historically, increased pressure in working life has different consequences for women and men. This was something the Female Factory Inspectorate was very much aware of. Despite technological progress and different types of welfare reforms today, we have much to learn from the work and attitude to life and working life of the Female Factory Inspectorate.

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Increased demands for timely adaptation and regularity, increased control and discipline meant further exclusion of workers with reduced working capacity. Source: Morgontidningens arkiv, Arbetarrörelsens Arkiv, Stockholm.

The Outer Boundaries of Wage Work Creating Occupationally Handicapped Workers

Martha Blomqvist

In this article changes in the work environment and working conditions are explored through an analysis of processes that exclude some categories of the work force from working life. The analysis covers more than a century and concerns the Swedish situation. The categories excluded are today labelled as persons with disabilities. Can a study of work from the somewhat atypical viewpoint of these categories actually tell us anything about changes in the work environment? In my opinion the perspective is very useful for making comprehensive and longterm changes in wage work discernible, changes which otherwise easily are hidden by more conspicuous and rapidly occurring changes. An examination of wage work from a position in its margins makes it possible to see changes in its boundaries. The drawing-up of new boundaries tell us about those enduring and fundamental changes in the conditions and demands of work that mean that some categories of workers are excluded from work, while others who were excluded earlier can be included. The perspective also makes obvious that criteria for the recruitment of, and the demands on, workers are determined by more than the actual work tasks and the content of work. Underlying long-term trends reshape the organisation of work and other social institutions. In order to gain an understanding of changes in working conditions, the institutional contexts and changes in these must be taken into consideration in the analysis.

The article begins by summarising how the formation of work by industrial capitalism excluded large groups of people from the workplace, because they did not match up to the new demands of work. Blind persons, deaf persons and "crippled" persons were among those excluded. The standardisation of work, competition through underbidding and minimum wages are key concepts for understanding the excluding processes.

By the 1940s, the exclusion from work of persons having only a partial working capacity had become more widely acknowledged as a social problem. The second part of the article deals with measures taken as a consequence of this understanding, on the continuing structural transformation of working life and on changes in industrial relations. "Performance competition" and consensus between unions and employers' organisations are important concepts.

A third part focuses on elements in the latest, still ongoing, transition of working life. Some new criteria for inclusion in wage work are identified. Individua-

lisation, organisational change and communicative skills are concepts that I regard as crucial for the understanding of this phase. The article concludes by drawing together threads and pointing at challenges to the present system of employment subsidies.

The historical parts of the article are based on a sociological study of disabled persons' relationship to wage work: Blomqvist (1990) *Hundra år av undantag*. (One Hundred Years of Exception) Unless otherwise stated the historical analysis is taken from this publication, where it is developed in more detail. The analysis of the situation of today is to a large extent based on a study on the attitudes of trade union representatives and employers towards workers with disabilities and on a research project in progress. ¹

The one thing we know about the future is that it is not predictable. Even when the point of departure is lessons based on knowledge of the past, discussions on the future to some extent always involve predictions of what is to come. The future discussed in the conclusion is a very near one, which makes it possible to keep the number of predictions down, but not to fully avoid them.

Exclusion from Wage Work

With the coming of industrial capitalism wage work became the dominant form of work. For some categories of workers the new organisation of work was excluding. Concurrently with the spreading of wage work, other possibilities to earn one's living became more and more circumscribed. During the first half of the twentieth century the situation for groups excluded from wage work became more and more precarious.

Work According to Capacity

In the pre-capitalistic society everybody who was able to work was also assumed to be capable of earning her or his living through work. Only persons unable to work at all could be allowed poor relief. The administration of poor relief therefore did not make any other distinctions than the one between "able to work" and "not able to work". Legislation was modelled for a society in which every person's working capacity could be transformed to some form of earnings and in which the duty to earn a living for oneself and one's family corresponded to real possibilities to work.² To be without work when one had some working capacity was thus assumed to be due to the individual's idleness and was unlawful until the mid-nineteenth century. However, actual imbalances between the obligations to earn one's living by work and the possibilities to take up wage work resulted in

¹ Blomqvist & Dahlkild-Öhman (1987). The project is titled *The transition of working life*.

² SOU 1931:20, Montgomery (1951) and Samuelsson (1973).

underemployment and widespread poverty. Though the concept of unemployment had not been invented, unemployment had.

In the nineteenth century most blind, deaf and "crippled" persons seem to have either earned their living themselves or contributed to their own support by working.³ Though it on average must have been more problematic for them to earn their living than for persons who could see, hear and move unhindered, their difficulties manifested themselves very differently. Deaf and blind persons seem not to have had more in common with each other than with hearing and seeing persons. The limitations seem to have been more distinguishing than they were points of similarity. The nineteenth century's population statistics registered deaf, blind and "mentally deficient" persons, but did not have one term referring to them all.⁴ The 1900 population statistics were the first to use one term – "crippled" – as a heading for all these groups, thereby recognising that the groups had something in common.⁵ Data on deaf, blind and "mentally deficient" persons was however still presented separately; they were not merged into one category.

The Employment Relationship

Until the beginning of the twentieth century Sweden was a very poor country, on the border of Europe. Migration waves used to follow upon several years of bad harvests. Between 1851 and 1930 as much as a quarter of the Swedish population emigrated to America, an indication of the level of destitution.⁶ For a large part of the Swedish population, the industrialisation process during the second half of the nineteenth century led to less poverty. The underemployed in the rural areas could find work in the factories located in more densely populated areas, and work in the manufacturing industries was also better paid than agrarian work.

For persons with a reduced working capacity, however, the first phase of industrialisation resulted for the most part in worsening circumstances. For them, industrialisation and the growth of wage work meant that the possibilities to earn their own livings gradually diminished. The organisation of work in the manufacturing industries dramatically changed the conditions for work. As work in the factories presupposed an employment relationship, work became a question of "either/or". In order to earn one's living by wage work, the individual first had to sell her labour, i e to negotiate an employment contract. The autonomous craftsmen competed with their products; it was the products, the results of their work, which were marketed and sold in the market. Wage work in the manufacturing industry meant that the market took one step forward. Now before the worker

³ Olsson (1982) and Uchermann (1897).

⁴ Befolkningsstatistik för år 1840, för åren 1851 med 1855, och för 1870.

⁵ Befolkningsstatistik för år 1900.

⁶ SCB (1991) p 12 and Lundh & Ohlsson (1994) p 10.

⁷ Blomqvist (1990) p 17.

could do any work and produce any products, his or her labour had to be sold in the labour market. What used to be a continuous relationship between working capacity and the possibility to earn one's living was now dichotomised.

Work in the factories also required adaptation with regard to time and space. During the second half of the nineteenth century, the demands for control and for discipline gradually increased in the factories: the work process became more efficient, more rules were introduced and the demands for timely adaptation and regularity in work increased. While the autonomous craftsman could keep his own pace and adapt body movements and work operations to his own requirements, the work pace in the factories was often set by machines and was therefore beyond the worker's own control. The work process required that work operations were co-ordinated with the operations of other workers as well as with machines. Workers who could not keep up with the new demands were sifted out.

Without Social Security

The patriarchal working conditions in farming and in iron works continued to exist for some time also in the factories, offering workers and their families some, though arbitrary, security in cases of unemployment, illness and old age. 10 Gradually, however, this patriarchal, feudal security system was abandoned, to be replaced by no security at all. 11 In order to compensate for the increased insecurity, workers organised health insurance funds, unemployment benefit funds and funds for funeral expenses. Some of these funds were part of trade unions in the making, a number of them later developing into trade unions; others were more religiously inclined or depended on charity. Blind, deaf and "crippled" persons seem less than others to have been members of these security funds, especially of the ones organised like trade unions. This was probably because their impairment implied an increased need to make use of the fund, which made them unlikely to be accepted as members. More than others, they were thus subjected to the risks of wage work. 12 The social problems of that time, discussed under the heading of the "Workers' Question" 13, was thus especially burning for these groups.

Minimum Wages

As long as the wage could be fully set to match a person's capacity for work, nothing stopped employers from employing persons without a full working capacity. However, the growth and increased strength of trade unions had a

⁸ Horgby (1986).

⁹ Isacson & Magnusson (1983).

¹⁰ Lindström (1990).

¹¹ LO (1951) and Hultén (1978).

¹² Blomqvist (1990) p 20.

¹³ Gustafsson (2000).

curbing effect on the adaptation of wages to working capacity and thereby on the employment of workers who did not have a full working capacity. This seldom acknowledged side effect of trade unionism needs some explanation.

The growing trade unions negotiated fixed minimum wages as part of the wages agreements. A stipulated minimum wage not only guaranteed workers a certain wage level; it also protected workers against the competition of unemployed workers, who were willing to accept a job for wages lower than the ones negotiated by the unions.¹⁴ However, exceptions to the minimum wage were explicitly allowed for workers whose working capacity was reduced. The very first national agreement for the engineering industry, signed in 1905, thus included a paragraph allowing for exceptions for "workers who have reached 60 years of age or whose working capacity is reduced because they are 'crippled' or due to illness". 15 Similar exemption clauses were successively introduced into most of the collective agreements to follow. Anxious to prevent misuse of the paragraph, the unions were however very restrictive when allowing for exceptions to the minimum wage. 16 The exemption clause was therefore seldom used. Instead employers became more selective when recruiting workers. The scope for humane considerations when employing therefore became more limited than before. More efficient forms of control were developed, and the demands on work performance and on work pace were standardised.

Until the 1930s competition for work through underbidding posed a factual threat to the trade union movement.¹⁷ This competition was made up of unemployed workers with a full working capacity. The workers with less than a full capacity tried to find a job in spite of a lower performance and offered to work for a lower wage. They were not part of the competition through underbidding, but the trade unions measures to delimit this – the minimum wage – nevertheless contributed to their exclusion from work. It is important here to underline that the unions were not the driving force behind this exclusion. However, an unintended consequence of the union's methods to secure its own existence was that employers' recruitment of these workers was severely hampered.

Exclusion Made Visible

A person's capacity to work thus gradually became more and more decisive for her or his possibilities to find a job, i e to sell his or her labour. A discernible injury – deafness, blindness or being "crippled" – signalled a possible limitation

¹⁴ Åmark (1986).

¹⁵ Sv Järn- och Metallarbetareförbund (1906) p 7.

¹⁶ Brodén (1939), Åsbrink (1939).

¹⁷ Blomqvist (1990) p 33 and p 136. By the 1930s the trade union movement was established and generally accepted. Though competition through underbidding has presented a threat to wage levels for a long time thereafter, it has not been a threat to the existence of trade unions.

of working capacity. Comparatively many persons with bodily imperfections therefore continued to work as craftsmen and in farming where the manufacturing industries' conditions for work were not valid. But craftsmanship and agriculture were also rationalised. The trades were exposed to very hard competition from the mass production of the manufacturing industries, and in farming industrially produced machines and tools were beginning to be used to increase productivity. The demands on work performance and on efficiency therefore increased in these sectors as well. Practically all parts of the labour market were affected by the rationalisation and standardisation of work, circumscribing working possibilities for persons with less than a full working capacity. More and more persons were thought of as not having a full working capacity.

This development seems to have negatively affected more men than women. The surplus of male workers from farming to a large extent went to work in the factories, while women often took on domestic jobs. As regards rationalisations, household work constituted a labour market niche, unaffected by standardisation and regulations.¹⁸

As late as the 1930s however, deaf mute and "crippled" persons, men as well as women, to a very large extent supported themselves by work, while "mentally deficient" and blind persons did so less often. Different disability categories were also segregated into different occupations. The occupational patterns followed the occupational training offered by the educational institutions for different disability groups. Noticeably many deaf mute persons thus worked as tailors and shoemakers, and many of them were autonomous craftsmen. So were many blind persons, who often worked as brushmakers and basket-makers.

The shortage of work characterising underemployment was gradually transformed into unemployment. The insight that it was not always possible for persons with a diminished working capacity to earn their own living was slowly accepted by the authorities. When the government undertook the first assessments ever of unemployment, this awareness had had an influence on the way the unemployed were categorised. The very first unemployment assessment in 1909 took an interest in the working capacity of the unemployed and categorised the persons reporting themselves as unemployed into three categories: no working capacity, not a full working capacity and full working capacity. Only persons belonging to the second and the last category were considered as unemployed. An assessment of unemployment conducted in 1927 showed an increased interest in ranking the working capacity of the unemployed. Persons accepted as unemployed were now sorted into four quality groups according to occupational skills,

¹⁸ Blomqvist (1990) p 32 and p 48.

¹⁹ SOS (1936).

²⁰ Ibid.

²¹ Arbetslösheten i Sverige under vintern 1908-1909.

²² SOS (1928).

working capacity, adaptability and willingness to work. According to the instructions for the categorisation, working capacity, especially physical capacity, was a crucial quality criterion. However, it was not solely decisive. Also persons with physical impairments could, in cases where they were thought of as "skilled and willing workers", be considered as an "adequate and well functioning work force".

According to the 1927 unemployment assessment the proportion of partially disabled had doubled since 1910. The assessment understood the increase as a

"natural result of the increased intensity and long duration of the recent economic depression which has lead to a more rigid weeding out of inferior workers."²³

The growth is thus seen as a result of social change, or more specifically of the more competitive labour market.

Increases in the proportions of "crippled" persons during the first decades of the 20th century were also registered in the population statistics.²⁴ The population statistics express an awareness of the vagueness of the concepts and of their changing meaning over time. The increase in "crippled" persons is seen as a result of such changes and of more reliable data. Regarding a very marked increase in mental diseases that had taken place since the 1860s, the 1920 population statistics commented:

"A continuing increase in mental diseases is perhaps /.../ one for our time's, with its restless development in different social areas, characteristic phenomenon."²⁵

The government officials producing these population statistics 80 years ago thus did not seem to have had any illusions about stable statistical categories. They seem to have realised that social changes affect the contents and definitions of these categories, even when they have not been formally altered. One would perhaps expect this constructionist insight to have had an impact on the civil servants' attitudes towards those without a full working capacity. Seemingly it did not. Or at least it did not influence attitudes expressed in reports on the unemployment assessments. These reports express discontent about persons who volunteered for registration, but who due to a low working capacity were not accepted as unemployed.

²³ SOS (1928) p 146

²⁴ SOS (1918) and SOS (1936).

²⁵ SOS (1925) p 32.

Including the Excluded in Employment

The exclusion of some workers from wage work was gradually acknowledged as a social problem. In the 1930s measures to meet these needs were a subject of political discussion. In the 1940s a government investigation worked on the issue, and subsidised employment designed to meet the demand of the partially disabled workers for work was eventually organised.

Industrial Relations

In the beginning of the 1940s collective agreements covered most of the labour market. Competition through underbidding no longer constituted a severe threat against the trade union movement. This did not mean that the unions accepted exemptions from minimum wages. The wages and increases in the wage levels now had to be motivated and one obvious argument available to the unions when negotiating was the performance of the workers. The competition regarding the price of the work thus turned into a competition about work performance.

The Swedish Employers' Confederation (SAF) and The Swedish Trade Union Confederation (LO), the main association for blue-collar workers, had established a mutual understanding in the late 1930s concerning co-operation for the development of rationalisation and peaceful relations on the labour market.²⁶. Their mutual understanding on the rationalisation issue made it obvious that active efforts for solving the problem of workers without a full work capacity were not to be expected from employers or unions. It also made it clear that the future could be expected to bring even more marked difficulties for those who did not meet with the increasing demands of working life. As employers and unions were not willing to shoulder any responsibility, it was left to the state to take action on the matter.²⁷

In a very well known contribution to a debate on declining fertility rates, Alva and Gunnar Myrdal (1935) confronted the trade union movement regarding its minimum wage policy, which excluded workers performing at less than maximum capacity from work. The Myrdals argued for the need to organise special production units for the less "productive" part of the work force and they stressed how important it was that the trade union movement did not obstruct such plans:

"If it does that, it jeopardises its most fundamental social policy ideal, that of safeguarding the interests of working people. For even individuals who are not top-grade are part of this group or at least should be. A trade union movement that in this and other respects developed in such as way as to

²⁶ An agreement met by the LO and the SAF in 1938 is often seen as the symbolic starting point of the Swedish model, and the place for the meeting, Saltjöbaden, has given its name to the negotiation climate for at least the following three decades (Edlund et al 1989).

²⁷ Blomqvist (1990) p 52.

thrust aside the weakest and shield the strongest would become soulless – it would embrace its own destruction just at the point when it wields its greatest power."²⁸

At the time there were no alternative employment opportunities for "less productive" workers. The idea was however a subject of discussion. The comments of the Myrdals indicate that an unreserved support from the trade union movement could not be taken for granted. The trade union was held responsible, not only for being uninterested in the exclusion of "less productive" workers from work, but also for its possible objections to the development of alternative employment for those workers, all in order to secure the union's power.

The Myrdals may have been among the first ones to openly challenge the trade unions on their attitude towards "less productive" workers, but they were not the only ones. To all appearances the collective agreements, together with the rationalisations taking place in industries, were commonly identified in the late 1930s as important obstacles facing those of a reduced working capacity.²⁹

Defining the Excluded

In the 1940s a government investigation whose purpose was to propose measures making it possible to make use of the work of "those of reduced working-capacity" was set up. The investigation defined "those of reduced working-capacity" as "persons, who, due to physical or mental work obstacles or social encumbrances find it, or can be expected to find it, more difficult than others to get and to hold on to gainful employment."³⁰ This, the very first common denomination for these groups, thus directly referred to their labour market situation. It implied that what blind persons, deaf persons and "crippled" persons had in common was that they were confronted with similar difficulties when entering the labour market.

In 1942 the associations for blind, for deaf, for "crippled" and for persons suffering from tuberculosis founded their first confederation ever and picked up

²⁸ Myrdal & Myrdal (1935) p 256. Wordings from the very same chapter in this publication have more recently, in 1997, been taken as a pretext for accusing the Myrdals of being in favour of racial hygienics. As far as I can see, the formulations referred to in this debate were in no way outstanding for the time. They indicate an élitist ideology, but hardly racial biology lines of thought. The debate took off after two articles by Maciej Zaremba in Dagens Nyheter 20 and 21 August 1997.

²⁹ A collection of articles published in 1939 discuss from different points of view the social problems of those of reduced working capacity. The authors represent different political organisations and their understanding of the issue is obviously very different. However, when discussing explanations to the situation, all authors bring up rationalisations as well as collective agreements. This is not to say that they all find them relevant. It does however show that the understanding of collective agreements as an obstacle for those of reduced working capacity was widespread. (Social Årsbok 1939).

³⁰ SOU 1946:24 p 12

the concept of "those of reduced working-capacity" when naming it.³¹ The constitution of the confederation as well as its name illustrate very well, I think, Iris Young's (1990) understanding of what defines a social group.

"Groups /.../ exist only in relation to other groups. A group may be identified by outsiders without those so identified having any specific consciousness of themselves as a group. Sometimes a group comes to exist only because one group excludes and labels a category of persons, and those labeled come to understand themselves as group members only slowly, on the basis of their shared oppression."³²

The naming was however controversial; it meant defining all blind, deaf and "crippled" persons' working capacity as reduced. A renaming of the confederation attempted to cut the link between labour market problems and being deaf, blind, "crippled" or suffering from tuberculosis, i e to redefine these groups' relationship the labour market. Relabellings to this or similar purposes have since taken place several times in the history of the confederations of associations organising the groups that today are called disabled.

State Intervention

The need for special measures for "those of reduced working-capacity" was explicitly motivated with the demographic situation – declining fertility rates were at the top of the political agenda – and with a shortage of labour. Though the explicit reasons were mainly financial/economic, there are strong indications that the social motives were more relevant, although the economic arguments were thought to be politically more current.³³

The government investigation and the measures proposed by it were in many respects groundbreaking.³⁴ It made up one of the cornerstones of the welfare state and for years to come had an impact on society's view of persons without a full working capacity.³⁵ The measures were composed of different forms of employment opportunities for which the state paid part of or (eventually) the whole wage. The autonomy of the employers and trade unions was fully respected. The measures did not in any way interfere with their doings.

In the 1950s a cautious implementation of measures proposed by the investigation began, followed by a steady expansion during four decades.

³¹ Ransemar (1981) p 88. The confederation's name was *Samarbetskommittén för Partiellt Arbetsföra* (The committee for co-operation between those of reduced working capacity).

³² Young (1990) p 46

³³ Blomqvist (1990) p 95.

³⁴ SOU 1948:54.

³⁵ It is interesting to note that the members of parliament first proposing the government investigation did not represent the social democrats, but the conservatives (Blomqvist 1990, p 76).

In the 1950s, 1960s and 1970s the structural rationalisations of industry produced new groups that did not meet up with the demands of working life. The LO still backed the rationalisations – the LO's wage policy of solidarity with low-paid workers had very clear rationalisation effects – but it was becoming increasingly aware of the problems facing in particular elderly workers.³⁶ "Work for everybody" – the political ambition during the same time – meant that their claims for work could not be overlooked.

Women's rising labour force participation rates further widened the population covered by the full employment policy. Employment became normative also for disabled women, which added to the demand for subsidised employment. The state supported more and more employment. The subsidised forms of employment gradually developed into a labour market of its own financed by the state.

To some extent, this subsidised employment explains the very high figures on labour force participation rates in Sweden. And the other way round: the generally high economic activity rates produce a great demand for subsidised employment.

A new concept, "occupationally handicapped", was coined as a heading for the categories of unemployed who could be considered for subsidised employment: "Occupationally handicapped" was (and is) a purely administrative concept and allowed for a flexible use of the subsidies. It included the traditional disability groups, but also the less than precise category of "socially maladjusted", eventually renamed to "socio-medical disabilities".

Over the years the subsidised forms of employment have been made the target of two main types of criticism.³⁷ The first is raised by employers and questions the economic conditions for companies in a particular group – Samhall – organised for the sole purpose of employing persons with working disabilities. Privately owned companies doing business in the same branch of industry as Samhall-companies now and then complain that the state owned companies, due to the favourable wage subsidies, expose them to unjust competition. The other type of criticism is delivered by associations for different disability groups and focuses on the recruitment of persons for subsidised employment. According to this criticism, unemployed workers lacking a "genuine" disability are often given priority, while persons with "real" disabilities are instead sorted out from subsidised work. The unjust competition brought to the fore here concerns competition for employment between individuals ascribed with different disabilities. The disability category that is questioned foremost is the socio-medical one.

³⁶ LO (1961 and 1966).

³⁷ Blomqvist (1990) p 124 and p 126.

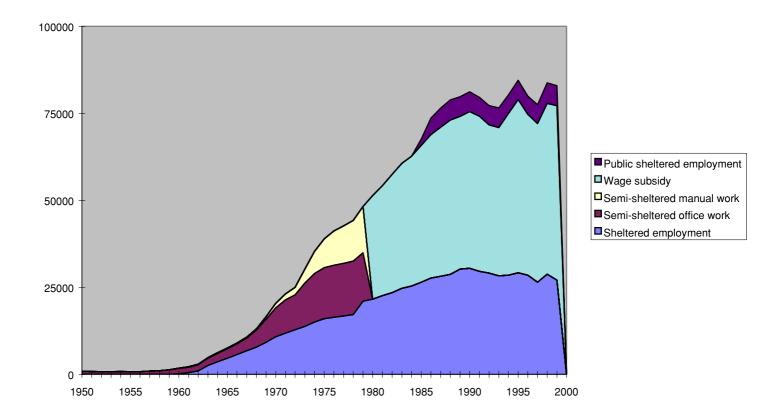


Diagram 1. Occupationally Handicapped in Subsidised Employment 1950-2000 Source: National Labour Market Board

The Work Environment Made Responsible

The growth of employment organised for persons with disabilities clearly demonstrates an ideological change in the understanding of disabled persons' difficulties to find themselves a job. Their problems had now become a concern of society. However, while it was a matter for the state to organise subsidised employment, employers were not totally freed from responsibility as regards the excluding processes. Some of the many changes in labour law in the 1970s held employers responsible for the rising demands of work and for the exclusion of people from working life.³⁸ The Swedish Working Environment Act has gradually included more and more aspects of working conditions in its definition of the working environment.³⁹ Until recently The Occupational Injury Insurance's

³⁸ A presentation of the labour law introduced in late 1970s is found in *1970-talets reformer i arbetslivet* (1982).

³⁹ Since 1991 it includes technology, work organisation and work content. "Technology, work organisation and work content shall be designed so as not to expose the employee to

definitions have followed changes in the Act, accepting more and more injuries as injuries caused by the working environment and thereby granting compensation for more and more injuries. The Protection of Employment Act of 1974 circumscribes the employers' right to hire and fire at their own discretion and offers elderly workers and disabled workers more protection than other workers. The Act for Promotion of Work of 1974 makes it possible for the state to intervene if employers do not on their own initiative employ reasonable numbers of elderly and disabled persons. All these changes aimed to press the employers to take more responsibility for how work demands and the working environment were developing.

For decades, the unions, especially the LO-affiliated ones, distanced themselves from the associations for the disabled and seem actively to have avoided getting too involved in investigations into these groups' relationship to the labour market. The associations for the disabled on the other hand seem for a long time to have avoided confrontation with the very powerful unions. In the mid-1960s, however, a first very heated dispute broke out.⁴⁰ The associations for disability groups accused the unions of not caring for their disabled union members and of their mistreatment. The debate made obvious how tense the relations between unions and disability associations actually were underneath the superficially undisturbed surface of non-communication. It was not until 1980 that the LO defined some of the issues of the disability movement as union issues.⁴¹

New Boundaries

The increase in subsidised employment continued during the 1980s but levelled out in the 1990s. However, this does not mean that the demand for such employment has been met. As the demand is directly related to developments in the labour market, it has no fixed limit. Changes in working life taking place in the 1990s give reason to believe that future exclusions to some extent may follow newly created boundaries.

Recent Transformations

The industrial society is now in the midst of a transformation into an information society or a post-industrial society. Since the mid-1960s the numbers of persons employed in the manufacturing industry has been declining. Jobs involving only

physical or mental strain, which can cause bad health or accidents." (Working Environment Act, 2 Chapter, 1§).

⁴⁰ Blomqvist (1990) p 170.

⁴¹ The rapprochement was however between the central level associations. The declarations made by the LO (LO 1980) were couched in general terms and not very obliging for the local unions.

manual work tasks are becoming increasingly rare; practically all jobs involve elements of intellectual work tasks as well.

The regulations in time and space introduced in the industrial society are loosing their relevance. In some industries these regulations have been dissolved altogether, and in most industries they are less significant than they used to be.

Work organisations are being modified in order to increase the flexibility of the work process. Individual piecework has been replaced by teamwork, job rotation and job enlargement have been introduced and autonomous work groups are taking over the tasks of supervisors.

Many reorganisations involve the delegation of control over workers to the work teams, making the teams responsible not only for planning but also for work performance. The individual's performance thereby becomes a collective interest, and the solidarity with the ones not doing their share is put under severe pressure. Individual wage systems add to the "performance competition".

For many employees these changes are for the better. Job enlargement means more varied work tasks, which makes work more interesting and reduces the risk for musculo-skeletal injuries. High performance workers may prefer an individual wage system. For those who do not meet up with the ever-increasing performance demands, or who for other reasons find it difficult to adapt to the new organisations, the changes constitute a threat however.

At the same time, many work tasks not at the core of the work process are sorted out from the work organisations. Such tasks, which do not form a necessary part of the ordinary work process, were previously often done by employees who for some reason had difficulty doing work that demanded a high performance or working on a team.

Widespread reductions in personnel result in further increases in the pace of work. Time is becoming an increasingly scarce resource. Tolerance declines with increases in the level of stress. Harassment at workplaces seems to constitute a growing problem, probably related to a harder climate due to the increased pressure put on workers. ⁴²

The reorganisations thus threaten to contribute to a substantial and systematic exclusion of persons, who for some reason are, or are thought of as being, difficult to integrate into the new work organisations.

The Changing Demands of Work

Though different studies and reports specify somewhat different qualifications as being important in the working life of today and of the future, on the whole it is the same kind of traits that are pointed out in different studies. Employer repre-

⁴² According to The National Board for Occupational Safety and Health, the numbers of employed persons exposed to bullying or harassment more than doubled between 1997 and 2000 (Arbetarskydd 2001).

sentatives in very different industries quite unanimously claim that the traits they nowadays look for when recruiting are social competence and the ability to cooperate.⁴³ Social competence, the ability to co-operate and (lately also) emotional intelligence all fit under the heading of communicative skills.

The most obvious explanation for the increased importance of communicative skills is the growing service sector. Perhaps less recognised, but equally important, is that more and more jobs in the goods-producing industries also make use of communicative skills. Workers producing the goods are increasingly involved in direct communication with customers. In addition, team-based work, introduced in the production of goods as well as in the service sector, presupposes cooperation.

Analytical skills and the power of abstraction are also becoming increasingly important. More and more work tasks make use of technology and communication, involving the handling of symbols and thus a capacity for abstract thought.⁴⁴

Work demands are changing only slowly. As the qualifications of the work force are changing at the same time, lasting imbalances between supply and demand as regards the qualifications of the work force are not liable to occur. However, it is possible to identity long-term changes in the qualifications required in working life. In agricultural society physical capacity was a prerequisite. The industrial society stressed the workers ability to maintain discipline, be it in physically or in intellectually demanding work. The information society depends on communication and accordingly emphasises communicative skills. This does not of course mean that the skills required in the industrial society are made irrelevant in the twenty-first century. Rather they form the base on top of which communicative skills are asked for.

Women dominate in jobs involving service tasks and making use of communicative skills. Men on the other hand make up the majority of workers in the goods-producing industries where communicative skills used to be of little value. We would therefore expect more men than women to end up outside the new boundaries of wage work; i e provided the logic of competence takes over the logic of the gender system and provided the understanding of communicative skills does not change too much.

⁴³ This holds true for sectors as different as the engineering industry, the food processing industries, banking and insurance, retail trade, central government and health and nursing. The data come from a study in progress, conducted by the author. Lena Abrahamsson (2000), in a study of the pulp industry, questions the demand for social competence as being genuine, suggesting that technological know-how, just like before, is what really matters, even when employers explicitly underline the need for social competence. I would suggest that technological competence *is* as important as ever for jobs consisting of technological work tasks, and that what is occurring is that social competence and the ability to co-operate is now demanded *on top* of that.

⁴⁴ Rifkin (1995), Reich (1991).

Another change in qualifications requested of the workers seems to consist of a shift from behaviour to personality. In the 1930s the ideal worker thus was expected to show "adaptability, vitality and attentiveness".⁴⁵ A worker exhibiting these qualities could easily be integrated into an organisation where the work tasks were defined beforehand. The workers who are sought after today demonstrate "flexibility, creativity and social competence". This is, I think, more than a change in terminology. Whereas the former terms describe a person's behaviour, the terms of today refer to her or his personality.⁴⁶ Whilst the worker in the industrial society was expected to contribute to the work organisation with her or his work performance, the worker in the information society is expected to make use of his or her personality for the purpose of performance and also for the development of the organisation itself.

Individual Responsibility

Whereas ability to think abstractly is taught and trained in the regular school system, formal training of communicative skills and of the ideal personality is more difficult to integrate into the educational program. Instead the individual herself is made responsible for the development of these skills. The shift in qualifications requested thus seems to correspond to a shift in responsibility: from society and work organisations to the individual. This change is in line with changes in ideology and in political power relations: from collectivism to individualism.

More striking and more concrete indications of change in the same direction are visible in changes in the regulation of working conditions. Beginning in the mid-1990s the rules for compensation for work related injuries became more restrictive. The burden of proof falling on the individual was made heavier. The statutes of The Protection of Employment Act have been weakened, allowing employers more leeway to decide the terms for personnel reductions. Both the regulation of compensation for work related injuries and the Employment Act have thus been changed to the employers' advantage. The Act for Promotion of Work has not been changed, but has all the same not had any impact. Used only once or twice in twenty-five years for the purpose of increasing the recruitment of disabled persons, the Act for Promotion of Work is probably the most disregarded part of labour law. This is not to say that that the Act is of no or little importance.⁴⁷

⁴⁵ These criteria for a good worker were frequently recurring in the publications of the 1930s and were also repeated in government investigations (SOU 1939:13 p 151). Blomqvist, (1990) p 49.

⁴⁶ Blomqvist (1990) p 144.

⁴⁷ According to a materialist analysis the Act fulfils some very important ideological functions (Blomqvist & Dahlkild-Öhman 1987 p 58). It helps to cover the conflict between disabled persons' need for a job and production's demands for efficiency. Through the Act difficulties disabled persons meet in the labour market appear as caused by the state administra-

While the labour laws of the 1970s singled out employers and the work organisations as responsible for exclusions from working life, the trend of today thus again seems to be a shift in the focus of responsibility, from collective solutions to individual ones. Individual responsibility is further underlined by the trade unions' loss of power. For six years in succession unionisation has been declining.⁴⁸

Excluding and Including Processes

According to the analysis above, new criteria for exclusion can be expected to be shortcomings as regards communicative skills and the capacity for abstract thought. Demands for measures to aid this group can be expected to increase further during the years to come. The subsidised forms of employment now available were meant for disabled persons. The wider category "occupationally handicapped persons", which in addition to the traditional disability groups also included the "socio-medically" disabled, was created for administrative purposes. Formally there is nothing to prevent that persons short of communicative skills are categorised as socio-medically disabled, making up an increasing proportion of persons in subsidised employment. Such a development will however most probably meet severe resistance due to reasons of legitimacy.

Over the decades the associations for disabled persons have now and then questioned whether persons recruited to subsidised employment are genuinely disabled or not, pointing primarily towards the socio-medical group. There is little reason to believe that the growth of subsidised employment for persons looked upon as socially unskilled would pass unquestioned; i e, supposing this was at all an attractive group for subsidised employment. There are indications to the contrary.

The competition for work in the labour market comprising subsidised employment now seems to exclude not only the traditional disability groups but also the socio-medical group from employment. Thus, a recent government report assessing the activity of the Samhall group of companies calls attention to the fact that increasing demands regarding occupational skills and social competence block recruitment altogether from the target group.⁴⁹ This group is, the report declares, in short supply of social competence. Obviously the target groups for subsidised employment do not qualify for measures aimed at their employment. The current system of employment subsidies seems unable to meet the demands of today.

For other categories the technological development is anticipated to bring with it possibilities for integration. Thanks to new technology several categories of

tion and not by the structure and function of the labour market and the demands of production. The act also strengthens the legitimacy of paid work.

⁴⁸ Kjellberg (2001). See also Allvin & Sverke (2000).

⁴⁹ RRV (1999) p 145.

disabled are now offered the hope of either a remedy or of new and better means of assistance. For some disability groups the loosening up of the former regulations in the time and space of work organisations means that working conditions become less excluding. Changes like these are not likely to become visible on a labour market level in the short run. (For the individuals concerned they are of course all the more noticeable.) These groups' problematic relationship to wage work may well survive the material obstacles for their inclusion. Still, there is no reason to believe that the now ongoing organisational changes will cause more difficulties in relation to work for all disability groups. The changes actually seem to be to the advantage for some of the traditional medical and physical disability groups.

Conclusions

The extent of employment opportunities subsidised by the state is comparatively high in Sweden. Considering the unions' relative strength, the agreements reached already in the 1930s between the SAF and the LO, and the early and thorough rationalisation of industry as well as of agriculture, there is reason to believe that the exclusion from wage work was more hard-hitting and more definite in Sweden than in many other countries. Once minimum wages were negotiated and collective agreements covered most of the labour market, it must have been comparatively difficult for persons who did not have a full working capacity to earn their own living. The rationalisations to come and the wage policy of solidarity with low-paid workers practised thereafter further contributed to the difficulties.

At the same time, there is a very strong and inclusive ideology of work in Sweden.⁵⁰ Occupational affiliation forms an extremely important part of many Swedes' identity.⁵¹ Seen in that perspective, the fact that the Swedish state relatively early took measures to meet the demands for subsidised employment, and that these measures have grown extensively during a half century, is perhaps not all that remarkable. When in effect, these measures further strengthened the ideology of work.

Today's reorganisation of work and work organisations runs the risk of contributing once again to a very harsh exclusion in Sweden. Just as in the first part of the twentieth century, unions and employers are now in agreement about the reorganisations being conducted. We can therefore expect that a good deal of the

⁵⁰ See e g Blomqvist & Dahlkild-Öhman (1987) p 31.

⁵¹ Even if identity formation will be founded less in work and employment in the future, less in doing than in being, it is reasonable to believe that work will be of more lasting importance in work centred cultures like the Swedish one, than in others. Michael Allvin (1997) discusses the individualisation of work as "a process which has separated work from the identity-forming social practice."

changes planned will actually be carried through. Further, organisational change seems to be extremely widespread in Sweden and to affect all industries.⁵² This suggests that the outcome of the reorganisations will on the one hand affect a very large part of the work force and, on the other hand, leave few lines of retreat for the ones not easily integrated into the changed work organisations.

When special measures for the traditional disability groups were decided on, processes very clearly excluding these groups from waged work had been in play for several decades. The analysis above hopefully makes clear that the processes and trends of today excluding new parts of the work force from waged work likewise are beyond the individual worker's control. When subsidised employment eventually grew more common it was in a context of a developing welfare state, in a society that had put work for everyone on the political agenda and in which solidarity was a word of honour. Today the welfare state is weakened, the political ambition to create "work for everyone" has been erased from the agenda and solidarity with disadvantaged groups has given way to individual interests. It took a considerable time before the burden of the exclusion from wage work was lifted from the shoulders of the individual disabled workers. The conditions of today are far from ideal, but it seems urgent to develop measures designed for the new situation.

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⁵² Gustavsen et al (1996), Brulin & Nilsson (1994) and Blomqvist (1999).

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Alone in the team? Photographer: Bengt-Göran Carlsson, Tiofoto.

Alone in the Team?

A Sociological Perspective on New Organisational Models within Health Care

Gerd Lindgren

Discussions of the work environment used to focus on physical conditions in various professions, for instance on efforts to cope with heavy lifting, repetitive work tasks and hazardous or toxic substances. Problems such as exposure and vulnerability have been addressed, and explanations of ill health among employees have been looked for both in structural and individual conditions.¹ During recessions primarily the latter has been pointed to, whereas in times of prosperity the former. Research seems to be suited both to the available resources and the spirit of the times. Therefore it is no surprise that nowadays research on the work environment increasingly has come to focus on the social work environment. Following the structural changes in the labour market and the withering away of collective traditions, uncertainty is spreading. Utility maximising increasingly appears as an individual, often forced, principle of action. The employees have to face new demands due to the more flexible employment conditions, lean work teams, customer-oriented services, just-in-time delivery and rising expectations regarding social skills and lifelong learning. New studies on how the organisational environment and the work organisation affect the employees' health more and more point to the significance of stress and social conditions. Burn out caused by excessive demands is an example of a work environment problem typical of the times. Increasing work intensity combined with a lack of influence, responsibility, control and social support lead to sick leave.

A research tradition that stems from the beginning of the 20th century has hereby again become topical. I am referring mainly to the social-psychological, often experimental research on social groups that first saw the light of day in the Hawthorne experiments.² Up till now these research results have mainly been incorporated in various management models. This is rather odd, since the much debated Hawthorne experiments primarily point to the employees' exposed position and need of protection against increasingly smart managerial models.³ The experiments show, among other things, that there are basically no limits to the

¹ Härenstam & Wiklund (1999).

² Roethliesberger & Dickson (1939).

³ Asplund (1987), Mills & Tancred (1992).

extent to which the socially responsive individual can be manipulated.⁴ With this perspective it becomes interesting to study how new organisational models relate to, or can be derived from, the findings in Hawthorne.

From the many Hawthorne experiments a way of thinking developed that nowadays rather obviously invades new organisation models. The Hawthorne results gave rise to a series of research approaches within management on "human relations". The results have for instance been interpreted as pointing to the necessity to create the right "atmosphere", "unity" and "climate". That is to say, constellations of groups or teams that guarantee high productivity and commitment to the work. After Hawthorne, group composition became a vital cog in the bigger wheel. My approach therefore is that gaining ascendancy over groups of employees at various levels in the organisation is a vital power struggle in change processes. Group composition is also decisive for the employee's well being and health. A positive response from core groups of employees is finally decisive for management's capability to improve the production results.

We can therefore assume that the struggle concerns who will get priority to the group's loyalty and who will thereby set the norms for the group's sensitivity and responsiveness.

Here I wish to discuss the difference between two common groups, on the one hand groups which form spontaneously among the employees – such as collectives – and on the other groups which are formed by management to enhance productivity, in my example labelled "teams". I ask three questions: How do these two groups influence the social relations among the employees? How can we understand the employees' reactions to these two types of groups within a sociological frame of reference? And how can we relate the current health problems among the employees to the basic social relations in the organisation?

Data

Two studies of health care employees constitute my background material. The fieldwork of the first study was carried out in 1989-90 and the second in 1996-97. Both these studies use qualitative interviews with personnel employed in the public sector. In both cases surgical work was performed at the workplace. In the first case a workplace at a large regional university hospital was chosen and in the second a workplace at a smaller local city hospital.

In the years that have passed between the two investigations public health care in Sweden has experienced extensive rationalisations. At the time of the first study the changes were yet a mere threat on the horizon. At the time of the second

⁴ Asplund (1987).

⁵ Doktorer, systrar och flickor, (1992), Klass, kön och kirurgi, (1999).

⁶ In Sweden approximately 95 percent of the health care personnel is publicly employed.

study large cut-backs and relocation of personnel had been carried through, and the implementation of new, market-oriented organisational models was in progress.

Below I will first describe what the informal organisation looked like at the time of the first study. Thereafter I will delineate the significance of the organisational changes carried out within health care in the 1990s. Finally I will use sociological theory to discuss and analyse the importance of the informal organisation's change between the two investigations. How was it before and how is it now; what are the implications of the changes for the employees' social work environment? What effects will the new organisation possibly have on the employees' health? I will solely concentrate on the hierarchical relations between the two female dominated groups, assistant nurses and nurses.

Girls and Sisters 1989-90

In the book *Doktorer*, systrar och flickor [Doctors, sisters and girls] I describe an informal organisation which, at the time of the study, was on the threshold of big changes. A grant system and a traditional hierarchy still dominated the organisation. In that organisation I could see that the assistant nurses, i e the "girls", had a relative autonomy in their work around the patients. They worked together when cleaning the wards and caring for the patients, and they had the opportunity to withdraw to the wash room for short moments of informal time together. They developed a work culture that has been described and discussed in the terms of a "collective". 7 Conditional for this collective culture was the nearness, the similarity and the mutual interpretation of various problems among the girls. The organisation led to *nearness* among the girls since they formed their own group at work. The obvious *similarity*, which followed from their position at the ward, was further emphasised by the girls' common background, coming as they did from small farms or a working class environment, and the common life-mode and "marriage contracts" they thereby shared.8 In other words they had a lot in common and they interpreted their working conditions using a similar frame of reference. The girls developed a strong us-and-them spirit and unity as a collective. The us-and-them spirit also meant that they had to live by the norms of similarity implied by the culture: be loyal and helpful, not try to attain individual advantages, be "female" in a caring sense of the word. The girls upheld this norm

⁷ Lysgaard (1967), Ve (1978) and Sörensen (1982).

⁸ Marriage contract here refers to the fact that they were married to men who were rather traditional in their masculinity. The men had typical working class jobs and were interested in male occupations, hunting, fishing etc. Homework was a female responsibility; he helped out but primarily devoted time to outdoor work, preferably together with other men. The contract can also be described as a life-mode, cf Jakobsen (1998).

system in daily interaction with the group, they corrected deviations from these norms and they endorsed and gave social support to "a true woman".

Among the nurses ("the sisters") the ideal type pattern was more complex. Characteristic was a form of corporate culture, based primarily on individuality and personality. They tried to form alliances with their subordinates but mainly with their superiors, the doctors. The sisters were different from each other in terms of life-modes – they represented various segments of the middle class – and struggles between cliques of nurses could be seen. Those who enjoyed the support of their superiors decided the daily work routines. These positions were however insecure and unstable. Since the nurses were divided between themselves they were on the one hand vulnerable to infiltration and rumours, but on the other hand the corporate culture was dynamic, prone to changes and, despite the internal split, a collective in a limited sense. As opposed to the girls' collective, the corporate group was built on the professional ambitions that united the sisters. That does not, however, mean that the corporate body lived up to the prerequisites of a collective. The sisters were more individualists than collectivists. They tried to attain individual goals and they were therefore active in various organisational matters. They however also protected each other if anyone was attacked for professional reasons. They were always sisters in that sense. The sisters were interested in "what" ought to be changed in the organisation, but they did not agree on "how" at the time of the study.

After this study was carried out, extensive rationalisations and reorganisations within health care have taken place. Let me therefore briefly describe these changes and the new set of ideas.⁹

An Organisation in Line with the Times

Rationalisations typical of the times have long been carried out in the health care sector. Already in the 1940s people were horrified at the great expense of health care. The solution was then found in the Tayloristic principles of differentiating and specialising the work. Work was to be divided according to principles shown to be profitable in industry already in the 1920s. Time studies were undertaken at the hospitals and the so-called round-system was introduced. The tasks best suited for round work were primarily the assistants' (later the assistant nurses') work tasks. For the nurses instead paper work, supervision, management and guidance became important tasks. Money could be saved if the health care workers were time-studied, low-skilled, cheap and exchangeable. The more expen-

⁹ Maybe we could talk of a new discourse in discussing the organisation.

¹⁰ Gustafsson (1987).

¹¹ Wendt (1998).

sive nurses could be reduced in numbers. To quite some extent, theoretically educated workers supervised the work from behind the windows of the office.¹²

When hospital work became centralised and rationalised, health care was also standardised all over the country. New expenditures were however sky-rocketing. One of them was the cost of specialist care. All the hospitals could not be specialised. From this followed a division of the hospitals into different categories during the 1960s. Normal hospitals, county hospitals and regional hospitals appeared, the latter the most specialised. But also these specialist hospitals now outgrew themselves; the number of specialities increased rapidly, as did the number of employees. Education was expanded at the regional hospitals and they became colossus supplying assembly-line health care.¹³

At the large specialist hospitals the inner work organisation was characterised by Taylor's principles of efficiency, i e specialisation, job splitting, coordination through hierarchy, limited areas of responsibility, top-down information, rigidity and rituals. This organisation was still more or less at hand in 1989-90, when I did my first study. It was an organisation where the doctors, the nurses and the assistant nurses all lived their separate work lives in the hierarchical order. They had their own worlds wherein they developed level-differentiated cultures such as the collective and the corporative culture described above.

Modern Organisational Models

The market for organisational models simply exploded in the 1980s. Just like with Taylor's principles, this continuously expanding market was created with a view to the private economy's need for competitive solutions. For health care the same set of models now came to be of interest. New management with an education in business administration entered the hospital boards. Privatisation and divisionalisation of hospitals were discussed and realised.

In *The Machine that Changed the World* the authors' claim that, in Japan, to produce similar goods as in the western world fewer employees are needed, the time of production is shorter, and less capital and less space are needed.¹⁴ Organisations could be lean when it comes to the number of subcontractors, employees, storage space etc. "Just-in-Time" delivery to the customer replaced the earlier system, which, with an ironic twist, is called "Just-in-Case". Downsizing and outsourcing became central buzzwords. In just a few years the employees met such phenomena as Quality Circles (QC), Time Quality Management (TQM), Time Based Management (TBM), Business Process Reengineering (BPR), Limitless Flow Organisations (Gränslösa flödesorganisationer, GFO), Learning organi-

¹² Evertson (1995) p 105.

¹³ Gardell & Gustafsson (1979), Gustafsson (1987).

¹⁴ Womack et al (1990).

sations, etc.¹⁵ The pace in the development of new organisational models (the fashion changes) is constantly increasing. The turnover increases and it seems as if we will soon speak of the model of the year.¹⁶

The most successful models are naturally also attractive for management. Management is held in high esteem in the models and the new organisations bring with them new means of control and power for management.

The Models Applied

Since my first study new organisational models have become visible in the health care organisations. As a result many activities within health care have been merged and personnel has been fired or relocated. Relevant here are mainly the altered relations between assistant nurses and nurses. At the particular care units there no longer exist any girls in work groups of their own since the work is carried out in pairs. This means that each assistant nurse together with a nurse make up a team and that they are tied to a particular doctor's patients (approximately 8), who are cared for by this team.¹⁷

Earlier the work was performed under a grant system, i e the different clinics applied for means and had a budget to keep to. Performance was seldom systematically checked in relation to the size of the means supplied. The doctors' professional calculations were rarely questioned. Nowadays a purchaser-provider split has been established, and the units get paid afterwards and according to performance. The unit (for instance the clinic) and the employer (the county) formally agree on what is to be done and at what cost. Parallel to this, management is trained in economics and leadership. The chief senior physicians are also trained in their new role as employer representatives; they can no longer hide behind their loyalties to colleagues and patients, which they used to do according to the hospital management. Individual pay based on performance, efficiency and competence is introduced.¹⁸

Assistant nurses can compare today's situation with how it used to be. For them, the changes have meant that they have continuous contact with "their" nurses as well as with the doctor. Earlier, when they worked in a collective of their own, they mainly had contact with each other. Today the girls are split up and separated in the team organisation and their closest fellow worker is a nurse. These, on the other hand, have gained more responsibility and more work tasks. They are expected to take an increased part in the care of the patients together with the assistant nurse whenever needed. Parallel to this they have more documents to handle, they have to keep a journal and they have to safeguard the quali-

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¹⁵ Abrahamsson (1998).

¹⁶ Björkman (1997).

¹⁷ Team is from now on only used in connection with multiprofessional teams.

¹⁸ Lindgren (1999).

ty of the care. The employees work different shifts to make sure that there is always someone to cover for those who are absent. The beds are used more efficiently through the coordination of various clinics' needs and thereby flexibility increases. The turnover among patients is higher and the time spent in hospital is reduced.

Let us now look more closely at the relations among and between assistant nurses and nurses and how these have been affected by these organisational changes.

The Departure of the Collective

In my first study, the sisters claimed that the girls had insufficient skills, were less committed to their work and lacked ambition.¹⁹ I interpreted this as an expression of the different worlds developed by the different work cultures in the "old" organisation.²⁰ The girls wanted to be autonomous and decide for themselves; they put up resistance when the sisters tried to enforce their knowledge and ideas on how to care for the patients. They had a collective culture to defend and to protect them, and they were proud of it.

Today, in the "new" organisation, when the assistant nurses no longer work with their old collective but together with a nurse, this cultural difference is looked upon as a personal lack of skills in the individual assistant nurse. The nurses think that:

"the assistant nurse, she also needs to be independent and able to plan the job and organise, because she has a big responsibility for the care and well-being of the patients. But I have to assume the medical responsibility, because the assistant nurse cannot take that. I have to, and I can take responsibility for all of it, and I do, but I cannot be directly responsible for all of it... there are assistant nurses who cannot do anything on their own, and that can be hard work."²¹

In the new, as well as in the old interviews, the sisters are those who worry about the girls' ignorance, lack of commitment and independence. Their statements are of course strongly related to the collaboration required in the organisation. Because of the organisation in pairs, the collisions between the old and the new norms have become frequent. The nurses look upon it as their task to "help" the assistant nurses up and out of the collective tradition. The nurses see themselves as administrators of the "correct" way of organising care work. To make the team effective they need to alter the ways of the assistant nurse – to reeducate her. The

²⁰ The "old" organisation will henceforth be used for the 1992 years' study, whereas the "new" organisation will be used for the study of 1999.

¹⁹ Lindgren (1992).

²¹ The thoughts of a nurse, cited in Lindgren (1992).

sisters act in good faith, there is no doubt about it. But what are the latent effects and implicit consequences for the assistant nurses who are the subjects of this?

In the old organisation the girls worked together and managed on their own, independently but under the guidance of a head nurse. In the work collective, help and protection from the group could be counted on. It did happen that this freedom was used for long smoke and washroom breaks, but these were also opportunities to support each other and share the pleasure of work. These opportunities are lost in the new organisation since the *nearness* between the girls no longer is at hand.²²

For the nurse however, the transition to team work meant a more independent position vis-à-vis their superiors. Parallel to this she is expected to take a more active part in the practical care of the patients, e g help the assistant nurse get the patients up in the morning and make the beds. The nurse thus today has a more direct insight into how the assistant nurse goes about her work (which used to be the role of the head nurse) and increased control of the whole caring process; in fact she sees herself as the true generalist today. Earlier the nurse was more of a tool subordinated to the head nurse. A situation which meant that:

"...we ran around a lot since we had all the patients in the ward to care for and we only knew a few details of each patient. You couldn't really answer any questions. Today, however, I can give detailed answers to all questions, which is very nice, and the relatives are satisfied."²³

Today the nurse has the general view of the situation and responsibility for her patients. It is for instance she who makes the plans when the patient is to go home. The assistant nurse, the nurse and the doctor are linked to each other in the hierarchical team whereas the chief nurse has been rationalised.

The nurses are positive to the new organisation. The assistant nurses however do not appreciate it to the same extent. They enjoyed the collective/their own group, but the team was said to be better for the patients. The assistant nurse and the nurse were supposed to work together in the mornings and in the evenings when the patients have to be lifted and moved. On that condition the assistant nurses agreed to the teamwork, but, they say:

"...we have seen that it doesn't work. In reality we assistant nurses make the beds alone, one here and one there (with their patients, the author's comment). The nurses have so much to do, distributing medicine, IVs and shots so they can't find the time. Like this morning, I made all the eight beds on my own, got all the patients up, while my nurse was busy with other things. So I don't think it is any good. At the moment we have patients here

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²² I wish to remind the reader of the collective's conditions: nearness, similarity and mutual interpretations of problems, Lysgaard (1967).

²³ Nurse, cited in Lindgren (1999).

who can walk when someone supports them, but if they can't do that, I couldn't get them up myself. Then I'd have to wait until the nurse comes. But above all I don't think it is any fun. It used to be more fun, when we worked together in the team. There are others who also think so."²⁴

The assistant nurses clearly miss the collective culture that existed in the old organisation. The division of work between nurses and assistant nurses has not been affected by the new organisation. The areas of responsibility are the same and the hierarchy remains. The assistant nurse performs the same work tasks as before, but today she has to work alone. The nurses understand that the assistant nurses have a boring time alone in the team, because:

"...the assistant nurses perhaps find it boring to make the beds on their own, that is the hard part of having patients who need a lot of care, that is when you realise that you just don't have enough time. On the one hand you have all the other tasks, medication, preparations, operations and documentation, all the contacts with the relatives and the doctors, so you have to have an assistant nurse who understands that all this takes time. Not all of them do, and that is when problems arise." ²⁵

Because of the work schedule at the particular unit, no constellation can last. The pair changes for both the sisters and the girls. Some of the teams work well and some do not. The nurses evaluate different girls as partners and the girls evaluate the sisters as partners. Which combinations work well? One of the nurses, who was part of starting the team work, claims that well functioning pairs have a history together.

"Those who remain of the assistant nurses after we started working in pairs, they think it is good. They think it is hard work sometimes, and it is, it can be too much. You could see that these people (the assistant nurses, the author's comment) really became more confident, grew, when we started working in pairs and they got more responsibility. They are really good, three of them are about to become nurses." ²⁶

The assistant nurses who were present when the team was introduced were often younger (often younger than the nurse in the team). Most of them have however been fired in the downsizing that later followed. The assistant nurses who finally came to dominate in the pairs have all quite a few years on the job.²⁷ Many of these have further been relocated from other wards within the county. In other words they have no experience from the first enthusiastic years with the teams. They have not "grown" with or on the job as team members. They have all left

²⁴ Assistant nurse, cited in Lindgren (1999).

²⁵ Nurse, cited in Lindgren (1999).

²⁶ Nurse, cited in Lindgren (1999).

²⁷ The principle of seniority was applied.

their souls in the former collective community and claim that "it was better before".

But even the few assistant nurses who have been part of the whole process are ambiguous to the meaning of the expression "grow with the work" for their own part. Note my italics in the citation that follows:

"If you need to be two to get the patients up, you try to be that because it is too hard otherwise. But then I ought to say that it doesn't always work, it depends on which nurse I am working with. It is different but with most of the nurses it works well. There are nurses who don't help out, but then you have to dare to tell them. Because we decided to work in pairs and then I shouldn't be working on my own, because it gets too heavy for us assistant nurses... I think it is more fun working in pairs because you get closer to the patient, I know more about the patient and her illness and medication. Earlier you had more patients and were more anonymous and it was easier to slip away then...now I have my patients and I know that this I have to do together with the nurse and if we don't, it won't get done...You are more alone at work now and there is the risk that you do things that you shouldn't do, like for instance lift a patient who is uncomfortable in the bed although you have nobody beside you. And when there is a lot to do you don't go and fetch anyone but you work a little harder yourself. The risk is that it isn't good for either the patient or for me. Otherwise it is probably up to you how much you work on your own. Some things I can do on my own, take tests, clean, dust, that I can very well do on my own...But the heavier things, that is when you have yourself to blame if you don't ask anyone for help. But we assistant nurses, we'd rather work on our own than ask for help. I have some pain in my shoulders and in my back, it is probably something you have to live with."28

Noticeable here is a kind of self-education that is quite opposite the one so aptly captured by Paul Willis.²⁹ Whereas Willis' boys, through arrogant behaviour and protest, came to remain in their original position, the assistant nurses accept the new demands on them and put the blame on themselves for not being able to grow with the new tasks. You really have to know how to behave when you no longer have your friends around or the collective norms to protect you. Beyond the collective you have to be able to dare say no, call for help or work a little extra yourself, because if you do not you are irresponsible and independent. There is no one beside you to help out. Nor can you slip away (to the washroom) and rest for a while. If you get worn out you also have only yourself to blame.

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²⁸ Assistant nurse, cited in Lindgren (1999).

²⁹ Paul Willis (1977).

Here the conditions of the co-workership become visible. Let me elaborate on this.

Entrance of the Co-worker

The new organisational models introduced the concept co-workers (*medarbe-tare*). In these models the traditional professional cultures and all special interests are seen as obstacles. The teams are therefore meant to establish something new, co-workers, who feel responsible primarily for the organisation and not the well being and status of the own group. The co-worker is the smallest unit in a corporate culture that comprises everyone.

The collective buffer culture has come to be associated with something lingering, something outmoded and old. The co-worker culture on the other hand is looked upon as progressive, forward looking and modern (post material and post-industrial). The co-worker is a prestigious concept in organisations which build upon teamwork, projects, broad skills and flexibility. It has become almost in bad taste to defend and look after the own group's interests. The well being of the totality, of the organisation as a whole, lies in everyone's best interests. In this we find the moving force of the new rhetoric and the co-worker fits nicely into this. Let us below browse through the sociological thinking and ask ourselves how these changes should be understood.

The Lonely Co-worker's Dilemma

The second study's interviews show that the assistant nurses miss the earlier support of the group and that they are faced with new demands on their professional role. They have to step out of the group and be more forward, help themselves, demand the nurses' help etc. Unless they learn this they will become worn out. How can we in sociological terms interpret the dilemmas of the lone co-worker? Sverre Lysgaard provides some of the answers in his theory of the collective.³⁰ According to this theory it is reasonable to interpret the growing co-worker/organisation culture as evidence that the technical-economic system is getting close to its ideal state.

What then does this mean? Lysgaard delineates the abstract organisation as a technical-economic system which all the employees are part of. To be a coworker in this system implies getting paid for your work, but also that you collaborate in making the organisation as profitable, viable and efficient as possible. The goal of the technical-economic system is increased profitability. The system is, in its abstract form, insatiate in its demands for employees' achievements, one-sided in its demands for efficiency and implacable in its demands for the partici-

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³⁰ Lysgaard (1967).

pation of the employees in the system. Because of these demands, in the ideal state all the human capital gets invested in the organisation.

The co-workers are however also part of the human system and people cannot be treated in just any way.³¹ Individuals are guaranteed certain rights and privileges in the culture and society that surrounds them. Besides guaranteeing rights, the human system also lays claims on the individual. The system creates expectations of growth and development; the individual is supposed to satisfy her own needs in agreement both with those closest to her and in accordance with the particular life-mode and gender contract. At the level of the ideal type the human being appears without limits, but the actual individual is always limited with regard to conditions, sex, her responsibility for others and her needs for security.

Here the motives for the third system, the collective, arise. Since the employees are limited, versatile and in need of security vis-à-vis the economic system, the collective is needed. The individuals need to establish a buffer between themselves and the technical-economic system. Those who are subordinated in the organisation experience the hardest pressure and therefore spontaneously organise a collective system, a group norm, behind which the demands can be defined and limited. In the old organisation the girls created, in line with Lysgaard's perspective, a room for the mutual establishment of the limits of work. At times even this buffer culture was insatiate, one-sided and implacable, but the costs in terms of personal denial were outweighed by what the group could contribute.

Lysgaard's model of the three systems is also dynamic. The relative strength between the technical-economic system, the human system and the collective is not once and for all given but develops and changes over time. It is also highly dependent on the organisation's surroundings and on alterations in the power relations on the labour market and in politics and economics. Today's emphasis on economic issues makes it reasonable to assume that today the technical-economic system is more viable than the collective system.

Can we find further partial answers to our questions regarding the lone team worker? I am reminded of the Hawthorne results. Among the many experiments in the Hawthorne study there are two of particular interest for my line of reasoning: The Relay Assembly Test Room and The Bank Wiring Observation Room.³² For the relay room six women were appointed who did not know one another and who were given a group piece rate which directly linked the individual's performance to the group's (earlier a group of 100 employees had had the same piece rate). All the tests, whether involving an improvement or a deterioration of the women's work environment (working time, breaks, dinner breaks etc) showed a positive influence on the productivity of the group. The women beat the

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³¹ The human system has a dual quality and has to be understood by looking at the power relations that exist between the sexes, i e the system establishes different norms for men and women, cf Lindgren (1985).

³² Asplund (1987).

production record when all the benefits, which had been gradually introduced, were removed in the final test.³³ Asplund notes that the women showed an almost pathetic willingness to perform progressively better and sums up the results by noting that they obviously were quite unable to set a limit to their work – why, I will return to below.³⁴

In the male group the results were different. The participants in the Bank Wiring Observation Room were studied on the spot without any changes in the work process. The 14 men showed a stable productivity level which was upheld by their group norm. Whoever deviated from the norm was punished, and this was particularly the case if someone produced more than the norm. We should add that because of the norm the men earned less than they could have. The researchers could thus conclude that the amount of pay was not decisive for performance – something else was, namely the group.

What then do these two experiments show if they are looked at in relation to the co-worker's dilemma? First of all, the girls in my old study can be compared with the men in the Bank Wiring Observation Room, i e the collective norm worked as the group's buffer against employer demands; the girls themselves set the limits. Parallel to this the new organisation's teamwork can be compared with the women in the Relay Test Room, because in neither case do we have a group but rather what Asplund calls an elementary community. Such a community is the result of a forced "group" which lacks history, where the participants are not similar and furthermore lack a mutual problem definition. Or, we could say that the elementary character of the social responsiveness was revealed.³⁵

It is not always wise or rational to be immensely responsive. Quite often it is, if not lethal, at least hazardous to your health. Experiences from many different situations make most of us suspicious and therefore we develop both our own and collective norms for how to react to our surroundings. In some instances, e g in an elementary community (which we end up in through no fault of our own), we lack the possibilities to see how the land lies. If we lack the opportunity to interact with others and in that way arrive at mutual interpretations, we easily slip into a one-sided responsiveness in relation to whoever pays attention to us, such as the researchers in Hawthorne. The Hawthorne results are in this way almost shameless in that they point to our utter exposure and vulnerability as human beings. The fact is, that when norms exist which delimit how responsive we are and to whom, actual experiences of the system have given rise to protective collectives. This implies that the dismantling of groups, the splitting up and relocation of the normative centres of the organisation, would be an attractive strategy for anyone who wishes to seize power, control and change things. As a way of thinking, the

³³ Ibid p 202.

³⁴ Ibid p 210.

³⁵ Ibid p 208 f.

Hawthorne results have influenced today's organisational models. In this perspective the seemingly harmless concept co-worker needs to be critically analysed and penetrated.

The Emptiness of Being a Co-worker

A condition for the system of co-workers is a weakening or disintegration of existing group cultures in the organisation. As a phenomenon, co-workership is blind to gender and class and perhaps even inhuman in that it fails to see the actual conditions which influence people's lives. To talk of co-workers implies talking of an ideal type in an ever changing organisation, i e an individual without a history, whose individual life-project is intimately tied to the workplace.³⁶ The co-worker construction is by origin limited to the goals and means of the work organisation. The co-worker, it is assumed, wishes to improve and develop through work and to look for success and confirmation solely in work. The coworker is alone and willing to compete. The co-worker becomes a sort of poststructuralistic prototype, self-evidently aiming for development, flexibility, mobility and continuous skill development in life. As a construction the co-worker has no actual life and no responsibility for other people. The relations between the co-workers can be compared to the characteristics of an opinion; i e the relations arise and spread at a mental collective level. New packages of thought sweep everyone along in these media-fixated times. They arise among persons who do not have any contact with one another, who do not have to see or listen to each other, who only constitute an audience.³⁷ Opinions cannot be compared to for instance traditions, because opinions lack antecedents and concrete origins.

But does the co-worker then exist? Naturally the answer is no, but in the health care organisation we can detect a similarity between the abstract and the concrete co-worker among some of the nurses: those who have their footing in the middle of the organisation, i e in the organisational space occupied by the middle class. Many nurses and their union representatives have, as mentioned earlier, struggled for more independent work roles and have thus had an interest in developing team-organised work, primarily to include the doctors. In their struggle for an extended professional space they have formed alliances with management. We could even dare say that they have been forced to embrace the technical-economic system to fight their prime opponents – the medical doctors with their monopoly over medical know-how and superior status in the organisation.

The nurses have focused on the agreeable side of the two-sided teamwork, the one that could also persuade the doctors to participate. The team creates opportunities and promises in the modern organisational models. The team is said to lead

³⁶ The thinking around life-projects is developed in a dissertation by Allvin (1997).

³⁷ Tarde (1901), cited in Asplund (1987) p 163.

to the dismantling of traditional work boundaries, to the establishment of cooperation and to furthering skill development across professional borders. In short, the need for buffer cultures will cease to exist since the technical-economic system has come to coincide with the human system.³⁸ The other, more problematic side to team work has been overlooked. The spokesmen and -women of the new organisation have underestimated the risks of subjecting the team workers to excessive demands from not only each other, but also from patients and employers as well, particularly in a lean organisation which has removed all its reserves. In such a context the co-workers become isolated and experience individually the implacable demands of the technical-economic system. This is most obvious among the assistant nurses who joined the team. They were picked from different wards and teamed up with nurses they did not know and who belonged to another professional group. For the assistant nurses the team therefore came to be comparable to an elementary community, or a constellation where the social responsiveness can be expected to be boundless. We would thus expect the co-workers to invest their entire human capital and be immensely responsive to whoever "sees" them. The assistant nurses are no longer seen by each other but by the nurses. These evaluate the performance of the assistant nurse in accordance with their own needs, i e an assistant nurse ought to deal with most of the patient care on her own. The assistant nurse on her part would rather work with a nurse who is available and helps her with heavy lifting and making the beds.

Are then the nurses as co-workers immune to the risks of the new organisational development? No, that is not my conclusion. Many nurses have certainly fought a winning professional battle, to some extent at the expense of both assistant nurses and doctors. But the nurses have also agreed to a largely unacceptable workload to get ahead. They have today an ever greater need of setting limits, in fact they actually need a buffer culture. Under the guise of what is "good for the patients", the team has increased the individual scope of responsibility, and an increasing amount of high-quality work has been squeezed out of fewer and fewer employees. The nurses have become overburdened in this process and have been left alone to carry a large responsibility, while power has become more and more centralised and attired in the language of technical rationality.

The co-workers are furthermore unable to create an interaction with each other which is concrete and rewarding in a sense typical of the old buffer cultures. A reason might be that the team not only appears as, but also is, an abstract community of joined professional roles. Between roles there is no actual responsiveness, no feelings of either comfort or discomfort and thereby no social support. Many co-workers, particularly the assistant nurses, become insecure due to demands on

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³⁸ Here I mainly think of the doctors' buffer culture and their professional ethic which up to now have excluded the nurses from any real influence in the health care system (Lindgren 1992 and 1999).

social skills, individuality and individual responsibility, and they fear that they will be held accountable for any mistakes they might make. There is an obvious risk that the co-workers of the team will get neither confirmation nor feedback in their daily work.

To me it seems as if the co-workership and the new organisational culture first and foremost are dominated by risks; the inhuman side expands in times of cut-downs. For the good side to co-workership to be developed, something else is required. In the strangling grip of insufficient resources, the norms of the co-worker culture become mainly formed by the implacable demands of the technical-economic system.

A Field Experiment in Human Burn Out?

Finally let me return to the phenomenon of the group as a collective buffer and the group as a team. The group as a collective may, as I have argued, be thought of as a buffer against excessive demands from the employer, colleagues and patients. But these groups today have been replaced more and more by different forms of multiprofessional teams. This is a positive development to quite some extent, but it can also be associated with social health risks. Among other things this organisational change gives rise to the lonely team worker's dilemma in today's greedy care organisation.³⁹

One theoretical interpretation can, however, be put forward finally. Lately our attention has been called to numerous reports of burn out among health care personnel. According to Asplund we could expect precisely this of an organisation which systematically eliminates the concrete sense of belonging to a group. Co-workership can, as has been shown, almost be compared with an opinion in Tarde's sense.⁴⁰ Important in this comparison is that it directs our attention to an abstract kind of social belonging. Burn out is thus coupled to a specific form of interaction with colleagues (and patients) which may result in emotional loss or emotional death.⁴¹ People get burnt out because they have no real feedback or support from their equals. In a work situation signified by a lack of common interpretations in the social interaction (abstract sociality), the social responsiveness becomes reduced and turned into its opposite, that is, asocial unresponsiveness. The background to this line of reasoning is built on the assumption that we can talk of abstract individuals in an abstract society. Furthermore it assumes that we can discuss the origins of a pure sociality and view the social responsiveness as concrete within the boundaries of a concrete sociality and abstract within an abstract sociality. Whenever the responsiveness is concrete, it gets constant in-

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³⁹ A much too lean organisation without any reserves can be labelled greedy. No matter how hard the personnel work they can never do enough (Kvande 1998, Lindgren 1999).

⁴⁰ Tarde (1901), cited in Asplund (1987).

⁴¹ Ibid p 144.

puts and changes continuously, i e there is no risk of burn out among those who are part of the interaction. Health care has increasingly, through the new organisational models and the dominance of the economic discourse over the caring discourse, developed in ways which further the abstract sociality at the expense of the concrete. In my studies I have shown how this occurs in the transition from concrete work groups to abstract teams and through the introduction of the prototype co-worker. In the groups that were built upon similarity and the definition of mutual problems, the concrete sociality dominated. The members established their own norms and the input of emotions was unlimited, for better or worse; you may argue in these groups but you will not get burnt out. In the latter – the teams – the members take on solely an artificial role and their patients are clients, costs and illnesses; here the sociality and the responsiveness become abstract, and a process of burn out together with feelings of guilt may get the upper hand.⁴²

A conclusion of this is that the organisation's concrete ability to "refuel" its members must receive attention for the problems of burn out to be uncovered. It is not merely a matter of more stress, more pressure or less time to rest, recover and sleep. Nor is it just a matter of securing more control, experiencing fewer demands and gaining social support from an appreciative management. It goes deeper than this: what is needed is the support of concrete relations with people who share the daily conditions at work, support of those who know the problems and with whose help the individual can set the necessary limits.

Eventually we need to ask whether this gigantic field experiment in abstract co-workership in the so delicate caring organisation ought to have been exposed to ethic examination before it was launched. At the present this experiment has to be regarded as a health risk project whose consequences we probably have only seen the beginnings of.

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⁴² Ibid p 173.

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What do we mean by "work environment"? Photographer: Rolf Adlercreutz, Tiofoto.

The Future of Work Environment Reforms Does the Concept of Work Environment Apply within the New Economy?

Michael Allvin and Gunnar Aronsson

With the economic crisis in the 1930s, and the world war following it, a general cease-fire was declared in the battle between work and capital. Antagonism gave way to a long and very profitable period of mutual back scratching, commonly referred to as 'the golden years'. This was a pragmatic period, wholly devoted to increasing the standard of living. During these years the work protection organisations in Sweden grew significantly. This expansion was not part of a union mobilisation or forced by state legislation. Rather, it was brought forth by the mutual commitment of the employer and employees to the problems concerned.1 Most of the protective measures introduced were directed against the immediate hazards of manual labour. The different measures were focused on particular hazards and their causes. The individual causes and causal relations were not always easy to detect but they were generally considered simple. Once the causal relation was detected, the protective measures could either be directed against the source of the problem or against the individual suffering from it, whichever was the most practical course of action. The work protection programs during these years were pragmatically rather than ideologically motivated. They were carried out with the purpose of saving lives and money (not always in that order). Although the employer and the employees had different interests and did not always agree on the necessary measures to take, they were equally aware of the consequences. Nor was it always easy to negotiate the terms of these measures, but the line of argument was in most cases pretty straightforward. Accidents and loss of lives caused delays and cost money.²

When the concept of "work environment" was framed in the 1960s it meant two things. First of all it meant taking a more comprehensive view of working conditions. Specific problems were no longer treated in isolation. It was recognised that problems interacted with each other and had a joint impact on the worker.³ This recognition suggested a more general approach to the afflictions of labour. As a consequence "the leaking valve", "the noisy fan", "the dangerous saw-blade" were all brought together as "work environment issues". As such they

¹ Tucker (1994).

² On co-operation despite conflicting interests during this period, see Thörnquist (2001).

³ Gustavsen & Hunnius (1981).

could all benefit from government funding, scientific research, legal treatment, decrees and legislative measures, etc. The introduction of a work environment concept thereby integrated the different problems of the work place into a whole. But it also changed their proportions and raised the level of abstraction. A safety measure was no longer merely a practical answer to a particular health problem. It was part of the great attempt to reform working life. This magnified perspective invited a pursuit for more complex as well as less obvious causal relations. Through this the protective ambition reached into other areas of work, previously closed to reformatory measures. In the 1970s management, work organisation, and the so-called psychosocial environment of work were gradually given increased attention as potential work environment issues. The reformatory ambition also extended beyond its traditional beneficiaries. Unlike the "work protection measures" against shop floor hazards, "work environment issues" were not limited to the working conditions of manual labour.

The other thing the concept of work environment meant was the exclusive focus on the environmental side of the various issues. The worker was considered to be at the receiving end of the problem and thus a victim of his or her working conditions. The individual, her abilities and behaviour, was thereby ruled out of the problem a priori. This exclusion was, in the Scandinavian more than in other countries, done for ideological reasons. The idea was to conform the working conditions to the worker and not, as it was argued, the other way around. The workers had a right to demand working conditions suitable to their needs. Furthermore, this right was not confined to the practical needs at the work place. Since the worker, or so the ideology claims, evolves as a human being and as a citizen through her practical participation at work, her needs as a human being and as a citizen must also be fulfilled through her work. In Sweden this ambitious goal was put in concrete form by a general program for "the Good Work", drafted and adopted by the Swedish Metal Worker Union in 1985 and further developed by the Swedish Trade Union Confederation in 1991. It was also endorsed through the Work Environment Act of 1977, and the law concerning the right of participation in decision-making (MBL) of 1976. Thus, "a link came to be forged between work environment and industrial democracy". 4 In the ideologically inflamed setting of the 1970s and early -80s, work environment issues were no longer merely about the particular health hazards of the shop floor; they were also about the future of democratic society. Subsequently, the whole work environment program gradually changed its direction. In the Work Environment Act of 1991 the aim was no longer to eliminate the hazards of labour, but to ensure the personal and professional development of the workers.

The inflation and politicisation of work environment issues were of course not the effects of the concept itself. Rather, the concept was brought forward by and

⁴ Gustavsen & Hunnius (1981) p 131.

interacted with the winds of change blowing through the 1970s. However, the concept was so empty to begin with that it almost insisted on being inflated. As long as work environment issues were concerned with preventing health hazards in the work place, the concept had a certain natural legitimacy. But when its conceptual applications ventured too far beyond the traditional work form of industrial labour, adding more and different working conditions to its field of responsibility, it became increasingly unmanageable, even irrelevant.

This became painfully clear when the work environment concept was expanded to accommodate the so-called *psychosocial* environment. This expansion was controversial from the start. There was a debate about what this environment was and how it was to be interpreted. Was it an objective feature of the environment that could be unambiguously diagnosed? Or, was it only distinguishable within the subjective realm of experience? The question was never really resolved. Rather, the different answers anticipated two equally problematic futures of the psychosocial concept. Those who advocated a subjective approach to psychosocial problems frequently had the social relationships within and between workgroups in mind. In practise, the subjective approach soon established workers and management as the principal environmental factor for each other. As a consequence, different problems of social interaction were observed: deficient group dynamics, inadequate leadership, social, sexual and ethnic harassment, etc. The diagnosis and even more so the therapeutic-like treatment of these problems were generally regarded as an unwelcome intrusion into the work site, an intrusion that alienated management and most of the manual workforce against the reformatory ambitions behind it.

The objective approach to psychosocial problems was no more successful. Its advocates were mainly interested in the organisation and structural framework of jobs. They were concerned about the restraining features and lack of sovereignty at work, particularly low qualified work. Identifying these features was a problem in itself. Persuading the workers that they were subjected to a restraining environment that was repressing their psychosocial development was another. The major problem, however, proved to be what preventive measure to take. Nothing short of a complete reorganisation of the jobs in question was required. But, to reorganise the individual jobs it was necessary to reorganise the production in its entirety, and to reorganise the production it was necessary to reorganise the company, and the reorganisation of the company was a question of management and strategic development. To really change the organisation of a single job, the whole company, including the top management, would have to commit itself heart and soul to the reformation of the work. Mere safety measures were clearly no longer enough; instead a change of attitude and general direction was called for. In this way the objective approach to the psychosocial environment often got caught up in exaggerated schemes leading nowhere. In the process it lost sight of the individual workers whose health it was entrusted to protect and, more importantly, they lost sight of it.

It is not unreasonable to suppose that the dwindling interest in work environment issues that we have seen in the Scandinavian countries since the 1990s is related to the propagation of their conceptual applications; a propagation which has been diluting their meaning and exaggerating their general applicability. Also, the politicisation of work environment issues made them highly susceptible to the political changes of the 1990s.

In this article we maintain that the conceptual propagation of work environment issues has passed its peak, and that its application within the flexible working conditions of modern labour is limited, if not pointless. An increasing number of jobs do not have a working environment; still more have trouble identifying one. This does not mean that the problems themselves have disappeared or become less urgent. It only means that they are to a lesser extent being identified and dealt with in the uniform and participatory manner typical of work environment issues. Instead, the problems are treated separately, not on a shop floor level and not necessarily with regard to the workers' perspective. To put it bluntly: the democratic reformation of work environment is being overtaken by a consumer demand for user-friendly artefacts. It is important to point out, however, that the flexible conditions of modern labour are not common to everyone on the labour market. They are probably not even common to most people. The tendency towards flexible conditions of work varies very much between jobs. Many jobs are still subject to traditional conditions. Even new jobs are adopting these conditions. Many more are experiencing minor changes in some of the dimensions of work. Others still are developing very flexible conditions. This diversity of working conditions is so apparent that we would call it another general tendency.⁵ Thus, the point we wish to make is that the diversity and flexibility of modern working conditions are reducing the relevance of the work environment concept as a general framework for reforms of working life.

What Exactly Do We Mean by Work Environment?

At first glance the concept of work environment seems pretty uncomplicated. The work environment is simply the environment in which we work. Already in this statement, though, it is obvious that the concept makes certain assumptions about work and the circumstances surrounding it.

First of all there are the assumptions following from the environmental concept. "Environment" is a spatial metaphor. The circumstances thereby referred to are the extended and organised qualities of space. This does not mean that work environment issues are only concerned with spatial features. The environment

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⁵ Härenstam et al (1999).

concept is as we said metaphoric. It does, however, refer to a surrounding reality, that is, an *external* reality. The mapping of this reality is what we may call *the theory* of work environment issues. The theoretical task involves the identification and isolation of individual factors and a demonstration of their effects. Apart from the more obvious conditions, knowledge of the work environment therefore presupposes scientific investigation. Science, however, is a quest without limits; the mapping and rearranging of the working environment is not. Since *everything* surrounding the worker is a potential work environment, the work itself must be relatively well-defined if there is to be a reasonable chance to investigate and control that environment. The first assumption of the work environment concept, then, is of a relatively well-defined job within a relatively well-defined set of circumstances.

There is also another assumption involved here. As a spatial metaphor the environmental concept relies on the Cartesian distinction between subject and object. Consequently, the work environment must be categorically *independent* of the worker. Take for instance your working hours. If you have the opportunity to set your own working agenda, that agenda is probably not considered to be part of your working environment. If, on the other hand, your working agenda is set for you, and all you have to do is to comply with it, that agenda is most definitely considered to be part of your working environment. This assumption coincides with another assumption. For the absolute distinction between environment and worker also follows the division of responsibility characteristic of wage labour. The employer is fully responsible for the working environment, but not necessarily for the worker. This means that the work environment unfolds out of the worker's perspective and is only restricted by the employer's responsibility for the means of production. This being so, the work environment concept also presupposes an employment relationship. We are primarily referring to the legal aspects of the employment relationship, as an agreement of mutual responsibilities and commitments between two opposing parties.

We are hereby entering what we may call *the practice* of work environment issues. The conceptual applications of work environment issues presuppose a certain practise. The practical task involves negotiating the terms for generating, accepting, treating and implementing the theory of work environment issues. To *identify* something as a work environment issue is to prescribe for it a formal and action oriented treatment. To get something *accepted* as a work environment issue is to have its alterations registered as a precondition for doing the work. Consequently, what is to be considered a work environment issue, and on the whole what is to be considered a work environment, is ultimately a question of negotiation between the conflicting interests of an employment relationship. The second assumption of the work environment concept, then, is of a negotiating order through which the work environment can be named and framed as a set of issues to do something about.

We see then that the theory and practice of work environment issues co-operate to determine the issues. Theory and practice presuppose each other. To treat and negotiate a problem that it is not possible to identify or isolate is as pointless as trying to identify a problem without hope of having it accepted and treated as such. If there is to be any point in talking about a work environment issue, it must be possible to identify and isolate it as well as to deal with it within a given order of negotiation. Hence, our conceptual understanding of a work environment presupposes a relatively well defined job with a set of relatively well defined conditions; conditions that, furthermore, may be treated within an established order of negotiation. Any attempt to broaden the concept beyond these considerations runs the risk of obscuring our understanding of it and, above all, of undermining the order of treatment that ultimately is the very purpose and legitimacy of the concept.

The Traditional Conditions of Work

Within what we tentatively may call "traditional work", there is usually no problem complying with these assumptions about the work environment concept. On the contrary, traditional work is well defined in almost all its dimensions.

It is, for instance, clearly defined in *time*. For over a century the working engagement has been precisely delimited and monitored by its working hours – not just of the day, but of the week, the year, and the life span as a whole. The working day itself has also been minutely scheduled, sometimes down to a fraction of a second.⁶ Traditional work is also unmistakably delimited in *space*. Since the beginning of industrialisation, the geographical location and extension of the workplace has been monumentally fenced off from the rest of society. Within the workplace itself a narrow and clearly defined workspace has traditionally been assigned to each task. There are also other demarcations within the workplace. The boundary between the office space and the shop floor is, for instance, generally unmistakable.⁷

Traditional work is furthermore regulated in its *organisation*, both horizontally and vertically. Managing the *horizontal* organisation of work has been the objective of industrial engineering since it was conceived. Whether it is technically controlled, like the Fordist conveyer belt, or standardised through operating procedures acquired by practice, the sequentially monitored labour process is generally the core of traditional work.⁸ Managing the *vertical* organisation of work has an even longer tradition. Traditional work is typically governed through a hierarchical division of responsibility.⁹ Beyond, or encompassing these four di-

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⁶ Blyton, Hassard, Hill and Starkey eds (1989), Contensou & Vranceanu (2000).

⁷ Fischer (1997).

⁸ Thompson (1983).

⁹ Perrow (1986).

mensions are of course the formal terms of employment regulating the rights and duties of work.

These regulations not only control the performance of work in time, space, and organisation. Their significance goes beyond the work place. By settling when, where, and how to work they also settle the opposite. By so clearly delimiting the performance of work they also define the activities that are *not* included in work. Non-work is what you do before and after your hours at work, and during the breaks. It is what you do outside the perimeter of the work place. It is what you do when you are not going through the procedures of the labour process. It is the decisions you make outside of your limited field of responsibility. Non-work is, to summarise it, what you do when you are not abiding by the rules of work. Together these rules define the acts of work, and thereby every act that is not a part of work. So, the more obvious these rules are, the more obvious is the distinction between work and non-work. In traditional work these rules were very obvious and so was the distinction between work and non-work. The reason for this was of course that traditional work was synonymous to wage labour. In wage labour you are paid to do a job, and to do a job is to abide by the rules of the job. This is what wage labour is all about: to be paid to abide by the rules of work. This is also the reason why these rules have been enforced with such harsh measures throughout the history of work.

Since the beginning of the last century, and especially during the post war era, the rules and regulations of work have become almost universally applied. This is due to the development of general technical artefacts and procedures, general agreements, statutory rules and regulations, etc. The consequence of this is that work has been established as an objective and uniform institution within society. It is objective in the sense of being independent of the individual performing it and the specific context in which it is performed. If one person leaves an employment another is hired on the same terms. Work is also a uniform institution in the sense that its conditions are common to most jobs. Even if the specific content varies between jobs, the formal conditions are shared between different jobs, different work sites, trades, market segments, even between different countries (if we restrict the argument to the Western and Protestant part of the world). Hence, you can change your job, work place, trade, and country, switch from the private to the public sector and still recognise the conditions of work as regulated in the dimensions specified above.

The point we are trying to make is that the conditions of traditional work are lucid and well defined. They are, furthermore, subject to negotiations between two distinct parties and certified in an employment agreement. The prototype of traditional work is of course industrial labour with its tangible conditions and sharp divisions of responsibility. However, the traditional conditions of work are, as we have argued, not restricted to industry. Up until the 1970s almost all jobs had these same conditions, or at least tried to enforce them.

The New Rules of Work

In the 1970s, and even more so in the 1980s, the traditional conditions of work and their applicability began to be questioned. Growing international competition forced industry into experimenting with alternative forms of organisation and management. A growing self-consciousness within white collar jobs, health care, and the rapidly growing service sector dissociated itself more and more from the industrial standard for work. New areas of work assumed new forms. There were many efforts, trends and tendencies proclaiming novel forms of organisation and management during these years. Looking back, some of these tendencies are more discernible than others. There was, for instance, a tendency toward a decentralisation of work organisation. The chain of command was decimated and the local division, the work group, and even the single individual were to a much greater extent expected to organise their own activities. 10 Associated with this was another tendency. Management was beginning to focus more on what was accomplished than how it was accomplished. In other words, the managerial focus was shifting from the procedure to the result. This is what Peter Drucker as early as the 1950s had called Management by Objectives.¹¹ A third tendency was that the scheduling of the working hours became more open and tasks could be located outside the regular work place. So, if a particular task allowed it, the individual worker could decide for herself when and where to perform the task.¹² The different buzzwords for this echoed through the 1980s: flexiwork, telework, telecommuting, homework, free hours, tele-cottages, mobile telework, etc. A fourth tendency was that the general agreements between employer and employees were getting less and less general. The employment agreements were becoming more specialised and individualised. Other kinds of agreement were also used more regularly: individual agreements, contract agreements, commissioned agreements, temporary agreements, short term agreements, consultant agreements, etc.13

To understand what these tendencies mean we must go back to the different regulatory dimensions of work described previously, for the tendencies indicate that the traditional regulations of work are gradually disintegrating. The formerly absolute regulations of time and space for work are relaxing. Instead of having a fixed schedule to obey, the individual has to decide for herself when, how often, and how much she must work. Instead of having a fixed work place to be present at, the individual has to decide for herself where to perform a specific task. The decisions involved may not be that hard to make or have far-reaching consequen-

¹⁰ Brooke (1984).

¹¹ Drucker (1979).

¹² Jackson & van der Wielen eds (1998).

¹³ Tregaskis, Brewster, Mayne and Hegewisch (1998).

ces. But a decision is nonetheless left to the individual, thereby presupposing a personal involvement and, subsequently, a consciousness of one's responsibility.

Management is also changing its character from a direct monitoring of performance to an almost visionary guidance. Without a fixed work program to follow, the individual has to initiate, define, plan, and take responsibility for carrying out the assignment herself. Assignments are also becoming more purposeful and goal-oriented and are more and more taking the form of "projects". Furthermore, without an explicit administrative hierarchy to abide by, the individual will have to seek out, establish, and maintain the necessary social contacts herself. As a consequence the administrative structure of work is becoming more informal, almost taking the shape of a "social network". Now, all these tendencies add up to the more general tendency of work being deregulated. We may of course be stretching the argument and pushing the conclusion a bit. The general tendency is, however, quite clear. The regulations of work are becoming more and more *flexible*, in the sense that the expectations on the worker to define, structure, and discipline her own performance are increasing. 15

Unlike the stable form of traditional work, the form of modern work is therefore becoming increasingly dependent on the individual worker performing the job and on the context in which it is performed. It is becoming increasingly harder to identify and delimit the work itself, and consequently, even more so, the working environment. For many jobs the externally organised conditions tend to drift into the worker's head, so to speak. The formerly overt and invariable performance is replaced by personal initiatives, interpretations, planning, and social contacts. Such conditions, more and more necessary for modern work, are not possible to unambiguously define and isolate. Furthermore, when the previously clear distinction between work and non-work is getting blurred so is the responsibility of the employer, and thereby the front line between employer and employee. This means that the conditions of modern work are in various degrees withdrawn from the responsibility of the employer and the established order of negotiation between the parties of work.

When the preconditions of work do not appear in the form of an independent environment but in the form of personally structured abilities, there is some validity to the claim that there *is* no working environment in existence, at least not in the ordinary sense of the word. As we have said before, this does not mean that the conditions of work or the problems connected with them have disappeared; they have just changed their form. The problems are just not identified, treated and corrected in the uniform and participatory manner appropriate to work environment issues. Consider for instance the act of developing and adapting pro-

¹⁴ Allvin, Aronsson, Hagström, Johansson, Lundberg and Skärstrand (1998).

¹⁵ Felstead & Jewson eds (1999).

¹⁶ Allvin, Wiklund, Härenstam and Aronsson (1999).

grams and interfaces for computers, arranging a work place for telecommuting within the home, organising the personal agenda, building a professional network, accommodating professional travellers at airports and in aeroplanes, or coping with the expectations of customers, clients, contractors, and co-workers in large projects. These are all activities intended to adjust the conditions of work to the worker. The fact that they are not necessarily done by the employer or after negotiating the terms with a local safety representative does not mean that the conditions involved are not developed or adapted to the user. Nor do these adaptations follow from a reformatory ambition. The adaptation of work to the worker is not necessarily done as part of a coherent strategy. Rather, it is done for many different reasons: commercial, strategic, aesthetic, family, personal, even unconscious reasons. Some reasons are in agreement with each other, others in conflict.

There is also the example of "burnout". In 1974 Herbert Freudenberger observed a gradual energy depletion and depression among young idealistic volunteers working at a "Free Clinic" for drug addicts in New York. Almost simultaneously Christina Maslach observed the same emotional exhaustion among health care workers in California. They both, independently of each other, called the syndrome "burnout" and described it as a loss of motivation.¹⁷ Unlike being overworked or worn out which follows from working too hard for too long, burnout presupposes a personal commitment. You just don't work a lot; you try to achieve something that is important to you. It is symptomatic that the phenomenon was first observed among human service professionals. A personal commitment to the relationship with the patient or client is an intrinsic part of the job. It is, however, also symptomatic that the phenomenon has since been spreading among the many newly created jobs of the so-called New Economy. Many of these jobs have very flexible working conditions and rely heavily on the personal abilities and commitment of the individual worker. The question then is whether burnout is to be considered a work environment issue or not. Being overworked probably is, since the independent cause most likely can be established in terms of the assigned or expected work quota. A more appropriate work quota can then be settled in negotiation. This may pose a lot of practical problems. In principle, though, the cause of the problem and the responsibility for it are reasonably clear. This, however, is not the case with burnout. Since the burnout syndrome presupposes a personal commitment, there is no independent cause to the problem. Nor is it part of the employer's responsibility. A remedy to the problem can, therefore, not be settled in negotiation. There may, of course, be things to do with the environment that will ease the problem, but it cannot be engineered or negotiated away. So, the answer to the question is that burnout like many other problems of modern labour can not readily be identified as a work environment issue.

¹⁷ Shaufeli & Enzmann (1998).

The Limitations of the Work Environment Concept

We have maintained that the forms of work are not just becoming more flexible; they are becoming more heterogeneous as well. This means that jobs are becoming more adapted to their particular requirements, and subsequently more particular in their appearance. For that reason it is becoming increasingly difficult to speak of "work" in general. As a consequence, it is also becoming increasingly difficult to speak of "work environment" in general.

The work environment concept, as already maintained, presupposes work as being relatively well defined and located within a relatively well defined set of circumstances that are subjected to an established order of negotiation. Since this is no longer the case with a growing number of jobs, we should expect the field of possible conceptual applications for work environment issues to be decreasing. This means that within the labour market as a whole we will encounter jobs that are severely afflicted by work environment problems and those that are not. This division may, for instance, manifest itself in terms of an inequality in the statistics on work environment issues. Some jobs will appear to have more problems than others do. These jobs will probably be jobs that conform well to the assumptions of the work environment concept. But this does not mean that the jobs that do not appear to have any work environment problems are without problems. These are probably jobs that do not conform well to the assumptions of the work environment concept. As a consequence their problems will not turn up in the statistics. Instead, they will be sorted and identified within other more or less adequate categories such as: personnel problems, harassment, difficulties in co-operating, family problems, personal problems, workaholism, stress, burn out, problems with the computer, system failure, as well as, of course, a host of less user-friendly artefacts. Unlike work environment issues these problems are not necessarily part of an independent work environment. Nor are they easily subject to the employer's responsibility or to the established order of negotiation between the different parties. As a consequence they will not be treated in the uniform and participatory manner reserved for work environment issues. Nor will their treatment ever be co-ordinated through a comprehensive strategy to reform the working conditions. Rather, they will be treated as irritating but isolated events, to be dealt with as they appear.

The tendency towards more flexible conditions of work, then, will increase the number and types of problem involving the individual worker's abilities to cope with her work and fellow workers. While the person-related problems are increasing, the work environment issues are withdrawing to the domains of the labour market that have retained more traditional conditions of work. As a consequence, the problems of working life are only to a limited extent going to be identified as work environment issues. When they are, it will mainly be within the more traditionally organised domains of the labour market. Given the kind of jobs still

maintaining a traditional organisation, it may be predicted that problems of the work environment will mainly be an issue for the lesser qualified jobs.

Projecting the idea of an independent and problem-ridden work environment on the labour market as a whole will therefore give the impression of a divided labour market, and of a growing inequality of working conditions. There will be the good jobs, held by highly qualified workers working their computers and travelling business class. Then there will be the bad jobs, held by poorly qualified workers doing manual labour in a very restraining environment. The bad jobs, of course, will have all the problems. Furthermore, the causal relationship between the visible working conditions and the problems will be self-evident. This familiar partitioning of the labour market in the antagonistic categories of "upstairs" and "downstairs" is easily acknowledged since it is well suited to the political institutions and administrative tools of industrial society. It will, however, blind us to the diversity of problems troubling modern labour.

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