Lost and Found: Social Innovation and Occupational Health and Safety in Organizations

Zanko, Michael

University of Wollongong, School of Management and Marketing, NSW 2522, Australia

61 2 4221 3749
Email: mzanko@uow.edu.au

Dawson, Patrick

University of Wollongong, School of Management and Marketing, NSW 2522, Australia and University of Aberdeen, Business School, Aberdeen AB24 3QY, U.K.

Email: patrickd@uow.edu.au

ABSTRACT

Despite the wealth of material on occupational health and safety (OHS) there remains an ongoing tragic toll on workers. Governments of the more industrialised economies have sought to address this problem through launching a raft of legislative changes. However, implementation of these mandates generally rests with management and whilst procedural regulations are broadly adhered to, more innovative solutions to OHS issues at work have been absent. In this paper we provide a brief overview of developments, debates and studies in OHS and through drawing on the concept of social innovation forward a more holistic organizational model of OHS management.

Keywords

Social innovation, occupational health and safety (OHS), employee well-being, workplace change.

INTRODUCTION

The enormous, tragic and largely unnoticed problem of workplace injuries and deaths continues to beset countries around the globe. In response, many governments have implemented reflexive, tripartite OHS (occupational health and safety) regulations that have often conferred primary responsibility for OHS on employers' management in organizational workplaces. However, traditional thinking and reactive policies have limited the development of novel solutions to improve the well-being and health of people at work. The focus has been on technical and procedural solutions rather than on the social elements of innovation and change. In this paper, we seek to examine the place of social innovation in the development of a model of occupational health and safety management in organizations. We commence by considering the emphasis in industrial production on the organization and control of work in the push for ever greater performance (and profits), often at the expense of the well-being of employees at work. We then turn attention to some of the work that has been conducted in the fields of work psychology, industrial relations and the sociology of work. The growth in interest in the new and emerging concept of social innovation is then considered,

from which we forward a more holistic model for improving the conditions and well-being of employees in work settings. We conclude by calling for further research and consideration on the practical management of OHS rather than the continual reliance on legislative change that has important, but limited ground-level implications for well-being and social improvement.

INNOVATION AND ENTREPRENEURSHIP IN THE DRIVE FOR FINANCIAL GAIN

Since the industrial revolution, innovation and entrepreneurship have largely been linked with the translation of new ideas and ways of doing things into commercial viable products or services. Financial gain has been at the forefront of innovation and change with little regard to the plight of workers and the health risks of working long hours in poor working environments. The main focus was on how to best structure organizations and make effective use of machinery in the drive for increased profitability and company profits (see, Rose, 1978). The new industrial entrepreneurs used their prerogative to decide the type, speed and direction of change and were often authoritarian in their approach (Dawson, 2003: 26-28).

With the growth of factories, new methods for organizing work were adopted which followed the early division of labour principles put forward by Adam Smith (1776) in his book *The Wealth of Nations*. Smith used the well-known example of pin making to demonstrate how through distributing tasks to workers (an employee would constantly perform one simple task rather than doing all tasks required to make a pin) output could be significantly increased. Taylor championed the application of the scientific method to the study, analysis and problem solving of organizational problems. He believed that through the systematic study of work it would be possible to identify (taking into account such factors as, the tools used, physical characteristics of workers, physical motions employed, time taken and the type of material or machine being used) the best way of performing a task. Taylor argued that this information could be used to redesign organizational structures to ensure that employees worked to their full capacity. Although there is considerable debate on the extent and uptake of scientific management, Taylorist forms of work organization can still be found in various guises throughout the industrialized world and his principles have further influenced the development of change theories. For example, some of the problems associated with Taylorist forms of work organization have been tackled by human relations theory and the more participative change strategies advocated by the field of organizational development (French and Bell, 1995). In other cases, some change initiatives such as, Business Process Re-engineering (BPR) (Hammer and Champy, 1993) have been accused of simply re-introducing a technology-mediated form of Taylorism based around the enabling characteristics of new information and communication technologies. In the words of Hugh Willmott: 'the silicon chip plays an equivalent role in BPR to that performed by the stop watch in Scientific Management' (Willmott, 1995: 96).

This approach to industrial engineering and the design of work has largely ignored or paid lip service to the longer-term occupational health and safety implications. Although there are examples of innovative workplace change arrangements that have sought to improve conditions of work (most notably in the Scandinavian countries), many of these have been short-lived, exceptional or largely focused on problems of ergonomic design (see Bohle and Quinlan, 2000). Moreover, the work of Myers on industrial fatigue was influential in highlighting the need to improve conditions at work (Myers, 1929: 14), as were the Hawthorne studies in drawing attention to the importance of social processes to the lived experience of work to conducted (Roethlisberger and Dickson, 1950), and yet, active concern with occupational health and safety has largely been tackled by various forms of legislation rather than with the active development and implementation of social innovations to improve the well-being of employees in work settings (Bohle and

Quinlan, 2000). In the section that follows, we briefly examine some of this work and in particular, we focus on research in the areas of work psychology, industrial relations and the sociology of work.

OHS: WORK PSYCHOLOGY, INDUSTRIAL RELATIONS AND SOCIOLOGY

Organizational and industrial psychology, occupational psychology, industrial relations and industrial sociology have all contributed to our understanding of the structure and operation of organizations and the reasons for workplace injuries and causes of occupational illness. As noted above, an early subject of much discussion and debate were Taylor's (1911) principles of scientific management, which sought to impose a tight system of work organization that controlled worker behaviour whilst securing improvements in productivity. This approach to industrial engineering was geared to put pressure on workers to produce their highest levels of output through a differential piece rate system (see, Clegg, et al., 2005:18-22), with little or no consideration being given to longer term occupational health and safety implications. This form of work organization has been widely adopted by business and criticized by scholars from many fields (see for example, Littler, 1982). During World War I, studies by psychologists found that highly motivated female employees working in munitions factories were not achieving the levels of productivity expected (Rose, 1978). Although the initial focus of the research was on aligning the abilities of women to particular jobs and in developing appropriate training programmes, the researchers soon discovered that the lack of rest periods (fatigue) and the repetitive nature of the job (monotony) were factors influencing the quality and quantity of output. The commonly held view that if workers put in more hours then production would increase was questioned, with studies discovering that long hours increased absenteeism, accidents and scrap, and that a drop in hours from ten to eight over a six-day week actually increased net daily output (Rose, 1978: 71).

In 1921, C.S. Myers, a teacher at Cambridge, secured funding to set up the National Institute of Industry Psychology (N.I.I.P.). Throughout the interwar period, the institute grew and engaged in a number of studies on fatigue that argued that the notion of physiological fatigue be replaced with that of industrial fatigue. In researching work environments, they also examined temperature, air flows, lighting and the like, in seeking to develop healthier work environments for employees (Myers, 1929: 14). In America, studies conducted at the Hawthorne Works of the Western Electric Company under Elton Mayo were used to show the importance of democratic leadership, of the need to encourage employees to participate in decision-making, and of the importance of consulting and listening to employees in developing a harmonious workplace that maximised productivity (see, Roethlisberger and Dickson, 1950). Although later critiques, such as Carey (1967), questioned the design of the study and the methods for collecting and analysing data, the study remains an influential landmark. This theory has influenced research in work psychology for several decades, resulting in far greater recognition being given to the social needs of employees (see, Bohle and Quinlan, 2000: 84).

There are a number of psychological studies in which, work-related stress is identified as a major cause of psychological and physical ill health (see for example, Kemery et al, 1987). Typically, this research has identified the individual and organisational contributors to stress and drawn distinctions between the more readily recognised medical symptoms that can be diagnosed by a medical practitioner, and those that are less readily identifiable but are reported by employees in stressful situations, such as, anxiety, insomnia, irritability, anger and fatigue. There has been a movement away from solely focusing on the individual to a concern with the individual and the working environment in which they find themselves. According to Bohle and Quinlan (2000: 88), work psychology has tended to focus on a small number of problem areas in which there primary interest

has been with the individual - in terms of cause and prevention - rather than with the social group or work environment. From this psychological perspective, it is not the system that is at fault, but the individual who fails to take responsibility for their health and safety. Solutions are aimed at the individual, promoting individual coping strategies and stress management guides that support each employee to best manage their own circumstances. Although, theories from work psychology recognise the influence of the environment and working conditions on injury and illness, their focus has largely remained on individual behaviour. Consequently, the driving question is how can we get individuals to change their behaviour to reduce injuries at work and to improve their health and productivity? The main causes are seen to rest not with the system of work organization, but with the behaviour of individuals and for some commentators, these approaches are seen to support a 'blame the victim' rather than 'blame the system' approach to occupational health and safety (Glendon et al, 2002; Rechnitzer, 2001):

Within the area of industrial relations and the sociology of work and health, far more attention has been given to issues around the organization and control of work, and the involvement of unions and employees in occupational health and safety. In turning attention away from the highly individualised notions of health, these studies draw attention to the context in which behaviour patterns occur and are reinforced, and to the importance of social relationships. The failure of prescriptive programmes – based around the individual – to effectively deal with problems of occupational illness and injury and the tendency to see the fault as resting in the behaviour of the individual rather than social factors, highlighted the need for broader sociological research (Bohle and Quinlan, 2000).

A classic interest of sociologists is with the distribution of wealth, class and occupation (Clegg and Dunkerley, 1980) and this concern has spilled over into comparative studies into health and mortality rates among different social classes and occupations (see, Davis and George, 1988; Bohle and Quinlan, 2000: 101-111). Johnson (2004) for example, argues that social class is a strong predictor of the propensity to suffer from chronic and other forms of health related diseases. He notes how the upper classes not only live longer, but tend to be healthier (suffer from less illness) during their lifetime. There is a type of health gradient that has been identified that crudely demonstrates how health deteriorates with lower social status and conversely improves among the higher social classes (Marmot et al, 1978, Lynch & Kaplan, 2000). Link and Phalen (1995) claim that social class is a fundamental determinant of health. Those in lower social classes are seen to have less access to good educational and health facilities, are more likely to live in areas that may have poor environments (housing, air pollution, heating and so forth) and ones in which violence and the availability of drugs is common (Evans & Kantrowitz, 2002). This broader sociological perspective has also been applied to the study of illness and injury in the workplace. These studies spotlight problems with conventional models of occupational health that have failed to achieve their intended objectives of alleviating the causes of workplace injury and illness (see, Dwyer, 1991). Criticism is levelled at prescriptive attempts to tackle occupational injuries through programmes that seek to modify individual behaviour. Attention is focused on the social causes of ill-health and injury and in particular, on patterns of work and forms of work organization (Dwyer, 1991). The negative health effects of non-standard work patterns, including shiftwork and extended hours have been well documented and are now regularly taken up by groups that represent employees, such as, trade unions and other work associations. For example, the Workers Health Centre, established in Australia in 1976 to improve health and safety at work, lists in its facts sheet some of the health implications of extended hours and shiftwork. These include: increased heart disease, gastric ulcers and gastro intestinal problems, social problems and minor psychiatric disorders, sleep disorders and increased fatigue and increased error rates and accident rates (Workers Health Centre, 2004).

Research in industrial relations and studies by sociologists have also shown how the system of work organization can be a major cause of occupational injury and employee ill-health (Dwyer, 1991). Work schedules, payment systems, technical, bureaucratic and personnel control systems, have been identified as elements that need to be taken into account when studying and making policy decisions on occupational health and safety at the workplace. For example, Bohle and Quinlan (2000: 104) illustrate this point well in their example of payment systems based on production bonuses where the use of safety devices, such as gloves and glasses, can restrict output potential and consequently, workers may choose not to wear such devices in order to secure a production bonus. Since the 1970s, the right of workers to know the hazards that they face at work has been increasingly accepted and embedded in OHS legislation. In facilitating employee involvement, ensuring appropriate training and providing industrial back-up, unions have played a key role and historically, matters of OHS have been the centre of a number of industrial disputes. Bohle and Quinlan (2000:441) show how over 20% of disputes in Australia were related to concerns over the physical working conditions. Whilst recognising the continuing importance of OHS to the union movement, they claim that with the shift in industrial relations regimes and the weakening of unions, the ability of unions to ensure safe working for their members and negotiate improvements is likely to be severely constrained. They conclude that

> The efforts of unions to negotiate improvements in OHS directly have met with varying degrees of success both over time and in relation to different countries. Reasons for these differences include the relative strength of the union movement, the specific regulatory apparatus governing collective negotiations (including the attitudes of industrial tribunals, governments and courts), the response of employers and the priorities and strategic preferences of unions (Bohle and Quinlan, 2000: 439) .

Whilst sociological studies of health and illness and industrial relations research have redirected attention away from psychological determinants towards social causes, this has resulted in a tendency to overlook the value of more multi-disciplinary approaches to understanding OH&S. There is certainly an argument to be made that neither approaches are sufficient by themselves, as studies that take a psychological or sociological perspective can both provide useful and complimentary lens from which to further identify, recognise and explain issues around health and safety at work. As Glendon, Sharon and McKenna (2006:2) usefully summarise:

> As part of the general critique of technical approaches to OHS, including the medical model, and ergonomics for its individual approach, managerial orientation and apparent unwillingness to consider the broader picture, Bohle and Quinlan (2000) are similarly critical of psychologists' contribution to OHS as being overly focused on individual factors in accident causation, having a management orientation and developing victim-blaming models. Sociologists on the other hand blame the system, perceive injury as inherent in the nature of work, and address conflicts of interest as a fundamental aspect of OHS. Compartmentalizing the contribution of various disciplinary areas risks labelling each too rigidly and ignores the potential for a more eclectic approach.

Bohle and Quinlan (2000 110-111) also indicate their surprise that little attention has been given to the broader socio-political context and the effects of organised labour resistance and state intervention on occupational health, or to the impact of gender relations and in particular, of sexual harassment and the sexual division of labour. Furthermore, Stephen Deery and colleagues (Deery et al., 2000) draw attention to the intensification around stress and anxiety inducing 'emotional labour'. They highlight how employees are increasingly expected to display emotions that comply with organizational expectations. In their call-centre study,

they show how the greater the incidence of having to deal with abusive customers the higher the incidence of absenteeism (Deery et al, 2000). Thus, whilst sociological studies have usefully contributed to our understanding of social causes, there remain areas that require further research and investigation and approaches that can bridge the psychological and sociological divide might further our understanding of OHS management in organizations. We contend that social innovation may prove a useful approach in linking some of the previous concerns into a more holistic model in the management of occupational health and safety in work settings.

THE EMERGING CONCEPT OF SOCIAL INNOVATION

There is a growing interest in the emerging concept of social innovation and as with all new development, there is a lot of confusion and ambiguity around what we mean by the term 'social innovation'. At the time of writing, the Wikipedia defined social innovation as follows:

> Social Innovation refers to new strategies, concepts, ideas and organizations that meet social needs of all kinds - from working conditions and education to community development and health - and that extend and strengthen civil society. Over the years, the term has developed several overlapping meanings. It can be used to refer to social processes of innovation, such as open source methods. Alternatively it can be used for innovations which have a social purpose - like microcredit or distance learning. The concept can also be related to social entrepreneurship (entrepreneurship isn't always or even usually innovative, but it can be a means of innovation) and it also overlaps with innovation in public policy and governance. Social innovation can take place within government, within companies, or within the nonprofit sector (http://en.wikipedia.org/wiki/Social_innovation)

There is rising public support for this emerging concept of social innovation. In January 2008, a UK initiative for web-enabled social innovation was born in the upstairs room of a London pub. 'The result was a decision to set up Netsquared in the UK, loosely based on the US Netsquared conference and community, which has now led to a host of meetups and other activities through which geeks and activists find common cause and do good stuff for social benefit' (http://www.designingforcivilsociety.org/2007/10/new-uk-initiati.html). The Centre for Social Innovation at Stanford University aims to support social innovators in providing knowledge and expertise to facilitate their endeavours to champion social change. On their web site, they provide a range of resources and information on conferences, conversations, papers and discussions around a range of topics including: socially responsible business activities, non-profit organizations and issues, such as, how to develop socially and environmentally responsible supply chain practices that can lead to overall improved business performance and strengthen organizations (http://www.gsb.stanford.edu/csi/). For this group, social innovation is more than invention; it is about social change that creates large-scale lasting positive effects. From these sources, it is clear that social innovation is a wide ranging and developing concept that embraces improving the health and well-being of people in society. This broad definition covers all areas of life including the plight of people in war-torn countries, nations suffering from draught, famine and political unrest, the poor and unemployed living in socially deprived areas through to concerns of family violence, non-profit organizations and the production of good and services that are not harmful to the environment. Charles Handy talks about the rise of the new philanthropists (social entrepreneurs) who do not simply donate money but get actively involved in tackling the social needs of the less fortunate. In outlining the work of four such individuals, Handy describes how Jeff Gambin, a restaurateur in Sydney, gave up his up-market businesses to cook for the homeless every night and who feeds 500 people each day (http://sic.conversationsnetwork.org/shows/detail3259.html).

With such a broad remit, it is important to clarify our particular focus and concern, which is with social innovations in the workplace that address issues of occupational health and safety. Essentially, our concern is with new models, concepts and ideas for understanding OHS that can lead to potential improvements in the safe working conditions and health of company employees. As such, our attention is on the process of social innovation in OHS within companies. We argue that despite various governments' efforts at publicly regulating through assigning primary responsibility for its control to employers and their managers in organizations, the major problems of industrial death, injury and disease continue unabated. Formal regulations and bureaucratic procedures reflected in organizational documents that espouse a commitment of OHS, have done little to improve organizational performance in this area. Support for bureaucratic OHS systems has created what Weber (1958) might refer to as the *iron cage* of control that limits outward thinking and organizational innovativeness. For example, the early work of Zaltman, Duncan and Holbek (1973) highlighted how the decision to introduce a new system was different to putting an innovation into use. Similarly in OHS, systems are adopted but it is lack of research interest and understanding in how they are used and how they could be used, that is missing. There is a failure of interest and understanding and in consequence, a lack of innovativeness in seeking ways of improving OHS at work.

Towards the promotion of innovation and innovative approaches to OHS, there is first a need to identify and prioritize OHS as problem that needs tackling. Social innovations do not occur as a single event but represent complex political processes among a range of individuals and groups. As Bessant and Tidd (2007) continuously emphasise in their book on *Innovation and Entrepreneurship*, innovation does not simply happen, it is a process which needs to be organised and managed. For example, Walker (1977) highlights how those who were able to shape the U.S. legislative agenda influenced how new safety laws were passed by the U.S. Senate. This indicates that there is first a need to spotlight and draw attention to the importance of the issue, before considering how to progress. The process of social innovation in OHS emerges over time from agenda setting and some initial conceptions and considerations, through to the search and assessment of options, implementation and adoption and use, towards the more routine daily operation of new workplace practices (Dawson, 1994: 45-6). This process twists and turns, there is a need to transform new ideas into reality, to draw on different resources and knowledge in developing a clear direction for change, to communicate and debate change to gain support, enthusiasm and commitment, and foresight and energy to follow through in the implementation and use of social innovation in OHS (Bessant and Tidd, 2007: 310).

Another element worth considering in our examination of social innovation and OHS, is the issue of the 'equality in the consequences of innovations' (Rogers, 1995: 429-422). Although Rogers' concern is with innovation in general, he usefully demonstrates how innovations can have desirable-undesirable, direct-indirect, and anticipated-unanticipated effects. Even with the best intentions behind change – often associated with the notion of social innovation - change can have consequences that are not foreseen and may worsen the position and well-being of those they were seeking to improve. In using a case illustration from the anthropologist Lauriston Sharp (1952), Rogers draws attention to the unanticipated and dire consequences of the adoption of steel axes by a tribe of Australian aborigines. The nomadic trip of the Yir Yoront used a stone axe as their central tool for building shelter, providing food and fuel; it was a symbol of masculinity and respect for elders. With the intention of improving the living standards of the Yir Yoront, missionaries distributed steel axes equally to men, women and children. As Sharp (1952: 92) notes:

The result was a disruption of status relations among the Yir Yoront and a revolutionary confusion of age and sex roles. Elders once highly respected, now became dependent upon women and younger men, and were often forced to borrow steel axes from these social inferiors…The religious system and social organization of the Yir Yoront became disorganized as a result of the tribe's inability to adjust to the innovation. The men began prostituting their daughters and wives in exchange for the use of someone else's steel axe.
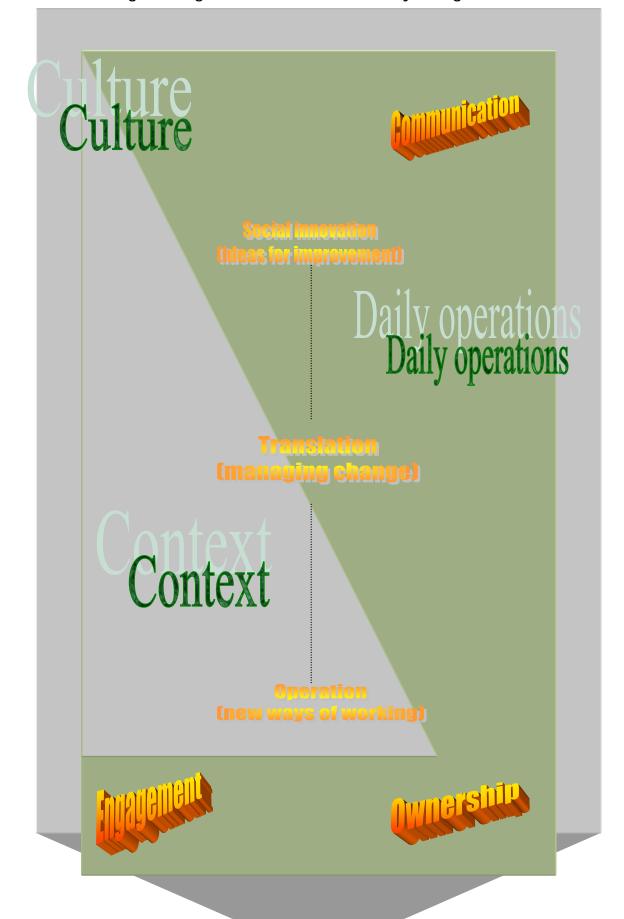
In our concern with OH&S at work, we contend that within many mainstream companies, managers are not managing OHS effectively. This neglect is reflected in the mainstream management and human resource management research literatures, where a longitudinal review of key journals showed an almost complete absence of scholars considering OHS management in organizations. As expected, there is much more research on OHS management reported in the broader social science and applied science literatures, although this is largely atomistic in nature. Thus there is a need to raise the profile of OHS and to consider new and innovative ways of developing OHS to improve the well-being of people at work. Towards this end, in the final section we develop an holistic organizational model of occupational health and safety management. This contextualised analytic framework includes institutional and technical (product-market) environments, as well as organizational cultural, historical and political factors that influence the bundles of OHS management policies and practices created and implemented to secure effective OHS and organizational performance.

AN HOLISTIC ORGANIZATIONAL MODEL OF OHS MANAGEMENT

In developing an holistic organizational model of OHS management, we aim to start not from either the psychological and social causes of OH&S but with the context and culture within which OH&S can best be managed in the pursuit of employee well-being. This agenda turns attention away from an individual based model – that tends to blame the victim – and from a social based model – that tends to blame the system – towards a model that draws on the idea of social innovation. The aim is to rethink how to approach the management of OH&S both within existing systems of work organization and in the development of new forms of work organization and job tasks. In both cases, the agenda needs to move away from blame or financial gain towards strategies that have social improvement and well-being as a central aim. In translating these ideas into practical change programmes within existing organizations, an understanding of the cultural and contextual conditions, as well as current operational practice, is essential. A movement away from procedural reliance, individual blame or an off loading of responsibility away from all employees towards a group (management) or those that occupy or a particular role (health and safety representative) provides a useful starting point. Communication, engagement and ownership are well-bandied words but difficult to operationalise in practice to bring about real change in the safe conditions of work and the health of employees. A representation of the model we propose is presented in Figure 1 below.

The intention is to draw on existing knowledge and theory from all branches of social science in identifying novel approaches that seek to secure social innovations in occupational health and safety at work, and then to translate these ideas into operational practice through engaging all key stakeholders and through a process of continual communication and feedback, modifying and revising implementation plans and operating practice. Ownership is a key element, not in terms of management responsibility, the need to conform procedurally to legislation, or in viewing health and safety issues as being the fault and responsibility of the individual workers, but in full ownership by all members of the organization and wider recognition by the owners and shareholders of companies.

Figure 1 Organizational Health and Safety Management

Culture

Communication

Social innovation
(ideas for improvement)

Daily operations
Daily operations

Translation
(managing change)

Context
Context

Operation
(new ways of working)

Engagement

Ownership

Although the model we represent above requires further development and refinement, it does present a platform for rethinking how we understand, make sense of, and practically manage occupational health and safety within work settings that does more than comply to legislative change in engaging employees and management in strategies for improving and maintaining the health and well-being of people at work.

CONCLUSION

In examining social innovation and occupational health and safety management, we have started to explore new areas of interest and new terrain for thought and discussion on how to improve the well-being on people at work. In the past, too much attention has been given to legislative change or to disciplinary based studies on work conditions and the health of individuals. Work psychology has provided useful information on the causes of stress and problems of employee tension and anxiety on work processes, productivity and industrial injuries. From this perspective, the means to reduce injury and ill-health is seen to largely rest with the individual. Thus prescriptions and policies rest on strategies and techniques that can change the behaviour of individuals to prevent the occurrence of accidents and to alleviate feelings of stress and anxiety within the workplace. In response to this, unions have negotiated over payment systems and conditions of work in an attempt to tackle the structural and work design aspects of occupational health and safety. Similarly, sociologists have investigated social causes (rather than psychological) behind problems of OH&S in particular types of work settings and organizations. They have been concerned with the pace and pattern of work, authority relationships and the control mechanisms imposed on employees during their daily work experience. However, writers such as, Bohle and Quinlan (2000) and Glendon, Shannon and McKenna (2006) point out that whilst all these social science discipline-based perspectives have contributed to our understanding of OHS at work, they are too narrow in their focus and in so doing, they argue for broader models that are more multi-disciplinary in presenting a more holistic view for the effective management of occupational health and safety. In an initial attempt to tackle this, we have presented a model that tried to accommodate context, culture, work organizational and individual and group working. Although we recognise the limits to our initial conceptualisation, we hope that it goes some way to furthering discussion and consideration of this important, but largely neglected, area of study. Moreover, with the growing interest in social innovation, the time is perhaps ripe for re-examining way of organizing and managing work processes that improves the health of well-being of employees and is not simply geared to increasing productivity and financial gain of the senior executive and company shareholders.

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